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World Radio History

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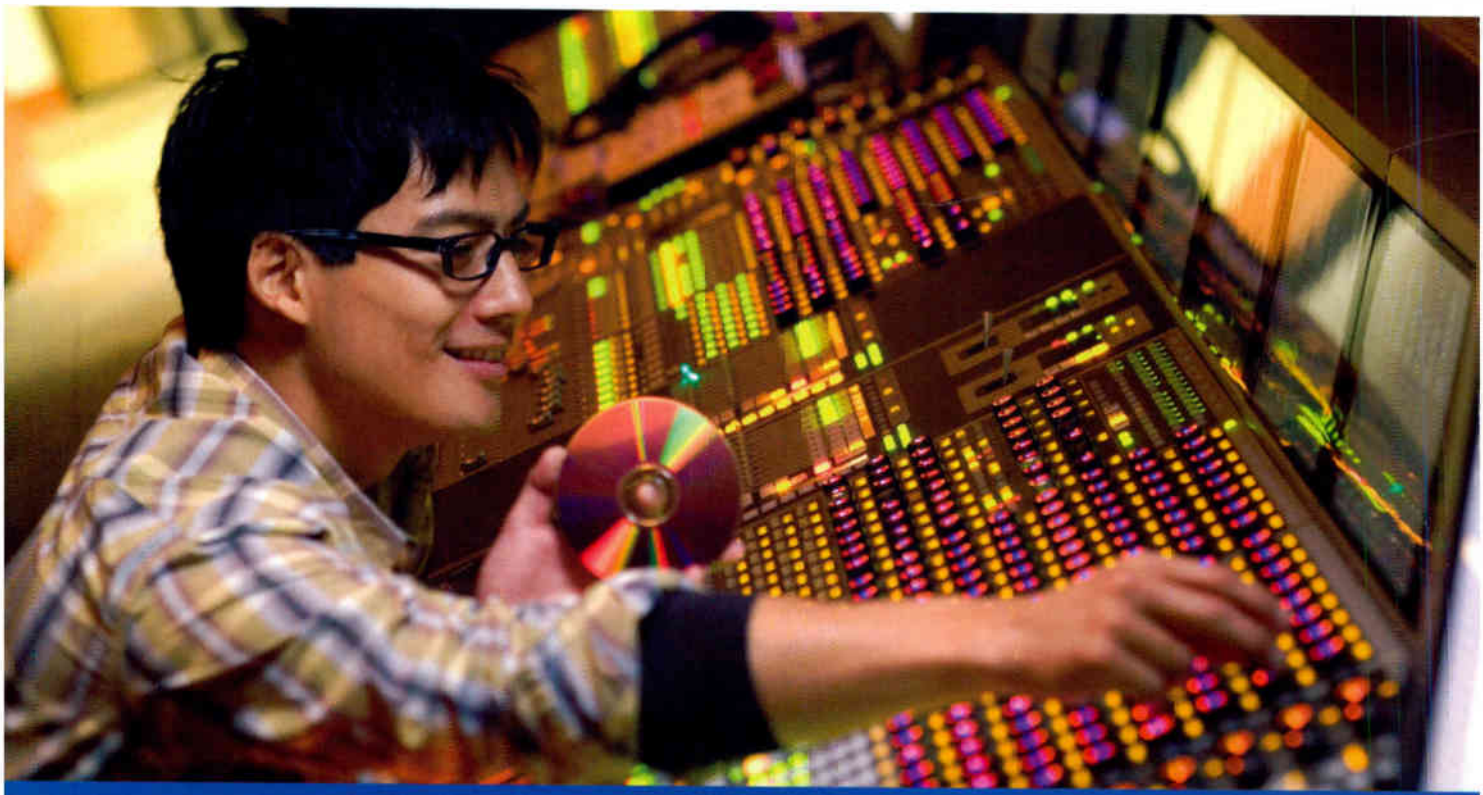

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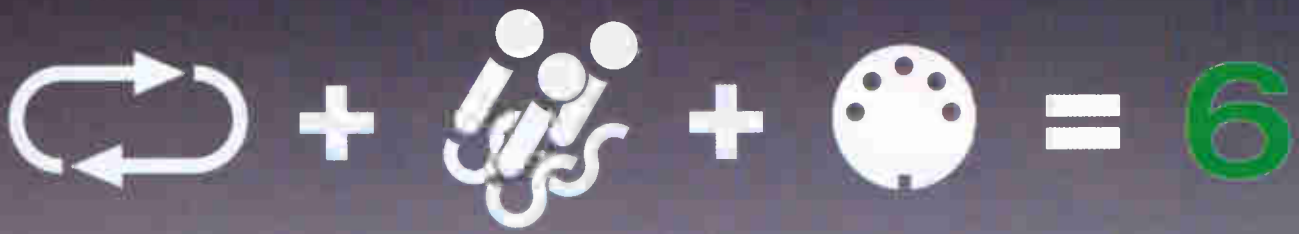
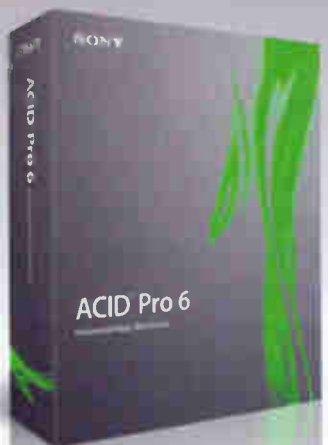


LOOPS MULTITRACK RECORDING MIDI SEQUENCING



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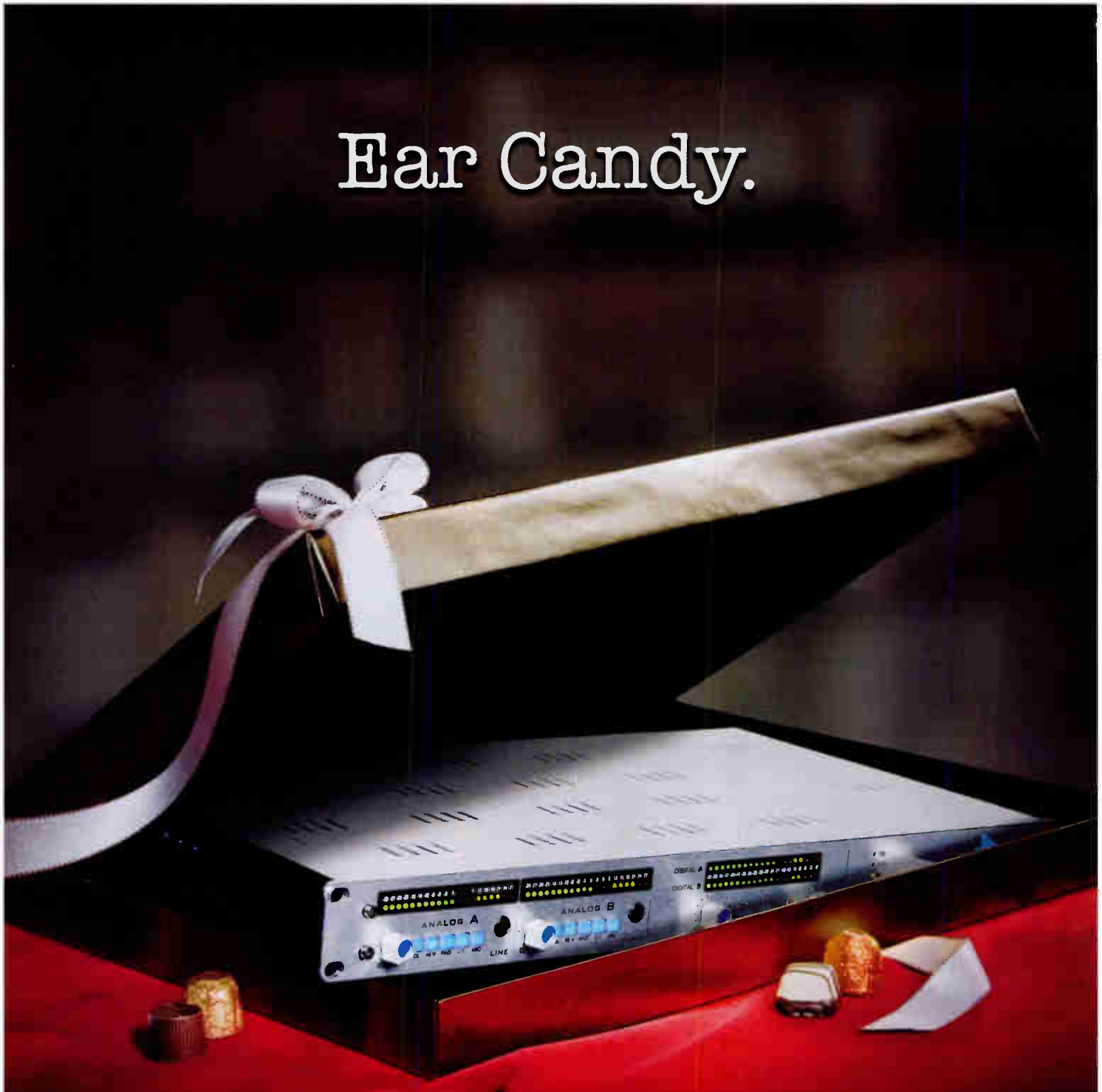

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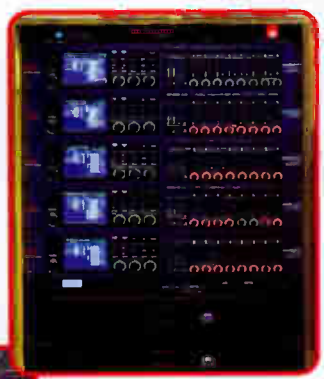
"When the audience hears Toby Keith, that's *all* they hear." *Dirk Durham, FOH Engineer*



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Dirk Durham

The Toby Keith Big Throw Down II tour audio crew, L-R: Ryan Reynosa, Monitor tech; Russell Fischer, System Engineer; Dirk Durham, FOH engineer; Earl Neal, Monitor Engineer; John Brawner, System Tech.

Not shown but also available: DriveRack 4820 with tamper-proof front panel for installed applications.

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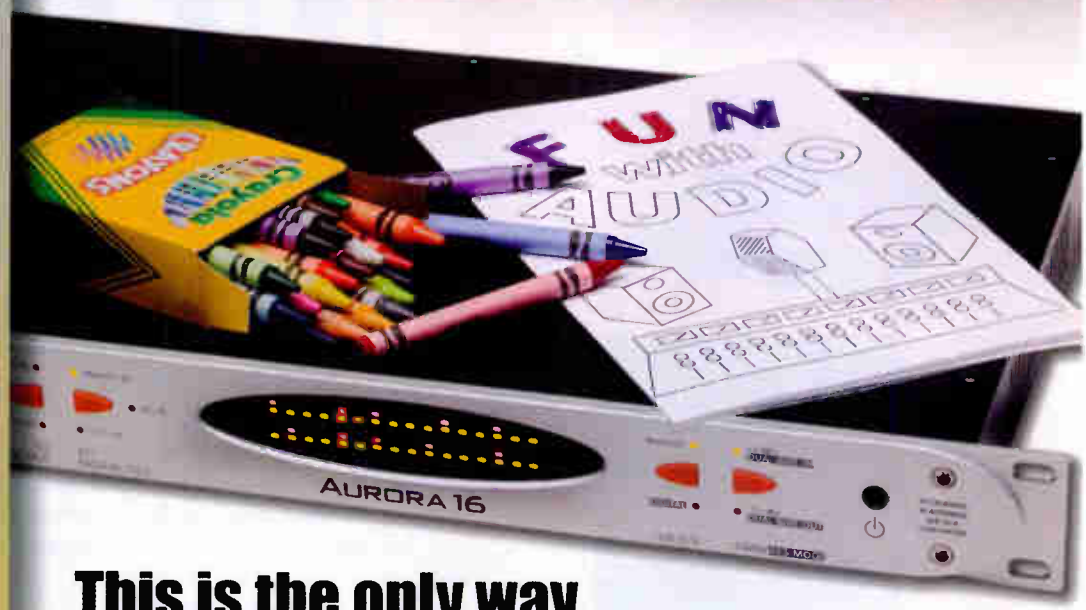

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September 2006, VOLUME 30, NUMBER 9


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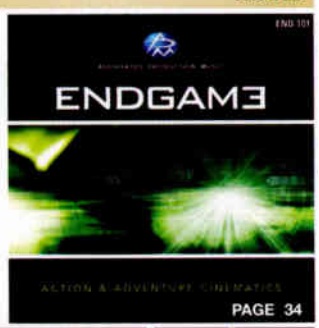


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On the Cover: Remote Recording Services' new truck, The Polar Express, co-designed by SIA Software's Sam Berkow and Steve Sockey, is the new home to this year's TEC Hall of Fame inductee, David Hewitt. **Photo:** Courtney Spencer. **Inset Photo:** Steve Jennings.

features

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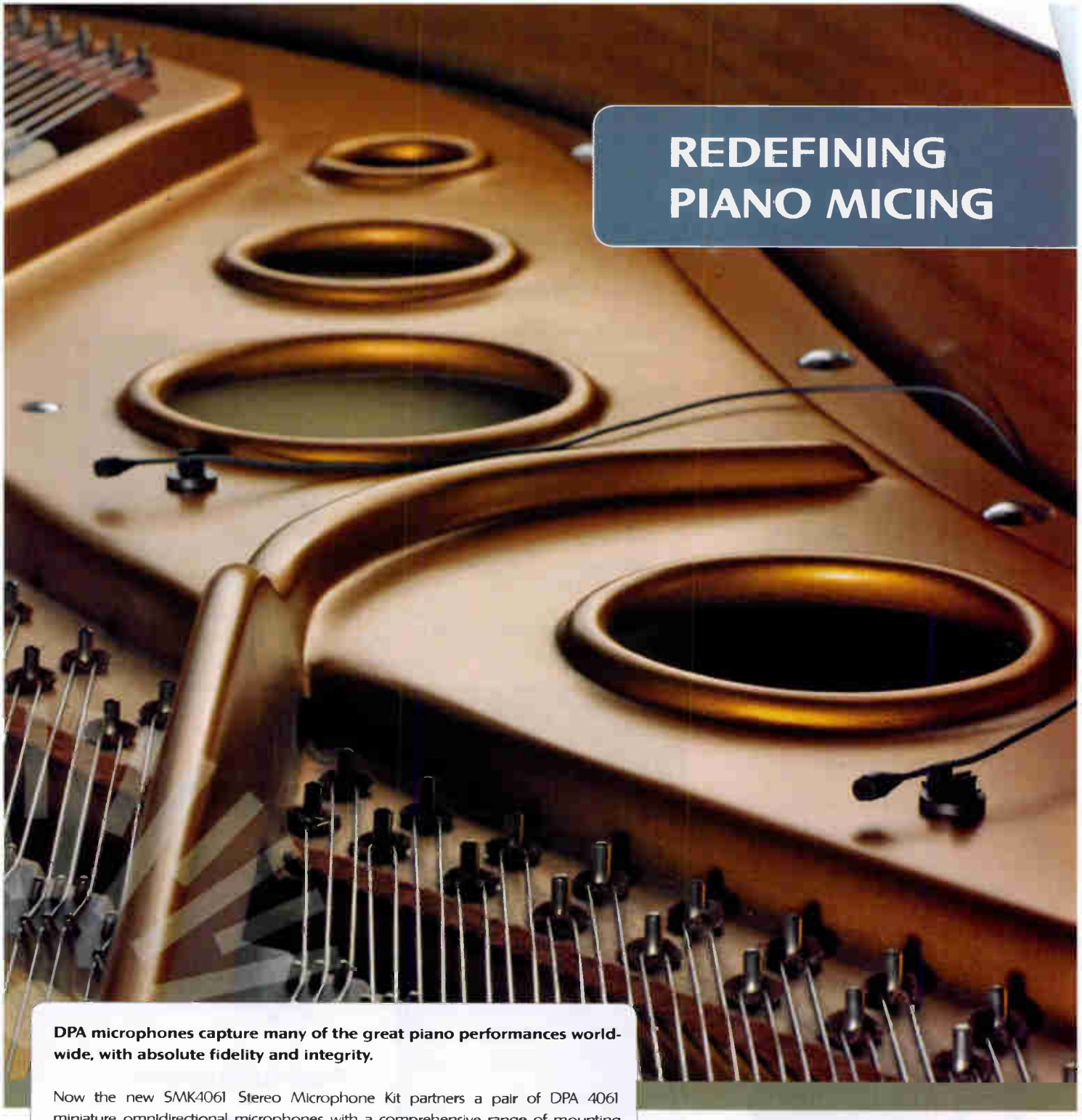

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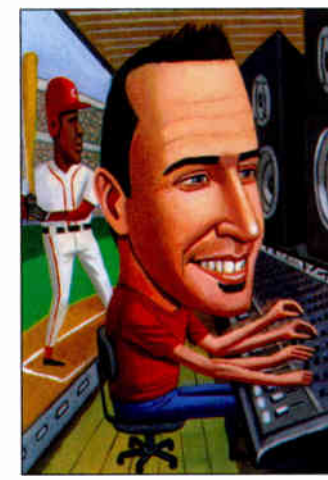

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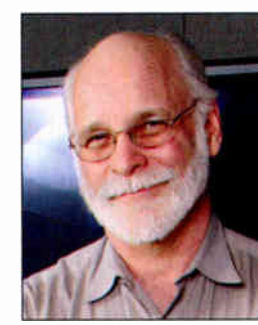

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Life Goes On

A year after one of the nation's worst natural disasters struck the Gulf Coast and flooded New Orleans, the city is showing signs of hope. Despite some post-Katrina successes (and many failures), things are far from normal, particularly in the Ninth Ward and other hard-hit areas. Today, life isn't easy in The Big Easy, but like other great cities that have endured disasters (San Francisco, 1906; Chicago, 1871; New York City, 2001), New Orleans can—and will—endure.

A sign of healing comes from a return to normalcy: Tipitina's is gigging, and you can have breakfast at Brennan's and beignets at Café du Monde. A major step comes from ordinary people doing everyday jobs under sometimes extraordinary conditions. This issue's "New Orleans Stories" section focuses on some audio professionals who are doing just that—finding their way amid the debris.

Grammy-winning engineer Trina Shoemaker talks about rebuilding her life after losing her home and studio to Katrina and the rising waters of Lake Pontchartrain. Faced with a tough dilemma, with minutes to evacuate, do you grab your Neve modules, the family dog or the photo albums? It's a human condition, not limited to hurricanes: *Mix* contributing editor Michael Cooper had the same scenario last week as he fled wildfires in Oregon. In his case, there was no damage, but a similar situation could happen to any of us at any time.

Three Doors Down guitarist Chris Henderson was not so lucky when Katrina blasted his home/studio in Gautier, Miss. Henderson went in after the floodwaters receded, rinsed everything down and couldn't return for six weeks. In some ways, Henderson was lucky—Fender, Gibson and PRS offered free/discounted restorations on his guitar collection (37 of 39 survived), and a favorite Neumann M147 somehow worked with just a dry-out after 18 hours of saltwater immersion. Since Henderson's room went back online, he's been offering free sessions to local bands—his way of helping his community.

Our Nashville editor Rick Clark chats with Scott Billington, producer and VP of A&R for Rounder Records, who talks about the state of music in the Crescent City. As a top producer/label exec, Billington produced a benefit album within six weeks of the disaster and donated the proceeds to NARAS' MusiCares to assist musicians who had nothing.

There's an old joke about "I'm from the government, and I'm here to help," but sometimes it's true. Louisiana is serious about jump-starting its recording industry, with an investment-based tax incentive designed to aid the state's recording community. Modeled after the highly successful motion picture incentives in many states, the music program rebates 10 to 20 percent back on money spent in the state for production expenses, such as studio fees, session players, engineers, hotels, catering, media, etc.

The minimum expense to qualify is $15,000 over the course of a year—not necessarily on one project. Louisiana will send a reimbursement check to labels or producers (whoever invests in the recording) regardless of where they or the artists are based, as long as the work was done within the state.

Visit www.louisianamusicexport.com, and add some Southern spice to your next project.

George Petersen
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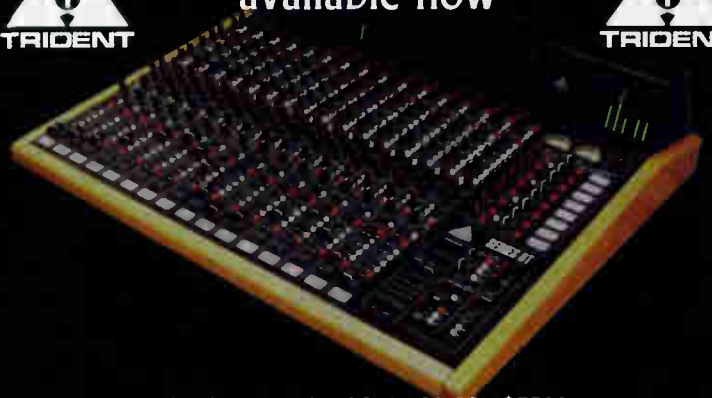

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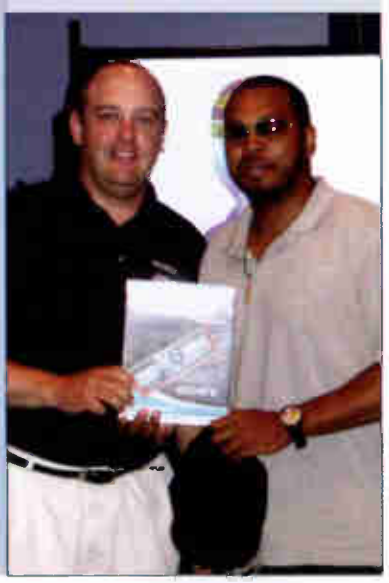
ST.LOUIS STUDIO GROWS

Jupiter Studios (St. Louis, Mo., www.jupiterstudios.net) has relocated to a newly renovated $600,000, 4,500-square-foot facility at 3323 Locust St., where owner Jim Callahan hopes to make his three new state-of-the-art suites a full-service recording and marketing facility. Studio A comprises a premier control room, a larger live room and two iso booths. Also in the lot is a tracking room (with iso booth), Studio B and audio/video post room Studio C. The facility was designed by Lawrence Group architect Kurt Kerns, a founding member of electro-rock band Gravity Kills.

INDUSTRY EVENT: SONY DEMO

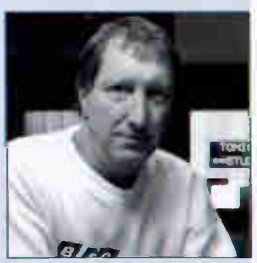
A standing room–only group of New York City–area audio pros, ranging from studio owner Walter Sear to indie producer Will Robertson, gathered at the Dale Pro Audio Event Room in mid-June for a Sony Oxford plug-in demo presented by Grammy-nominated engineer/mixer Vaughan Merrick and Sony's Andy Munitz. Three lucky attendees won door prizes at the event: Sear Sound studio manager Roberta Findlay and Jamman Productions producer/composer James Manno each won Oxford Limiter plug-ins. Robertson (below, right, with Sony's Art Gonzales) won the grand prize, a full TDM Oxford



NEW POST HOUSE OPENS

Music production executive Jeff Rosner, who co-founded music company Sacred Noise and served as its executive producer, has teamed with sound engineers Josh Abbey (Bob Dylan, network/cable themes, Russell Watson) and Kevin Halpin (Phish, Lenny Kravitz, Bruce Hornsby, Shawn Colvin) to form new audio post-production facility Color (New York City, www.color-ny.com). The studio features a Yamaha DM2000 digital console, Digidesign Pro Tools HD 2 Access 7.1 DAW, Genelec 5.1 monitoring and a fine selection of outboard goodies. The recording space offers a fully soundproofed and isolated live room, a vocal recording booth and a loaded mic closet.

RON ESTES, 1940-2006



After an audio career that began at KOGO Radio and TV in San Diego, Calif., Ron Estes, the audio engineer for NBC's *The Tonight Show* from 1980 to 1991, passed away on July 13 in Studio City, Calif. During his tenure at NBC, Estes was instrumental in the July 26, 1984, broadcast of *The Tonight Show* in stereo, beating ABC, which planned to broadcast the 1984 Olympics in stereo the next day. The Academy honored him in 2004 for this achievement; he later earned three National Emmys. In total, Estes garnered 12 Local Emmys and a TEC Award in 1986 for Outstanding Creative Achievement by a Broadcast Sound Engineer.

The family requests that donations in Estes' name be made to Actors for Animals.

World Radio History

COMPILED BY SARAH BENZULY

NASHVILLE STUDIO REBORN

Nashville-based producer/engineer Jonell Polansky has expanded her production company, DaCapo Music (www.dacapomusic.com), to include a full-service, state-of-the-art commercial recording facility. "I wanted to reconfigure my studio to be competitive with the finest rooms in Nashville," she says. DaCapo Music is centered around a vintage Trident Series 80B console, and offers Nuendo and a selection of analog outboard reverbs, delays and mic pre's, as well as a fully loaded mic closet.

Polansky has relied on her extensive mic collection to produce and engineer vocals for numerous artists during her 13-year stay on Music Row. "Singing in the studio is difficult, regardless of talent," she says. "But there are only a few producers that really take the time to teach singers to excel in this environment. Younger artists are being developed and signed to recording contracts now. It is a natural progression of their talent and career to learn to sing in the studio properly. Someone must really take the time to listen to the artist, obliterate any fears and build vocal confidence. There is a lot of trial-and-error involved, and in today's age of 'hurry up and record,' that time is often not given."

NOTES FROM THE NET

ROCK WITH THE BEST

Yamaha and Roland are sponsoring Dream Musician's (www.dreammusician.com) efforts to provide musicians with the ultimate experience of playing in their favorite bands. At DreamMusician.com, through a licensing arrangement with Universal Music Group, musicians can download songs that isolate or exclude the original instrumental track of their choice. Dream Musician also provides songs that separate the musician's instrument from the accompaniment of all other instruments in the song. This way, fans can acquire the original master tracks to hear exactly how the artist performed their songs when they were first recorded. The songs, downloadable in Windows Media format, are accessible through secure digital downloads priced at $2 per individual title.

PUMP ON

Pump Audio's new MyPump Soundtrack (www.mypumpaudio.com) service provides an easy and affordable way for users to add licensed, independent music to their video creations and Web commercials. Creators can view their video while searching through the Pump Audio catalog to find the right track. They can then perform simple song editing and add the music to their video. Pump Audio splits the licensing revenue with the artist, who retains complete ownership over his or her music.

Pricing for tracks will vary, and in some cases will be free for consumers using the MyPump Soundtrack service through a partner. Basic licensing for the Web will start at $0.99 per track or less for bundled uses.

TEC AWARDS TICKETS ON SALE

Tickets are now on sale for the 22nd Annual Technical Excellence & Creativity Awards, to be held Saturday, October 7, 2006, at the Hilton San Francisco. All-star bassist Will Lee, back by popular demand, will host the show. TEC Awards will be presented in 23 categories at the ceremony, and Remote Recording Services' David Hewitt will be inducted into the TEC Hall of Fame. Rock legend Steve Miller will receive the prestigious Les Paul Award, sponsored by Gibson Guitar Corp.

Tickets are available online at www.mixfoundation.org, or by calling the ticket hotline at 510/985-3214. TEC Awards proceeds benefit programs for hearing health and audio education, including the annual TEC Awards Scholarship.

INDUSTRY NEWS

Joseph B. Castronovo

Twenty-year vet of **Korg USA** (Melville, NY), **Joseph B. Castronovo** assumes the company's presidency... New general manager at **Professional Wireless Systems** (Orlando) is **Carl Cordes**...Previously national sales director for Telos Systems (1999-2003), **Marty Sacks** rejoins the family as VP, **Axia Audio** (Cleveland)...**Meyer Sound** (Berkeley, CA) grows: LCS Audio (which Meyer Sound acquired in November 2005) co-founders **John McMahon** and **Steve Ellison** are now executive director, LCS Series, and applications director, LCS Series, at Meyer Sound, respectively; **Jerry Placken** joins the fold as sales manager for LCS Series; **Frank Martin** is appointed installation sales manager for Meyer Sound Germany; **Jim Sides** is named managing director, Meyer Sound Germany; and **Alejandro Orozco** joins as marketing manager for Latin America...Now director of sales at **Inter-M Americas** (Chester, PA) is **Neal Marten**...New live sound product specialist at **Digidesign** (Daly City, CA) is live sound/studio engineer **Dave Skaff**...**Karl Gustafson** joins **Denon Professional** (Itasca, IL) as brand manager...**Tracy Carl Knapp** joins **OmniMount** (Phoenix) as sales manager, commercial products.

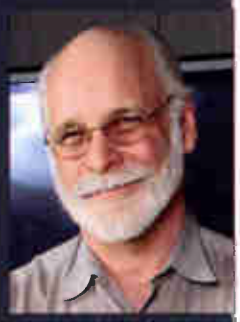
World Radio History

EXTRAS

MIX WEB

Go beyond the printed page and log on to www.mixonline.com to get extra photos, text and sounds on these select articles:

Mix Interview: David Hewitt



In addition to being inducted into this year's TEC Hall of Fame, David Hewitt has been in the remote recording truck for many high-profile gigs. Find out what else he's told *Mix* through the years.

Producer's Desk: Scott Billington

Want to know more about the Rounder Records producer? Check out an extended photo gallery of Billington and the artists he's produced, as well as a full recording discography.

Local Crew: Gulf Coast Sound

Learn more about the clients and venues served by this busy Fort Rayne, La.-based sound reinforcement provider.

Digital Consoles

Now that you're up to speed on what's new in the world of upgrade/updates in digital consoles, here are tips and techniques on getting the most from your board.

SPARS SOUNDBITES

DON'T FORGET THE ROOM—IN HI-DEF

BY MICHAEL DAVIS

SPARS
THE SOCIETY OF PROFESSIONAL AUDIO RECORDING SERVICES

High-definition television is taking hold after years of fits and starts and format skirmishes. Channels are continually being added, and television set prices are falling. For us audio professionals, it means that supplying high-quality audio content accompanying HD television is becoming both a reality and a necessity.

The earliest adopters and experimenters in hi-def broadcasting were live concert recording (sometimes for DVD) and sports programming, beginning back in the mid-'90s. Much of the press at the time focused on the use of 5.1 channels and technical explanations of how to move the tracks around. I would like to focus on an often-forgotten area that can greatly affect the perception of "high definition," whether in a live concert recording or sports programming environment.

Recording and mixing high-definition surround audio requires unusual attention to what defines "space" in a recording and how best to represent it. Approaching a recording with this in mind has immediate advantages in improving the sense of high definition in a way that technical specifications and discussions cannot.

As one begins setup for recording in a location, starting early allows more time to accomplish what can be a time-consuming mic placement and wiring strategy. The first goal is to discover a venue's aural personality. Survey it from the standpoint of how sound moves air and how it reflects off of hard surfaces and is absorbed or diffused by soft surfaces. Being cognizant of how a crowd will be situated will also affect how mics are set. As front-of-house engineers are playing back music and monitor engineers are tuning up the stage system, this is a great time to walk around, looking and listening. It is essential to walk about the stage looking at close-up instrument mic placement and listening for other potential problems. It's also important to walk around the venue looking for undesirable noise sources, such as air conditioning ducts.

Soundcheck and rehearsal is the time to be moving between the truck, stage and audience areas, making adjustments to stage and room mics as you compare what you hear acoustically to what you hear in the recording truck.

The two goals are to capture the emotional realism that the audience helps provide and to document the character of the venue being recorded. Together, these elements create an aural signature that can become an integral part of the final product and lend a unique character to each recording.

Miking techniques will vary depending on the situation. The idea is to record different perspectives from various places in the room and later combine them in a surround environment. A series of wide-spaced pairs placed at intervals from stage to back wall throughout the venue will document sound moving through the room acoustically. Some variation of zone mics covering the audience is essential if the spaced pairs might not capture them adequately. Placing a mic pair behind the backline of the stage or at the front of the stage facing the stage can often yield useful information about the sounds moving about there. This is particularly true in acoustic performances.

By documenting air movement, spatial localization of sound dramatically improves. This localization enhances the sense of "being there" and helps convey the emotions of the live audience to the listener, thus reproducing the original emotional response in the consumer. This will always make for a more entertaining and desirable final product.

High-definition audio is an ongoing endeavor, from both technical and aesthetic standpoints. But increasing one's sensitivity to acoustics and its importance in high-definition audio will maximize the ability to make the best use of increasing technical quality. In other words, using your ears will help make the best use of your gear. ■

Michael Davis is the owner/engineer at Digital Audio Post (Nashville).

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BY PAUL D. LEHRMAN

The Surround Game

Sports Mixing in the Age of HD

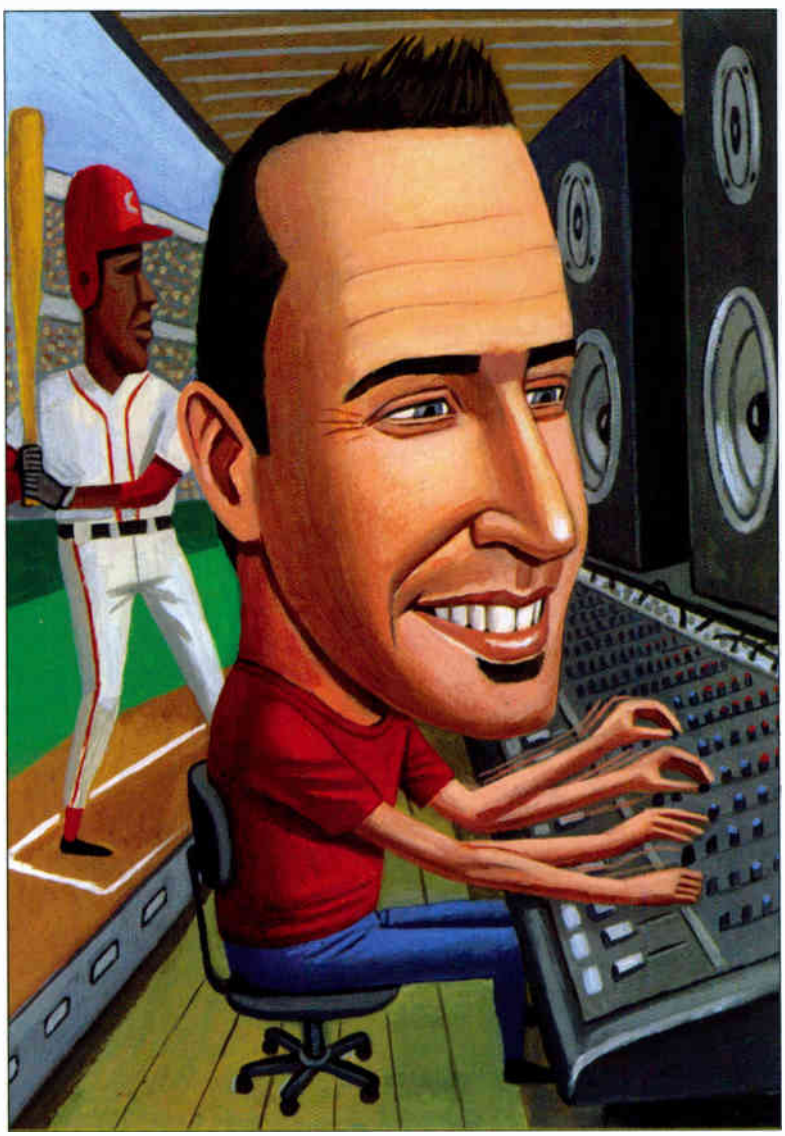

ILLUSTRATION: CHARLIE POWELL

A few years ago, the chief engineer at one of the busiest audio post houses in Boston, a multiroom facility that does mostly TV commercials and hosts some of the top agencies and accounts in the country, outfitted all of his rooms with superb 5.1 surround monitoring systems. Every year, I bring a group of students around for a "real-world" visit to his shop, and every year, I ask the same question: "How often do they actually mix spots in 5.1?" And every year, he gives me the same answer: "Almost never." As he explains it, "In the middle of the Super Bowl, when the president of Toyota calls up his ad agency and asks them why the heck his ads are in stereo while the game is in surround—*that's* when we'll start working in 5.1." So far, it hasn't happened.

So does this mean nobody is watching the Super Bowl in surround sound? Not at all; the explanation is a bit more complicated. But it has got me thinking about the pitfalls of doing surround broadcasting for live events on television.

Recently, I had lunch with Phil Adler, an old friend who for the past 18 years has been mixing sports for TV. Phil, whom I met many years ago when he engineered one of the first albums I produced, has worked for NBC, Fox, HBO and the NBA, but these days, his main client is CBS. Our conversation got me even more curious about the subject. So I talked to some more people and I found out a lot about how surround mixes for sports are created, how they're distributed, how they're transmitted and what can go wrong along the way, which is quite a bit.

There's an oft-cited theory that the driving force behind any new technology during the past 20 years has been pornography. It certainly could be argued that this was true for early video discs, VCRs, camcorders, DVDs and the World Wide Web. But surround audio isn't in that category. Its driving forces are DVD movies, videogames and live sports. In some ways, sports are the most interesting because there's only one delivery medium—television—and whatever anyone wants to do anywhere along the line, it has to get funneled through that channel.

According to Jim Hilson, senior broadcast audio specialist at Dolby Labs (and also a former recording engineer), "The real issue is that DVD movies and videogames are coming out in 5.1. If TV is just in stereo, people notice the difference. People equate 5.1 with HD, but there are a lot of people still listening in stereo even though what they're receiving is 5.1. There are way more DVD players than there are Dolby Digital decoders. But a lot of people have home theater systems and they're beginning to hook up their digital TVs to them."

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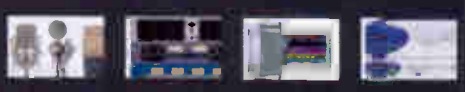

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World Radio History

Now I do have to admit that I do not watch sports on TV very often. Oh, I'll sometimes have a baseball game going while I'm doing something else, particularly in those not-as-rare-as-they-used-to-be interludes when the Red Sox are doing well, but generally speaking, watching a screenful of guys in colorful, if sometimes dirty, costumes who make more in a week than I do in 10 years, running around chasing balls or pucks, or riding on top of large quadrupeds or ridiculously overpowered internal-combustion engines doesn't do much for me. And I should also admit that I don't have a surround system hooked up to my TV. So I'm not approaching this as a fan.

That said, I have a great deal of admiration for what sports mixers do, especially these days when they're expected to create a soundtrack as complicated and compelling as a Hollywood movie score on the fly. What they have to deal with—wireless and crowd mics, instant and not-so-instant replays and sound effects under swooping graphics, not to mention the director and sometimes the network yelling in their ear—is pretty amazing. Phil once came into a class of mine and played a tape with the mono game mix on one channel and the production intercom on the other. I was impressed, and the students were horrified.

As we move into the age of high-definition (HD) television, surround sound in broadcast is becoming more the rule than the exception. Unlike standard-definition (SD) broadcasts, multichannel audio hasn't been jury-rigged onto the medium but is instead an integral part of it. But it's still going to be awhile before it becomes the rule among audience members. Hard figures are difficult to come by, but it's probably safe to say that fewer than one-sixth of TV viewers at home are currently watching in HD, and according to my friend Phil, when it comes to sports, "There's still more stuff going out not HD than is HD." And it's also going to be awhile before all the kinks are worked out of the surround sound signal chain, and before everyone agrees on how best to handle it.

At a typical sports event, according to Phil, the mixing engineer might have 60 or more audio sources to wrangle. They include tape (or in the case of many new trucks, tapeless) feeds for replays, highlight reels and produced packages, but the most important ones are the microphones. "Sports coverage requires a lot of mics," Phil says, "around the playing area, in the playing area and on the players themselves, when it's allowed." In a typical truck's arsenal are shotguns, lavaliers, boundary mics, headsets for the announcers and theatrical mics on the commentators' studio set. There are mics in the locker rooms and on every roving video camera. Some mixers like more than others: A typical basketball game will have 10 mics on the court, but Phil has seen at least one game with 30.

Umpires and officials wear wireless packs, and there are often four or more parabolic wireless mics around the arena. "Having RF mics means people can move untethered, but whenever possible, there is a hardwired backup for each wireless," Phil says. "We try to coordinate frequencies with whatever town we're in, but as the spectrum becomes more polluted, it's more difficult. Someone can come in with a system who doesn't coordinate with us and it knocks us right off the air. My field submixer is responsible for the wireless mics, and he has to move frequencies around all the time."

Generally, it's the crowd noise that makes up the bulk of what goes into the surround channels. "For NFL games, I would use five pairs of crowd mics at the 20-yard lines and the 50," says Phil. "Two

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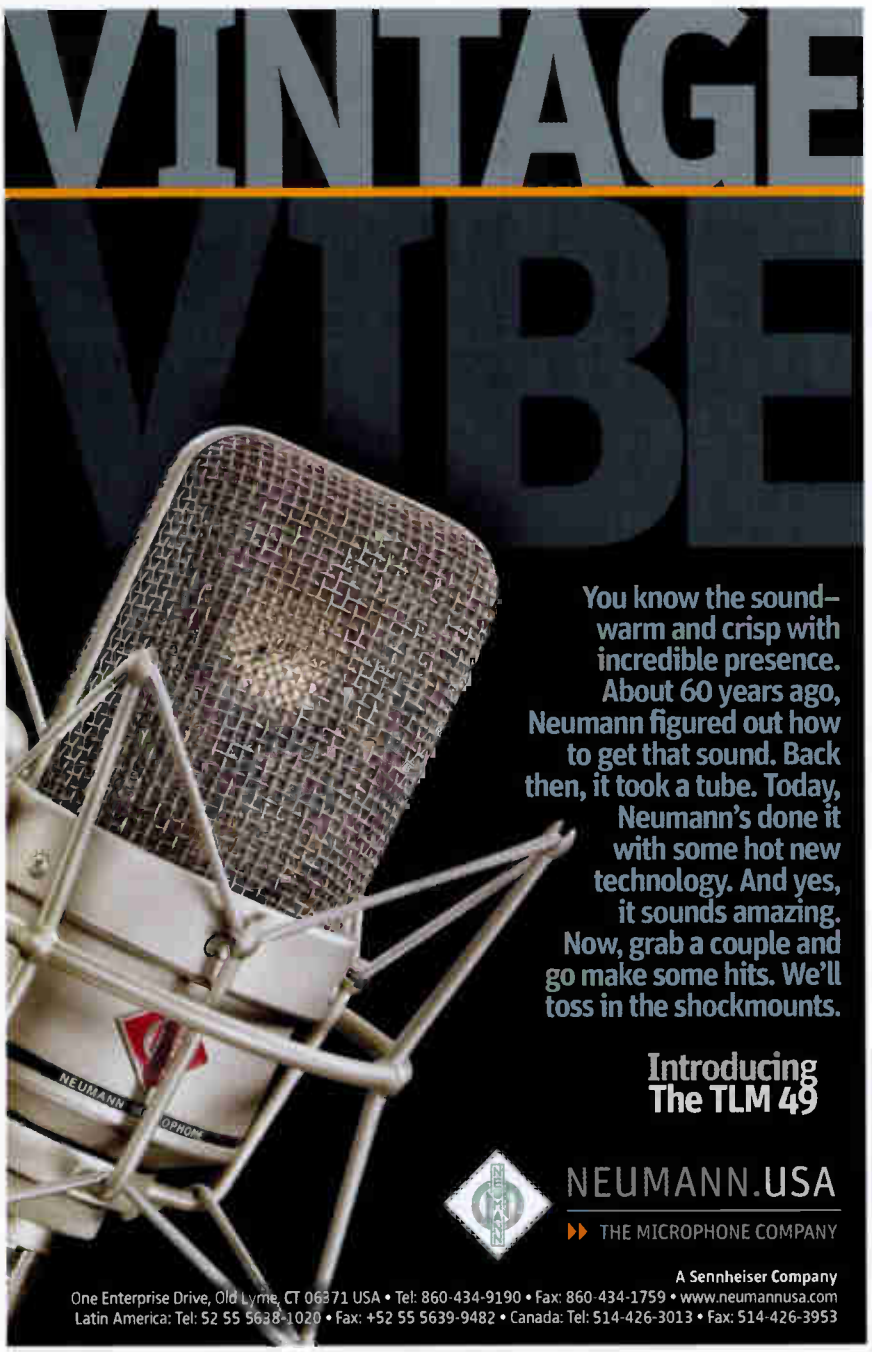

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World Radio History

DIGITAL CONSOLES

What's New, What's Hot

BY GEORGE PETERSEN

Digital consoles have become more feature-laden and smarter—although not necessarily larger. Today's boards seemingly have the ability to pack hundreds of inputs, effects, routing and more into a shoebox-sized chassis, with owners mainly deciding which size control surface suits their needs. But even after the sale, the story isn't over—your "new" console might be only a software update or a couple of DSP cards away. With that in mind, *Mix* looks at the latest developments in this expanding field for live and studio applications.

Allen & Heath (www.ilive-digital.com) plans to ship its iLive digital console system next month. Its iDR-64 mix engine holds 8-channel cards for 64 inputs and 32 outputs, which can be groups, auxes, matrices or mains, and it can be used as a stand-alone mixer. Available control surfaces have 28, 36 or 44 faders, and house four additional cards for eight assignable and eight mix inserts.

AMS-Neve (www.ams-neve.com) is shipping its digital 88D music console, which combines a 1,000-track, 96kHz DSP engine with Neve preamps and multisource 8.1 monitoring, Pro Tools/Pyramix/Nuendo integration and classic EQ/dynamics plug-ins. At AES Paris, the company added WavTrak waveform display to the 88D package and debuted the DFC PS/1 PowerStation console, a single-operator, lower-cost version of its DFC Gemini film board for pre-dub/pre-lay and print mastering.

Coming to this month's PLASA show is Cadac's (www.cadac-sound.com) S-Digital live theater desk. S-Digital's design reflects the surface architecture of Cadac's J-Type analog board, offering a familiar mix environment. More details will come after the show, but production is set to start next month. Also new is Cadac's Digital Series Stage Rack, combining the M16 remote-controlled mic amp and the X16 MADI Merge Unit for comprehensive multichannel audio distribution of analog and digital.

Calrec's (www.calrec.com) Bluefin technology lets existing Alpha console owners upgrade from 226 to 480 (mono equivalent) channels simply by installing a couple of DSP cards. Bluefin also puts full EQ and dynamics on all channels, and can provide 78 full 5.1 surround sound channels, eight 5.1 groups with full EQ and dynamics, four main outputs, 48 multitrack outputs and 20 aux outputs.

DiGiCo's (www.digiconsoles.com) MiNi-DiGiRack adds flexibility to its D1 and D5 Live systems. The four-rackspace unit features a MADI or optical interface and allows any slot to be used as input or output for analog connections, or I/O for AES digital. In the turnkey D1 Live 48Mini-DR and D1 Live 56Mini-FM packages, the rack is onstage and the Mini-DiGiRack provides eight mic/line in, eight line out and four (eight channels) AES I/O at the house mix location. Also, Aviom's D-16c card for DiGiCo's standard DiGiRack bridges Aviom and DiGiCo protocols, delivering 16 channels of digital audio, and letting musicians create their own personal mix via Aviom's A-16II Personal Mixer.

Digidesign (www.digidesign.com) sold its 1,000th ICON family digital console controller and announced a JLCooper-designed Surround Panner option for its D-Command/Pro Tools HD systems. The $1,695 option has a touch-sensitive joystick, plus knobs and mode buttons for individual parameters.

On the live side, Digidesign announces Digital Stage Input (DSI) and Digital Stage Output (DSO) card options for its VENUE live sound environment, each providing eight channels of AES/EBU or ADAT Lightpipe I/Os. And on the DSOs, the AES and ADAT outputs are active for simplified simultaneous splits to recording/monitoring/broadcast feeds. VENUE D-Show 2 software supports DSO/DSI and adds numerous other features, including snapshot enhancements, a preview mode, absolute and relative edit modes, channel strip cut/copy/paste, split fader banking and more.

The company now bundles Troodon's (www.troodontechnologies.com) TrooTrace™ TDM plug-in with all VENUE systems as part of its VENUEPack 2 promotion. TrooTrace simplifies system setup, tuning, EQ and alignment with 10 audio analysis and system tools that run on VENUE's DSP mix engine.

Still in development, EAW's (www.eaw.com) UMX.96 24-bit/96kHz digital live console features expandable 56x44 analog I/O, 3x12 integrated loudspeaker processing and full integration of SIA SmaartLive, giving users immediate access to system measurement and calibration. Onboard EQ, crossovers and limiters allow speaker alignment, audio distribution and zoning to be done directly from the mixer.

Euphonix's (www.euphonix.com) EuCon Hybrid now allows DAW integration (Pyramix, Nuendo, Pro Tools, Logic Pro, etc.) to existing System 5 users through a pop-in MC controller. Users can map the surface with any configuration of DAW controls running any DAW platform—even several simultaneously.

Euphonix also announced the 50th sale of its MC media application controllers and unveiled revamped control surface modules for System 5. Operationally compatible with previous System 5 versions, the new modules add higher-resolution displays at each module and touch-sensitive knobs with color-coded LED rings: EQ in blue, dynamics in purple, red aux sends, etc. Standard with new consoles are modules available as upgrades for existing System 5 owners. Similar modules have also been shown for Euphonix's Max Air boards.

Designed as a comprehensive HD production/encoding suite for audio finishing for HDTV and film, Fairlight's (www.fairlightau.com) HD DREAM Factory comprises a dual-bay Constellation-XT large-format mixing console and Fairlight's Pyxis HD nonlinear video system, an integrated platform for recording, editing and mixing to picture. The Constellation-XT multiformat mixing system is expandable up to 240 channels into 72 buses, with scalable DSP, integrated disk recording/editing, clip-based automation and more than 80 third-party plug-ins.

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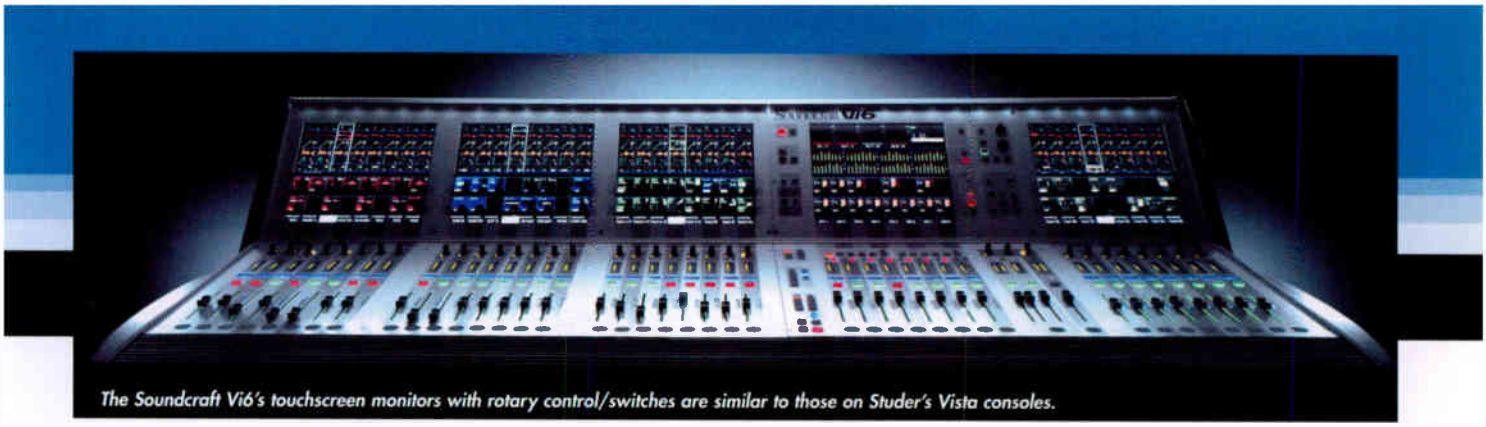

The Soundcraft Vi6's touchscreen monitors with rotary control/switches are similar to those on Studer's Vista consoles.

Constellation-XT, part of Fairlight's HD suite

On the music side, Fairlight's Constellation-Anthem console blends a familiar analog-style music console surface with the power of digital, offering three switchable operating styles: classic split, in-line or a Constellation post-production mode. The console reconfigures in seven seconds for the new task.

Harrison's (www.harrisonconsoles.com) Trion digital console is offered in versions for film/video post, broadcast and live, and features a traditional surface rather than a central, shared-knobs approach. A new Fold-Out option provides the benefits of a dedicated, shared control panel without losing the "sweet spot" space that such panels usually require. Two layout modes are available: traditional, with channel control/assignments that are accessible on vertically oriented strips; and fold out, wherein any audio channel can spread across any eight contiguous vertical fader/channels.

InnovaSon (www.innovason.com) celebrates 10 years since unveiling Sentury, the world's first live digital console in 1996, with a buy-back deal offering generous trade-ins on previous models. New are the EtherSound-enabled Dio Core remote I/O stage boxes for its current Sy40, Sy48 and Sy80 mixers. These feature up to 64 I/Os, digitally processed bus and direct outputs for remote/stage locations; additional Dio Core units or other EtherSound-enabled devices using standard Cat-5 Ethernet are also available.

Launched at AES Paris, Lawo's (www.lawo.de) mc^{2}90 digital console takes the technology of its mc^{2}66 mixer to a new level with a redesigned graphical layout and user interface. The mc^{2}90 incorporates a modular design that can be adapted for various applications and integrates Lawo's Star2 topology, providing total redundancy in no-fail environments such as broadcast, remote recording, theater and live.

CueStation 4.4 programming and control software for LCS Audio's (www.lcsaudio.com) flagship digital audio system, Matrix3, adds many new features, including password protection, enhancements to the Wild Tracks hard disk playback option, mixer parameter chasing, improved metering, additional control mapping functions and more efficient screen layouts.

Designed as a control surface for its Audio Engine digital router, Logitek's (www.logitekaudio.com) Mosaic is modular and configurable. Intended mainly for broadcast on-air/production, Mosaic configurations range from two to 24 faders with easy access to timers, intercom, dynamics and EQ functions. Drop-in modules for faders, monitors and soft-key functions give users as few—or as many—buttons and controls as needed.

Mackie X.200 Digital X Bus includes Build 1.2 software.

Mackie's (www.mackie.com) dual touchscreen-controlled, 24-bit/192kHz-capable X.200 Digital X Bus console includes new Build 1.2 software. The download adds features such as true snapshot (scene) automation; improved gain reduction metering in the compressor window for better visibility in the critical 0dB to -12dB range; a "set plug-in delay" function to compensate for latencies in different plugs; inverse aux panning; channel preset save to/from any mixer channel; a channel-naming shortcut; and control of any stereo-linked channel using a single automation track.

New options are available for Mackie's TT24 digital live console. An $899 UFXII DSP card provides 24 additional channels of EQ, gating and compression for a total of 48 fully DSP-functional channels. The new DS3232 digital snake has 32x32 channels of balanced XLR I/O and 32 mic preamp/converters in a stage box with remote input gain control from the TT24, and connects to the console via a U100 network card and Cat-5 cable. A LP48 Lake Processor Card can be configured in Lake Loudspeaker Processor mode as a 4-in/8-out loudspeaker processor for eight channels of balanced analog output with line-drive capability, or provide up to 10 channels of insert EQ processing including the Lake Ideal Graphic EQ™ and Lake Mesa EQ™.

The XL8 Live Performance System from Midas (www.midasconsoles.com) provides an open-architecture audio control/distribution system for handling all audio aspects of a live show. The 72-fader, 96kHz system offers the reliability of distributed pathways, redundant routers, dual stage boxes, multiple DSP engines and a separate control computer on each of its five console bays for fail-safe operation. It runs over a standard Ethernet physical layer, but uses a proprietary MidasNET protocol with low, ideal-for-IEM latency. Stack-for-more-I/O stage boxes each include 24 remoteable mic preamps with three analog mic splits linked to 96 channel inputs (plus 16 mic/line aux ins).

Smart AV (www.smartav.net) announced V. 1.5.1 software for its Smart Console, adding new features such as scene management, solo grouping, "smart metering" channel modes, floating ARC and more. But the

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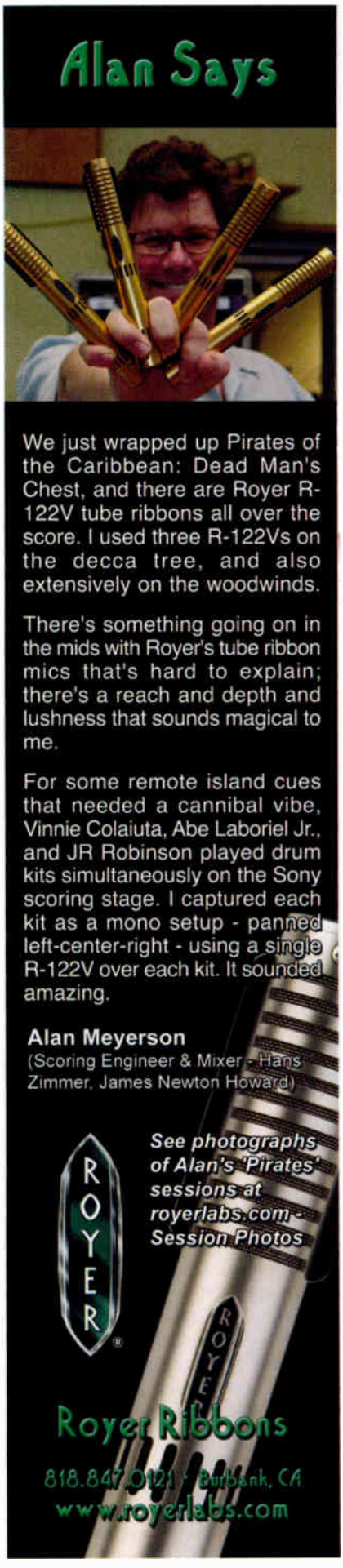

big news is support for Apple's Logic 7.2, Pro Tools 7 (via HUI), Merging Pyramix 5 and Steinberg Nuendo 3.2. For the live market, V. 1.5.1 also offers Smart AV control for the MediaMatrix Nion engines.

Soundcraft (www.soundcraftdigital.com) is shipping the Vi6™ digital live desk. Its touchscreen color TFT monitors with rotary control/switches mounted on the glass is based on Studer's Vista consoles. Standard are 64 input channels in two layers of 32 motorized faders assignable to 32 outputs. FaderGlow™ multicolor LED illumination marks fader assignments at a glance. I/Os are in a stage box that connects via MADI over Cat-5 to the board (or a second Vi6 for monitors), and the desk can act as control central for a Harman Pro HiQnet system of networked DSP, wireless, amps and speakers.

Now shipping, SSL's (www.solid-state-logic.com) C300 draws on the innovations of the C100 and C200 line, but in a post configuration for one/two-operator versions, with a channel count expandable from 128 to 512 and up, and HUI DAW support. Meanwhile, SSL expands the capability of its C100 digital broadcast board with MORSE (Modular Resource Sharing Engine). The system has modular I/O, stage boxes and router hardware, allowing for an extremely dense concentration of audio I/O and router matrices for simple to large-scale applications. Optional PC control software manages asset ownership for smooth workflow. For the C100, SSL also offers a new IFB Master Channel for fast, direct access to multiple comm buses.

Version 2.5 software for StageTec's (www.stagetec.com) Aurus enhances the board's scene automation facility with freely configurable virtual layers, allowing the user to have different channel assignments available with each snapshot. The console's surface can be instantly customized to the user's preference with each scene change. StageTec also announces a single-rackspace Base Device for its Nexus routers, providing maximum power and flexibility in an ultra-compact, highly portable system.

Studer (www.studer.ch) is shipping its new Vista Series board, the Vista 5, a compact console with three banks of 10 faders having four layers that can access up to 1,700 channels. It features a one-knob-per-job surface with 32 faders: 20 channel strips optimized as input channels and 12 additional strips for operating output and input channels. Using the standard Vistonics screen, up to 52 outputs are under immediate control.

The Tascam (www.tascam.com) DM-3200 digital console has been updated to V. 1.20. Expanded features include cascade support for linking multiple mixers, MIDI Machine Control, GPI and more, as well as support for new hardware options. An IF-FW/DM FireWire card turns the board into a flexible computer audio interface with built-in effects, cue mixing, automation and more. An IF-SM/DM surround monitoring card brings the power of Tascam's high-end DS-M7.1 surround monitor controller to this affordable digital console.

Wheatstone's (www.wheatstone.com) D-7 for live TV and sweetening combines digital audio switching and router-based source call-up with integrated 4-band EQ and expansion/compression available to any input channel from a mouse-driven flat-panel monitor display. Also standard are automatic muting, monitor/talkback support, auto cue dropout, machine start/stop, multiple mix-minus and stereo/mono/5.1 handling.

Yamaha's (www.yamaha.com) MY Series 24-bit/96kHz-compatible expansion cards can be inserted into any of Yamaha's PM/DM/0 Series digital consoles and DME Series DSP engines. Designed for broadcast, the MY8-AEB 8-in/8-out AES/EBU interface for unbalanced digital signal transmission has eight BNC I/Os and a single BNC reference video sync input. A 16-channel MY16-CII CobraNet interface is targeted for live sound users.

Yamaha's PM1DV2 sound reinforcement console is shipping. The new version features automatic gain adjustment for systems using shared inputs, a pre-HPF direct out for recording feeds and built-in add-on effects such as a studio-grade compressor, vintage EQ, tape-style compression and high-end REV-X reverb. For theater applications, an enhanced Event List enables the Timecode Event List to match that found on the Yamaha PM5D console.

For midrange live use, Yamaha's M7CL puts all the faders on one page and offers a touchscreen LCD. The unit comes with 32 or 40 mic input channels with recallable mic pre's, four onboard stereo effects, eight graphic EQs, 16 mix buses, eight matrix outs and three rear panel expansion slots. Mix data can be stored to USB memory stick or to an XP PC using Yamaha's Studio Manager via Ethernet.

With the PLASA, IBC and AES shows just around the corner, there should be a lot of digital console news to come. Watch upcoming issues of *Mix* and visit www.mixonline.com for coverage of new developments. ■

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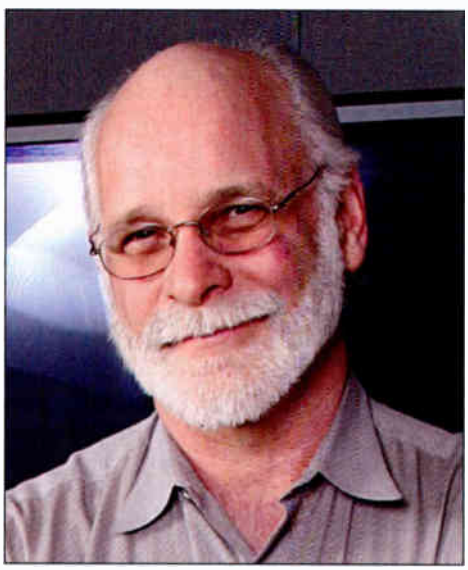
BY BLAIR JACKSON

David Hewitt

For TEC Hall of Fame Inductee, the Road Goes on Forever

David Hewitt is proof positive that sometimes nice guys finish first. This year's TEC Hall of Fame recipient—an eight-time TEC Award winner previously—is a true giant in the world of mobile recording, and he's one of the modern industry's pioneers. His company, Remote Recording Services, has been going strong for more than a quarter-century now, thanks to his enviable engineering skills, his remarkable "people" skills and what are arguably the best remote trucks in the business: The famous Black Truck begat the legendary Silver Studio, and now the White Truck (see "Inside the Polar Express" sidebar) is crisscrossing various states to capture the magic and spontaneity of live music events.

Much has been written about Hewitt's work through the years in the pages of this magazine, but we knew relatively little about his origins and how he and his company evolved. So that is the focus of this interview.



Where did you grow up and how did you get involved in audio?

Well, the *CliffsNotes* version is I was born in Montana and my father was an Air Force pilot, so we moved all over the place, which was very good training for the remote business. [Laughs] I haven't stopped yet. Love of travel is probably a prerequisite to this kind of business. I spent my high school years in France and Germany from 1960 to '64—those were some of the best times of my life. It was a wonderful time to be there. Among other things, it was the golden age of sports car racing, which I was really into. Later, I was in the Air Force, too.

Were you a tinkerer, an audio guy?

My early days were pretty much all mechanical, but not audio so much. I started flying with my dad when I was a kid, and then that crossed over into my love of sports cars and I got completely mesmerized by that whole thing. We used to go up to the Nürburgring, which is one of the famous racetracks in Germany—you could race around in your civilian car, and it was one mark for the car and a mark for each person in it. You did this at your own risk!

Anyway, I got into working on engines really deeply, and when I came back to the States, I dived into it completely. I was working with various sports car elements. I worked for Bob Holbert Porsche [the champion race car driver who also had an auto dealership near Philadelphia] and at one point, I also went on to work for [multiple Indy 500 champion] Roger Penske when he had his first Chevrolet agency. He had his first Can-Am car, a Lola T-70. Just my luck, when I got my first crack to go up to Watkins Glen [Finger Lakes, N.Y.] with him, the car crashed and that was the end of that for a while.

Were you a musician at all?

A frustrated musician, yeah. I played a little guitar, a little bass, and like so many people in this business, it was about girls! I had a couple of girlfriends that were singers, but I wasn't good enough to make the cut in the band. I think I was too lazy to practice. But I figured out how to twist some knobs and that got me interested in the whole recording side of things. That was around the Philadelphia area in the late '60s. There was some rock 'n' roll going on there and a lot of jazz, and, of course, R&B was always big there.

Were Joe Tarsia and Sigma the big players in town?

Sure. Joe had been the chief engineer at Cameo Parkway Records [home of Bobby Rydell, Chubby Checker, et all], and then he went and [started] Sigma. What moved into the Cameo Parkway Studio was Regent Sound, which was started by Bob Liftin of Regent Sound in New York. He sent Joel Fein down to Philadelphia to run the studio, and Joel Fein was nice enough to let me hang out there. There was no job, of course, but it was the usual story: I was there for three months with no pay, and then Joel finally convinced Liftin to pay me $50 a week.

"And then one day, the chief engineer doesn't show up for a session because he has car trouble, and then..."

[Laughs] Not quite! Actually, I think it was that poor Joel was completely overworked; he was the only engineer in the place. So I got to start picking up some of the acts coming in. We had Stevie Wonder in there, the Dixie Hummingbirds, who were a wonderful gospel group. And, of course, a lot of R&B.

Is this 8-track, 16-track?

By 1970, Bob had invested in Ampex MM1000 16 tracks—those big ol' mastodons. But when you got them to run on-speed and stay up, they sounded great!

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Is that where you first encountered remote recording?

Yes. Bob Liftin was all about television audio and big band and all that. One day, there was a TV pilot they were going to do at the Academy of Music in Philadelphia, which was right across the street from the studio, and they wanted us to record it. I'd gone out before with equipment, dragging around cardboard boxes full of stuff—that was cruel and unusual punishment! But this was a 26-piece orchestra—a big deal. So I started calling around trying to see if I could get a truck [for the recording] but none were available. So I called Chris Stone [of the Record Plant in New York City] and he was so great: "What do you need? No problem! *Of course* we've got a truck for you!" He really knocked me out. So he sent this truck down and it had a 24-input, 8-bus DiMedio console and a pair of MM1000s in this dinky truck—it was crowded in there! [Laughs]

So it was me and Carmine Rubino, who was a big engineer in those days, and Frank Hubach [also an engineer and tech guy], and the fourth guy who was dragging the cables was Jack Douglas, who went on to be a great producer with Aerosmith and John Lennon. We had such a good time, and it just made my hair stand up! Everything happened so fast. Problems would pop up and the guys would dive on 'em and they'd get solved. It was tension, release, tension, release—and yet they all remained calm and they had a great attitude. They were all so friendly

In the "Silver Studio" during Oscar celebrations in L.A. are (seated, L-R) owner/engineer David Hewitt; World Studio Group CEO Chris Stone; (standing, L-R) assistant engineers Phil Gitomer and Sean McClintock.

Inside the Polar Express

"If you're going to build an all-digital truck, smaller doesn't make it lesser," says Sam Berkow, lead designer of the new Remote Recording Services truck (pictured on this month's cover). At the time of our interview, the truck was parked outside of Harlem's historic Apollo Theater, set to record and mix the fifth annual Jazz at Lincoln Center Spring Gala fundraising event. "With this truck, you can get a client something they won't find in any other digital truck around the world, which is a great mixing environment. What we set out to do was create an environment where Dave Hewitt, who's done 2,000-plus shows in an analog truck, would not only feel comfortable, but would also want to mix."

Hewitt, who has made the transition from a 16-year run in the 44-foot Silver Studio to the 22-foot Polar Express, says, "From an acoustics standpoint, there's no comparison. We were constantly improving on the last design, but nowhere did we have the science and the art that Sam has brought to this project. This truck is a whole different level of treating the acoustics first and fitting the equipment around them, instead of vice versa."

When starting with a truck, acoustic designers are faced with an array of constraints that generally don't present problems in the typical building-based studio, including the need to reduce weight, protect against road-borne vibration, creatively route cables without the use of troughs and maximize ergonomics in atypically tight spaces. To make matters worse, installing acoustical treatments can limit the designer's ability to effectively distribute conduit cabling and manage signal routing.

"One of the primary tools we have to work with is room shaping, incorporating walls that slant in both the horizontal and vertical planes," says Berkow, who designed the truck with his partner/senior consultant at SIA Software, Steve Sockey. "The problem is modes: There are certain frequencies that resonate with parallel walls or sets of walls, and are particularly problematic in smaller rectangular spaces. I've broken these modes up by placing bass traps vertically in the front corners of the space and horizontally across the top of the room at the front. Further, the front wall is actually two acoustical panels, slanted inward toward the center of the room a little bit. Secondly, we used soffits that run along the sides of the truck [at the ceiling] to create a series of bass traps that 'dampen' unwanted modal frequencies and help create a smooth decay within the spaces, as the soffits incorporate both sound-absorbing and diffusing materials. Once the truck was built, we used our SIA Smaart acoustical measurement software to measure noise levels and optimize the interaction of the monitor systems and the 'room.'"

In the sweet spot, Hewitt works on the Nuendo platform (96 tracks of Pro Tools are also available) powered by AMD 64-bit Dual Processors, and he faces two Yamaha DM2000 V. 2 mixing consoles flanked by Dynaudio Acoustics Digital Air 6s (surround) and 15s (stereo). Available remote mic preamps include Millennia HV-3s, Aphex 1788As and RME Octomics going to Apogee converters feeding RME 648 MADI converters and running to the truck via fiber optics, feeding again into RME MADI bridges before hitting the Yamaha consoles.

With the warm sounds of Wynton Marsalis' septet floating in, Hewitt couldn't be happier about the advances his efficient new workspace represents. "The power and the I/O capabilities are immense," he states. "Size *does* matter, because in cities like New York, a minimal footprint is important. And when it came to the sound, that's got to be built in from scratch—you can't bring the acoustics in with a piece of outboard." ■

David Weiss is Mix*'s New York editor.*

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and encouraging, and afterward, Jack said, 'C'mon up to New York and we'll show you around.' So I did go up there and checked it out, but they weren't hiring, so I decided to go out West in [what else?] a Volkswagen bus and try my hand out there. I made the rounds out there—in the Bay Area, where Chris Stone and Gary Kellgren were setting up the Record Plant in Sausalito, and then down in L.A., but there were no jobs, so I went back home figuring I'd save up some money and then move out there and figure something out.

So I went back to Record Plant in New York to see what was happening, and I walked through the front door and bursting in to greet me is Frank Hubach, who had been left in charge of the remote truck after Tom Flye moved to California to work at Record Plant in Sausalito. He sees me coming, and he literally grabs me by the shirt and says, "What are you doing right now?" Before I could answer, he says, "Get on that truck!" So with no change of clothes, no *nothin'*, we drive to a show somewhere in upstate New York, and we did what I think was the first of the *King Biscuit Flower Hour* [radio] shows. It was Mahavishnu Orchestra and some dinky band called Aerosmith opening for them! It was *fantastic*! Then we drove immediately to Boston—this is in the dead of winter—and we dragged everything out of the truck into the Symphony Hall—the consoles, the machines—and took them up two floors and set up in there to record the Boston Pops. I'd never been that close to a symphony before; I was pretty much a rock 'n' roll and jazz guy, and that blew my mind completely.

Then, in fairly short order, Frank Hubach decided to leave and he took off, so that dumped the truck in my lap, and that was my big break. But, boy, I was struggling. I had to engineer all the gigs that didn't have a guest engineer coming in, and those were pretty deep waters. But you learn in a hurry.

At some point here, you decide to take the leap and start your own company.

Well, that truck was so long in the tooth—it was an old Wally Heider truck that had been modified to death and it still was just not enough. We had mixers stacked up and the inputs were starting to grow and grow, and I finally convinced [New York Record Plant owner] Roy Cicala after a couple of years to build a new truck. And that was the Black Truck, which was probably the first of the heavy-duty, audio-only remote trucks. It was deadly serious: a Peterbilt chassis built from the ground up to be a remote truck; not a converted dry goods van. [Laughs] It had proper insulation and lead-lined walls. It

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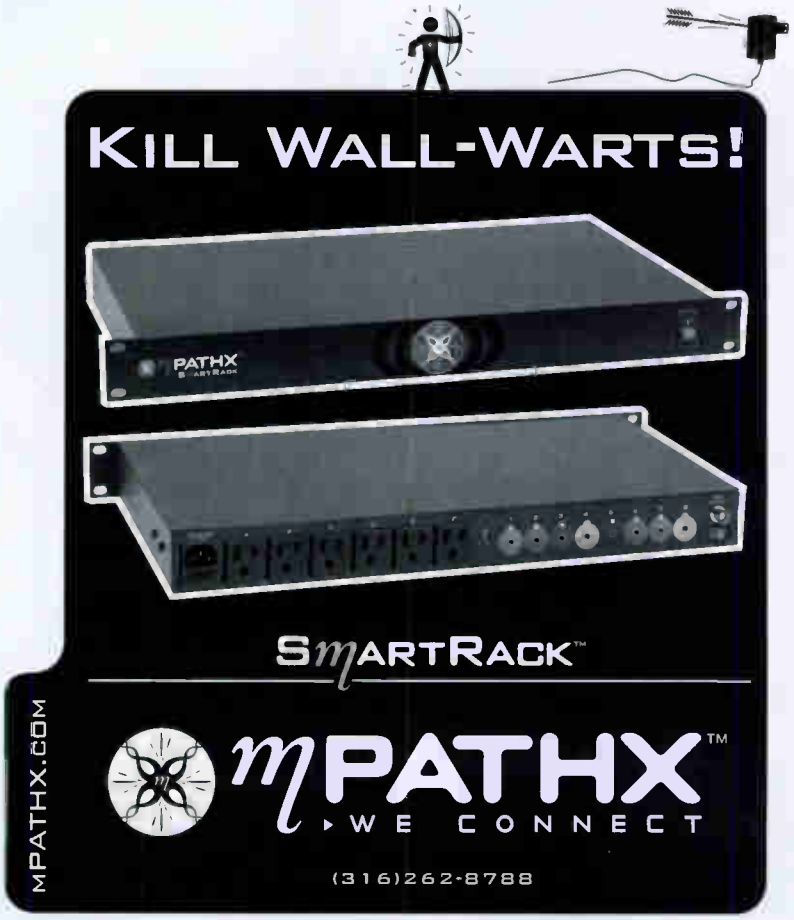

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was a real studio. We had a custom API built for it—44 inputs, which seemed like the whole world at the time!

What else did you change from the previous, less-satisfactory truck?

Mostly it was about the I/O. We used the Record Plant standard AMP connectors and built our own Jensen mic splitters, and we had monster AC [240 to 208-volt] isolation transformers, which the old trucks didn't used to have—they had all sorts of grounding problems. So all of a sudden, life got much easier in terms of troubleshooting. Most of the buzz and grounding problems went away.

Did the fact that you had built this sensational new truck affect the kind of gigs you got?

It just made it all easier. We'd been doing big-input gigs for a while. Bands like Yes and Emerson, Lake and Palmer. ELP had 60 inputs for a three-piece band, which was unheard of in those days! These days, a single performer might have 60 inputs.

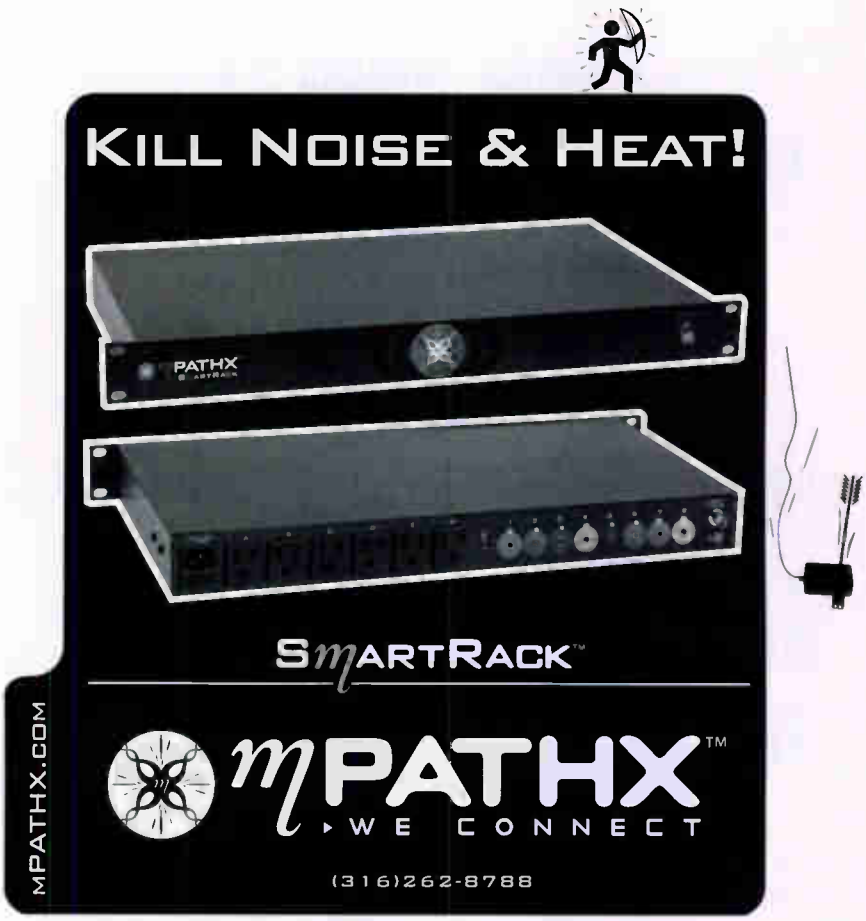
How did the Black Truck become yours?

In '79, when I finished the Black Truck, I became an independent contractor. I fired up Remote Recording Services, but I was still director of remotes at Record Plant. It was one of those deals where they let me do some side work on the condition that I watch their interests and take care of their remote needs.

One of the reasons I [started my own company] is that digital audio was starting to happen then, so I bought a [Sony PCM-1610] and a BTU [¾-inch video recorder], and we used to rent that stuff out. And when the [Sony] 3324 came out, Neil Young had the first two in the country, I think, and right behind that a guy named John Moran from Houston. John and I struck up a deal, and I used the machines a lot.

I left Record Plant in about '85. They didn't want to do the digital stuff or post work particularly, and we had some other disagreements. So I left—on good terms—and I still used that truck. By the following year, I had negotiated with Roy Cicala to buy the Black Truck, and it wasn't long after that that Record Plant New York went under. After that, we took on a higher profile as Remote Recording Services and we moved an hour north of Philadelphia in Bucks County. For me, it was a quality of life issue. For what I was paying for rent for an operation in the New York area, I could build my own building! Besides, you're in a truck. It doesn't matter where the headquarters is.

Was there ever a period in your life in which you wanted to settle down and be



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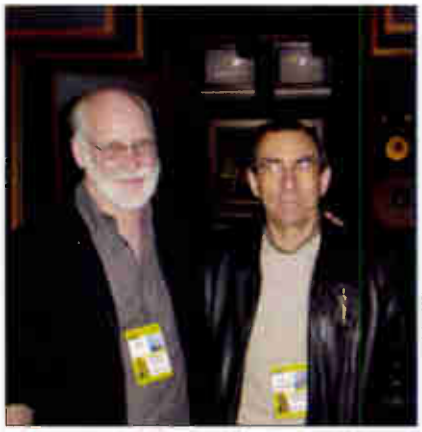


PHOTO: HOWARD MASSEY

Hewitt and broadcast mixer Ed Greene at the 76th Annual Academy Awards

in one place, or have you always had that sort of wanderlust that's required by your profession?

It's sad, but true—I get itchy. I love the country, I love the city, but I need to keep movin'. It's in the genes at this point, I guess. But you definitely pay a penalty, and your family pays a penalty for all the time you spend on the road. It's the sad part of the job.

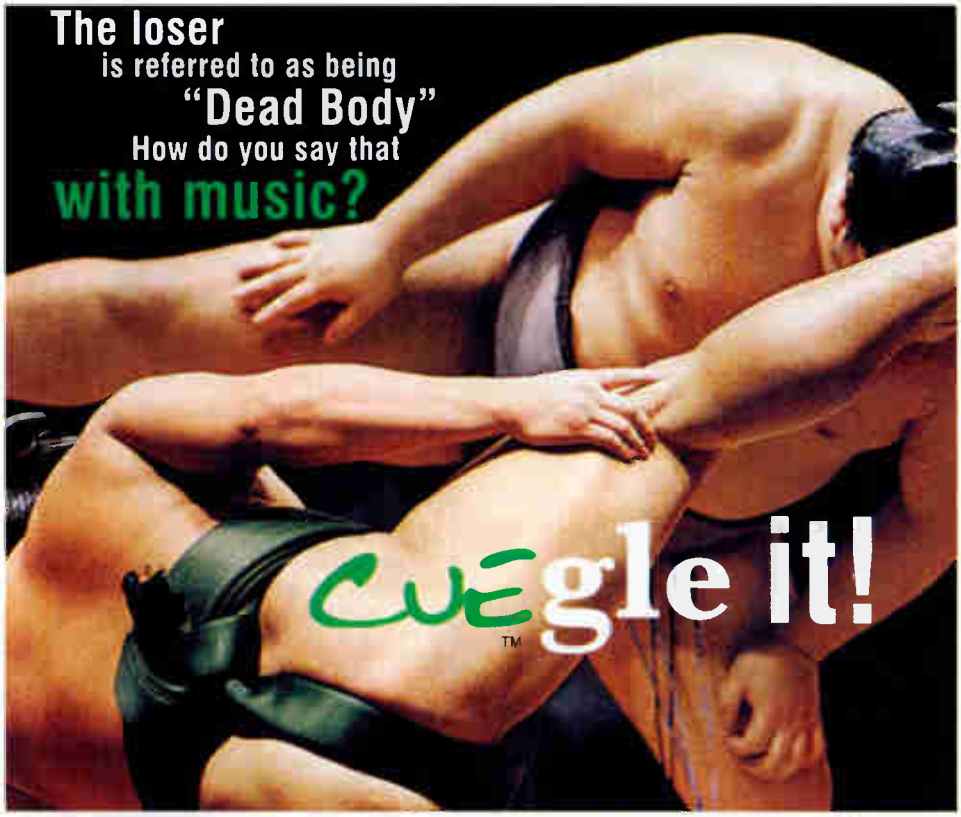
When did the Silver Studio come onto the scene?

Well, the next part of the evolution is that in 1989, we crashed the Black Truck. It rolled on an icy highway out here in Pennsylvania, around five o'clock in the morning. I got cold-cocked. I was sitting shotgun and the seat-belt popped and I went flying. I'm very lucky to be alive. So there's your *forced* evolution. That brought about the birth of the Silver Studio, and here we are 16 years later!

So it's another opportunity! What did you want to do that you couldn't with the Black Truck? It's even bigger, isn't it?

It is. We definitely moved it all up a level to make the biggest and the best, and to have room for the producers and room for multiple machines. Because at this point, you're getting into locking up 24 tracks and you've got some digital and you've got this and that. Here's a great example: Early on in the Silver Truck, we did three dates back to back, each one of them [in] a separate format. We had the 24-track Studers, which at that time were the A820s, for one date; then we had a 32-track digital with the Allman Brothers because they liked the Mitsubishis; and then we had Sony 3324s for Carole King. We had no time to go back and swap machines between dates, so we had four big, hulking multitracks, but we had the room for them.

The Silver Studio has a Neve VR?



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Yes. That console has been amazing. It's virtually bullet-proof. It's now had 14 years on the road and it's just great.

I understand you have a new partner in the business.

Yes, Karen and Jim Brinton bought RRS in 2003 and brought their business skills and experience to the company. Karen established her office in New York to be closer to the clients. I continue on as the president and chief engineer.

And now you have a new truck.

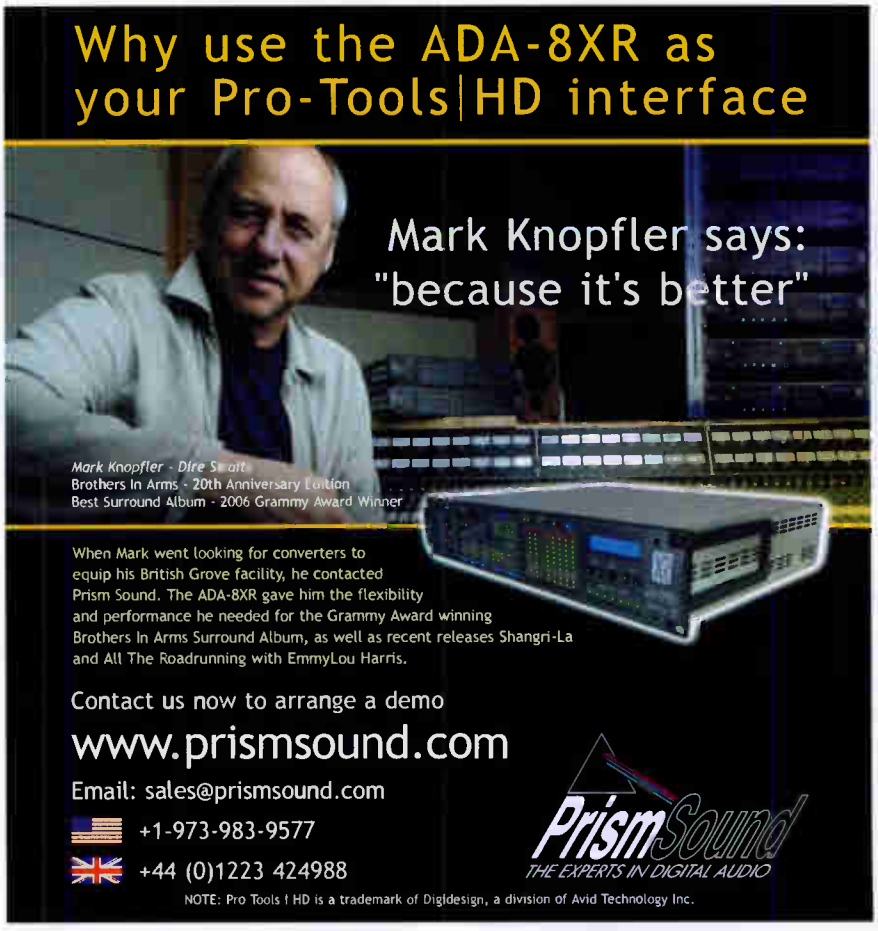
Right, the [business] climate has changed, so once again, we built another truck—and we didn't wait until we wrecked the previous one! [Laughs] And the reason we did is I didn't want to tear into the Silver Truck and make a modified half-analog, half-digital concoction—although we've always had digital recording capability on the Silver Truck. We figured if we were going to make a dedicated digital truck, we'd do it from scratch. The Silver Truck still has a healthy client base—like we went down to Nashville and did Neil Young's *Heart of Gold* DVD and film. We had four 24-track analog machines all locked up. We still do the [Rolling] Stones and some of the old guard—and the new guard that likes the sound of analog.

But for all the TV production and things like that, we had to field a digital truck. It has a smaller footprint—it's about half the size of the Silver Truck. We did some modern acoustics, thanks to the wonderful Sam Berkow of SIA Acoustics, who did the acoustic design for [the Polar Express], and it worked out spectacularly for us. I love the sound we get in there. It has a pair of Yamaha DM2000s and it's all run on MADI. Some of our very good clients, such as Elliot Scheiner, are Nuendo-based, so we've got that and Pro Tools. We actually have three Nuendo rigs based on the AMD Dual-Core processor. Those AMDs are just rocket ships!

On a fundamental level, though, I'm guessing that what still thrills you is the art of it. It's the show, the music.

That's exactly right. In the end, all the technology should be transparent to the music. These days, you've got a lot more people in the chain. There's almost always video involved and that brings its own, shall we say, "unique elements," and it's much more involved. In the overall product, the audio is only one of many things that's going on. But *we* still want it to sound as good as it possibly can. We still care about the music. It's everything to us. ■

Blair Jackson is Mix's senior editor.



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YOUR WAY, RIGHT AWAY

New Production Music Library Releases, New Delivery Options

BY SARAH BENZULY

Two years ago, online delivery was the name of the game. Then last year, makers of production music libraries saw advantages in putting their deliverables on customized hard drives or digital asset-management systems, allowing for speedier search capabilities than rummaging through hundreds of CDs or DVDs.

This year, companies are speeding up their download capabilities and streamlining the delivery and licensing process to suit a client's need. And lately, those client needs have focused on new markets—ringtones, videogames and other mobile media devices. According to CSS Music's Michael Fuller, "Music libraries must now navigate a more complex terrain. If we forget about the customer's needs, we will pay a big price. On the other hand, being precipitous about offering mobile media licensure to gain illusory market share could be costly."

New company First Call Music's Stephen McNamara agrees: "Ringtones are an area that many production music libraries seem to want to exploit. However, our research suggests a major problem for a music library trying to make inroads into this area: Many people in the ringtone demographic seem to want popular songs, not generic music from a library. And with a price point of around a dollar, there is little economic incentive for the ringtone users to go with generic tunes instead of their favorite hits.

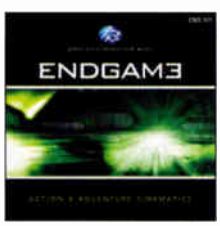
"Videogames are another matter," McNamara continues. "Well-produced library music can play a significant role in game development as games require longer pieces that can loop seamlessly and must enhance the visual image. Library music might play a larger role as the pressure increases to finish the music in a faster time frame."

All-Star Music Hyper Latin

For example, FirstCom Music is working with several videogame producers to create new libraries, including co-producing a remix with DJ Danger Mouse for the theme to *Grand Theft Auto: Liberty City Stories*.

Whatever new roads production music libraries take, there are plenty of new offerings to entice loyal and new customers.

5 Alarm Music (www.5alarmmusic.com) has just released new libraries All That Jazz, Club Selector, Islands & Beaches and Hot Club. These double-disc volumes provide full, underscore, commercial cut and solo instrumental versions. Users can also check out breakout indie artists from 5 Alarm's record label, Rescue Records (www.rescuerecords.net).



APM Endgame *music cues*

615 Music (www.615music.com) has released the 10-CD Promo Accelerator library and added six CDs to its 615 Platinum Series collection. Promo Accelerator was designed for TV promo producers and offers a number of contemporary sounds. In addition, the company is the new exclusive distributor and representative for composer Shelly Palmer, whose releases include *Palmer News Packages*, *Brave New World*, *Alt.news*, *Millennium 3* and *Building Pride*.

AirCraft Music Library (www.aircraftmusiclibrary.com) has created production musicnow.com, a search tool that allows visitors to browse the company's catalog, listen to samples and download/license music. Users can search for new releases Psychedelic Rock, Piano A'Tudes, Alternative Rock Vol. 1 and Electronic Indie Pop. The company has also just completed recording the first disc in its AirCraft Artist Series, featuring award-winning composer/performers. The first disc, *Cello Classics and Abstractions*, features Grammy Award–winning cellist Eugene Friesen.

Releases from new company All-Star Music (www.allstarlibrary.com) include *No Wimps* (with composer Peter Baltes), *Hyper Latin* (composer Michael Sembello), *Gargantuan Guitars* (composer Earl Slick), *UK Rock* (composers Slick and Mark Plati), *UK Funky Town* (composer Steve Sechi) and *Chick Rock* (composers Slick and Plati).

Endgame, Associated Production Music's (www.apmmusic.com) collection of original music cues, was created by in-demand videogame composers. Endgame bows with six CDs, featuring contributions from the likes of Tommy Tallarico, Chance Thomas, Jack Wall, Inon Zur. Cris Velasco and Rod Abernethy, to name a few. The company also introduced a new podcast, providing news and other developments at APM.

Home to composer Bob Mithoff, Bob's Music Café (www.BobsMusicCafe.com) is offering its latest volumes of production music, 101 Classic Themes and Feature Film Scores. Each set comprises four CDs packed to their physical limit, with a buyout license per volume of only $99.

The Canary Collection (www.canarymusic.com) offers Mac/PC hybrid CD-ROMs of its libraries free with purchase of the audio CD counterpart. The company will also release a stand-alone (CD-ROM) searchable database.

CSS Music added 14 new CDs to its Target Trax, Repro-File Plus, Super Theme and Max Trax libraries. Both of the company's Websites, www.cssmusic.com (for CDs, CD-ROMs, CD volume downloads and hard drives) and www.dawnmusic.com (individual track downloads), feature full-length streamed samples. In addition, CSS

World Radio History

ILLUSTRATION BY DMITRY PANICH & LAURA WILLIAMS

has updated its asset-management system, UltraEdit II ($2,495, MP4, MP3; $3,995, WAV). The new system features enhanced search flexibility, auto-fill cue sheets, enhanced playlist generation and compatibility with other management tools.

DeWolfe Music Library (www.dewolfemusic.com) has added a slew of new releases to its expanding library, including *Tronic Beats*, *Club Rouge, Vol. 4*, *Latin Mix*, *Alternative Rock*, *Sounds of the Urban Underground*, *American Patriots 3* and *4*, *Big Band Entertainment*, *Lifestyle TV Two*, *World News* and *Summer Sounds*.

Extreme Music (www.extrememusic.com) added to three of its seven libraries. New discs include *Lounge Noir*, *Drumdrops*, *Indie Rock 3*, *Reggaeton* and *Rockin' Breaks* (X Series); *Dark Drama*, *Epic Choral*, *Light Drama 2* and *Horror* (Directors Cuts); and *Elgar Vol. 2*, *Tchaikovsky Vol. 4* and *Classical Hits Vols. 4* and *5* (Ultimate Classix). Go online to see how these music offerings have fit into *Click*, *War of the Worlds* and *Harry Potter and the Goblet of Fire*, to name just a few blockbusters.

First Call Music (www.firstcallmusic.com) launched earlier this year with five libraries already under its belt: Light & Casual Moods provides acoustic instrument tracks; Grooves, Moves & Vibes thumps with R&B, electronica, big band and hip hop; the self-explanatory Guitars Rule!; Emotion, Drama & Suspense; and Action & Darker Moods.

Putting the world of hip hop on a four-CD set, Firstcom Music's (www.firstcom.com) The Chronicles of Hip Hop features Bavu Blakes, Def and Dangerous, DJ Agzilla, The Movement, Krome, Marcus Siskind, Hydroponic Sound System and many more crunk DJs and rappers. The SEE Trailer Tracks 4-CD collection features a wide variety of styles for motion picture advertising. Users can take advantage of the company's MusiQuick Local search/audition/download software or custom hard drive delivery. The company's One Music library is now being produced by ad music company Juniper Music (McDonald's, Hasbro, Nissan, Nokia).

Firstcom SEE Trailer Tracks

Advertising any five royalty-free CDs for $189, Fresh Music (www.freshmusic.com) provides the user with numerous library offerings. Check out these new releases: World Vision, Mirror Image 2, Access Community, New Century Indie Rock, Production Elements 2, Sparse, Ultimate Action Beds, Western Swing and Dark New Age.

Recently named music supplier for RTM Productions (Spike TV), GMP Music (www.gmpmusic.com) has released

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YOUR WAY RIGHT AWAY

three new products, entitled Ad Shop VII (broadcast variety), The Way It Should Be (soft rock/easy listening) and The World As We Know It (world beat). Users can download an entire CD from the site; the downloaded file contains all of the individual tracks in high-resolution MP3 format and a pdf file for the CD and track information.

For the past five years, The Hollywood Edge (www.hollywoodedge.com) has been creating record label–quality production music under the Soundelux Music banner. New releases feature breakthrough artists Carl Moniz, Michael Barclay, Bruce Hanifan, Mark Drost and Peter Kneser. During the past year, the company added two installments to its Premiere Edition library. *High Impacts* features more than 2,200 action sounds, and *Sonic Energy Production Elements* brings 1,200 effects to create impressive soundscapes and punctuations.

Showcasing its music on HGTV shows and soap opera *Days of Our Lives*, JRT Music (www.jrtmusic.com) brings out seven new releases this year: *Street Beatz* (hip hop, rap), *Action Shack* (retro rock), *Tunes for Toons 2* (full orchestral productions), *Poptronic 2* (techno/trance/electronica), *Fresh Beats* (broken beat, nu jazz), *News New* (beds, stings, promos) and *Kitsch Kitsch 4* (from the Tele Music classics vinyl vault circa 1970s).

Metro Music Productions' Experimental techno CD

Celebrating its Sweet 16, Killer Tracks (www.killertracks.com) launches its Indie Film Score library. Check out new releases from producer Wendie Colter and music supervisor Mark Rome, as well as newly published releases *Chilled Underscores*, *Pop Shop*, *Silent Movie Piano* and *Celtic Now*. Also new are *Videogames Music Demo* and *Trailer Trash*; the latter is offered in surround.

Manhattan Production Music's (www.mpmmusic.com) libraries, including new releases *Modern Alternative Rock* and *'80s Music*, are now available to be downloaded to iPods and iTunes (including metadata).

Megatrax (www.megatrax.com) expanded its production music library this summer with 10 new releases. Four *Urgent Grooves* CDs from Amusicom

MusicBox PromoBox

can increase the tension of a crime scene investigation or heighten the hyper-reality of a car chase. *Urgent Grooves* is offered in a range of styles, from industrial techno rock to orchestral pieces. *Scoring Moods 1: Human Journeys* features a wide range of underscore, while *Britpop* features contemporary piano and male vocal pop sounds. *Cinematic Trailers*—chock-full of brass and orchestral themes, as well as high-impact percussion—was recorded with a full orchestra and choir.

Metro Music Productions now sports a new Website, www.metromusicinc.com, offering users instant online licensing and payment. New library Modern Rock features the current trends in guitar-driven music; Experimental is hard-core, high-energy techno and electronica; and Urban Beats 1 and 2 highlight chart-topping hip hop grooves.

Music Bakery (www.musicbakery.com) is now offering categorized thematic CDs for $149 each in MP3/WAV/AIFF formats. These CDs cover high-energy themes for sports, American music, drama and suspense, world beat, rock and urban, industrial, motivation, classical and more.

GT PROFILE

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More info on Greg Ladanyi and GT's other Friends & Relations at **www.groovetubes.com**

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YOUR WAY RIGHT AWAY

MusicBox (www.musicboxmx.com) has just released its newest CD library, PromoBox, an ongoing series of CDs, with each CD holding 50 themes in five genres: action, uplifting, suspense/tension, comedy and drama. Full-length versions of each theme also appear on existing MusicBox CDs. Check it out online via MusicBox's search-and-download system, MusicBoxLIVE.

Network Music (www.networkmusic.com) is upgrading its Website to offer search-and-download functionality. The new site will offer random browsing of all its libraries, as well as a specific search engine using the company's Trakfinder technology. Trakfinder HD is a hard drive–based, search-and-download delivery system that offers similar browsing/searching as the site. And in the CD world, new release *The Thunder Down Unda!* offers fresh rock, pop and film sounds with an Aussie flair. UBM, the company's newest library, is produced in Germany with European-based composers, and is geared toward film and TV productions. SLAM! is an aggressive, contemporary library with seven CDs. New releases in its broad-based library include *Beatific Bliss*, *Competitive Spirit*, *Blues Cues*, *Ancient Atmospheres*, *Classic Game Show*, *Acoustic Sunshine*, *Global Vision* and *Urban Chill*.

Non Stop Music's Blues release

Nightingale Music (www.NightingaleMusic.com) has extended the scope of its Voice Box Series with *Voice Drops*. Filled with more than 750 "human mouth" elements, *Voice Drops* is packaged on an audio CD and CD-ROM (WAV files) and comes with a wide range of vocal material, including multilingual alphabet and numerical countdowns, Foley, hip hop samples and everything in between.

The broadcast-quality library at Non Stop Music (www.nonstopmusic.com) can now be searched and downloaded at www.CUEgle.com. An advanced music search and download engine, CUEgle combines the look and feel of a physical CD collection with the quick search capabilities of an online library. Each MP3 track can be previewed and downloaded. Users in need of WAV or AIFF files can conduct their CUEgle search online, then pull the files from a CUEgle-supplied hard drive. Searchable via CUEgle is new library Amphibious Zoo, a five-disc collection of contemporary CDs, including *Suspended Adrenaline*, *Blues*, *Passport to India*, *Hip Hop 1* and *Funk*.

The folks at Omnimusic (www.omnimusic.com), seeing many of its clients switch to online delivery, has spent the past year re-categorizing all of its tracks, writing its own software programs for search/audition and installing its own services for search/download system Sparky. The company also adds new titles *Buzz*, *Sports World*, *Biorhythm*, *Café*, *Biznet II* (business/technology) and *World Tour*.

Production Garden Music (www.productiongarden.com) added to its Manchester Music Library (*Theme Suites IV*, *Xtreme Edge*, *Entrepreneurial Spirit*, *Classical Masterworks*), Metro Music Library (modern rock, dance house, cool jazz and more), Music Street Library (loaded with energy and character) and AV/Video Series 200 Library.

The biggest change at RCB Music Library (www.rcbmusiclibrary.com) is that it went to a buyout format. The library still allows user signup to gain full access to the members' section. Demo MP3s can be downloaded, but each MP3 has a voice-over every few seconds to prevent theft. New libraries include Poignant Moments and the *Drum Loops* and *Drum Grooves* volumes. The drum volume will offer MIDI files on select 4-bar loops.

With the success of Emotional Response I, Frank Serafine (www.frankserafine.com)

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releases the sequel, Emotional Response II: Ice Sculptures. Serafine collaborated with musician John Nau to create a film-style, atmospheric library. Serafine has also joined forces with Associated Production Music and is currently finishing a cinematic music advertising collection. The company is also working on Gun of Cinema, Comic Sonic Relief, Sci-Fi and SFX.

Designed to work with the Mood Mapping capabilities of its Sonicfire Pro 4 (now universal binary), each track in **SmartSound's** (www.smartsound.com) Strata Series is delivered in multi-layer format, with up to eight separate instrument layers. A new title in Strata, *Ethereal Dreams*, provides a light, warm collection of new age soundscapes.

Twelve years ago, Sonic Network made its entry into the audio market with turnkey solutions for PC soundcard and game console manufacturers. In June 2006, the company rolled out a comprehensive brand structure under the name **SONiVOX** (www.sonivoxrocks.com), which offers a three-tiered product suite based on the company's past offerings. These include mdME (music-driven mobile entertainment), AudioiNSIDE (mobile audio–enabling technologies) and SONiVox MI (formerly known as Sonic Implants), which carries the line of virtual instrument libraries for musicians, composers and hobbyists. Several new product offerings are scheduled for release, beginning with SONiVOX MUSE, a suite of music production software. Pyrosonix, Jamfone and DanceLord, three new SONiVOX mdME applications, are scheduled to follow with releases targeted for this month.

Stephen Arnold Music (www.stephenarnoldmusic.com) is currently making available to NBC affiliates its The Rock news music package. Named in honor of Rockefeller Plaza, home to NBC in New York, The Rock has taken the memorable "bong bong bong" signature and created 15 themes and more than 800 cuts of music. Released early last month, Box of Rocks: Video Music comprises the initial seven CDs; each quarter, an additional CD will be offered.

TRF Production Music (www.trfmusic.com) has been busy this year with a whopping 35 new CDs out: Ten in the Kool Kat library, 10 new CDs added to its Adrenalin library, 12 in the Stock library and three to the Dennis library; TRF has also added to its Bravo and Cobra libraries.

Big news over at **Valentino** (www.tvmusic.com): The company's entire collection of 300 CDs of specialty music and more than 50,000 sound effects is now available for Mastertone and TrueTone ringtone, ringback and related mobile entertainment apps. New library Millennium offers 16 volumes of techno, power and prestige, sports themes, actions, bumpers and stingers, drama, Latin pop, classic rock and funk.

VideoHelper's (www.videohelper.com) ScoreHelper: Disc 04 features five new scores: the spy/action score of *Counterdeception*; King Crimson–esque *Thrill Kill Seven*; the European-tinged romantic comedy *Villa Firenze*; the videogame-inspired spy comedy *The Clumsiest Spy*; and the action/romance/documentary *The Rising Sun*. Coming attraction: Overkill—all available on PLAY (www.playvideohelper.com), a music library search-and-download system.

Westar Music (www.westarmusic.com) has added 21 new CDs, including six to its Drama Film Scores set, a slew of additions to the Classical Music Collection and titles in easy listening, world fusion and segues. Interested? Check out the company's MusicSource search engine. Buying? Westar Music distributes Soundminer, a digital audio management system for the Mac. ■

Sarah Benzuly is Mix*'s managing editor.*

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BY KREGG BARENTINE

Trina Shoemaker

Grammy-Winning Engineer Rises Above Hurricane Disaster

[Eds. note: We will never forget how, in 2005, Hurricane Katrina brought destruction all over the Gulf Coast. Thousands faced devastating losses and those in the production community were not spared. Yet even in the face of this disaster, they inspire us with their resilience and determination to overcome. Over the next pages, we share some of their stories.]

A year after the worst natural disaster to ever hit the United States, the physical and financial effects from Hurricane Katrina are still being felt by those hit the hardest. Many of us in the recording industry have found ourselves wondering what we would do if such a disaster ever hit us. What would you do if your vintage Neve EQs and preamps were submerged underwater, or your original UREI 1176 compressors and API Lunchbox pre's became buried underneath layers of toxic sewage-sludge? Worse yet, what would you do if you lost your entire recording studio filled with rare, sought-after pieces of gear that took you a lifetime to acquire? This is a topic that consumed many of my interim moments with Grammy Award–winning engineer Trina Shoemaker (Sheryl Crow, Queens of the Stone Age, Dixie Chicks) while working with her on a project earlier this year at Blackbird Studios in Nashville. Shoemaker was a 20-year resident of New Orleans before she lost her home and studio in Hurricane Katrina.

I met Shoemaker at the console of a classic Neve 8078 in Blackbird's Studio A (beautifully redesigned by Michael Cronin) as she excitedly waved a FedEx envelope in the air proclaiming, "My insurance checks have arrived!" When I found out what the insurance check was for, Shoemaker's captivating story unfolded.

Where did you live in New Orleans?

I lived in a beautiful two-story home of Cape Cod design, built in the 1940s in the Gentilly neighborhood of New Orleans, near Lake Pontchartrain. It was filled with lush flora and mature trees. Without getting ahead of myself, I should mention that this was next to the London Avenue levee that broke. Anyhow, I bought the house in May of 2005 after realizing I needed to live in a family-friendly area since I had a newborn baby and was a single mom. I spent about $75,000 dollars to convert the garage into my recording studio, and I lived and worked there for all of two months before the hurricane hit.

How did you prepare to evacuate once you heard the news?

I was in Alabama with my baby visiting Grayson's, my fiancée and baby's father, parents. It was on Friday the 26th that I heard the news of Hurricane Katrina making its way up through the Gulf. I had a very bad vibe at that moment. I decided to drive back to New Orleans and ready myself as best I could. I left at 4 a.m. on Saturday and arrived around 7 a.m., thinking I would prepare to have some wind damage to the house and maybe a little water. I figured the worst that could happen is that the first-level studio might get a few inches of water, or that the roof might leak and that I might have to replace carpet after the storm passed. So I boxed up my computer, my Pro Tools HD rig and some of my more-expensive microphones, which I stashed upstairs on the second level in plastic, hoping they would not get damaged.

At first, I thought I should take the whole studio upstairs, so I started bagging everything, but with an 8-month-old baby in my arms, no one to help me and sweating profusely in the hot, muggy weather, I realized that wasn't going to happen. I started to panic because everyone was evacuating at that point, so I just took gear out of the racks, bagged the items and stacked them all on a folding table in the middle of the control room. Deep in my heart I was very frightened of this storm. Growing up, I had bad dreams about storms and here it was—really happening.

Did you manage to take any gear with you when you evacuated?

I took some hard drives and my Pro Tools iLok key, but

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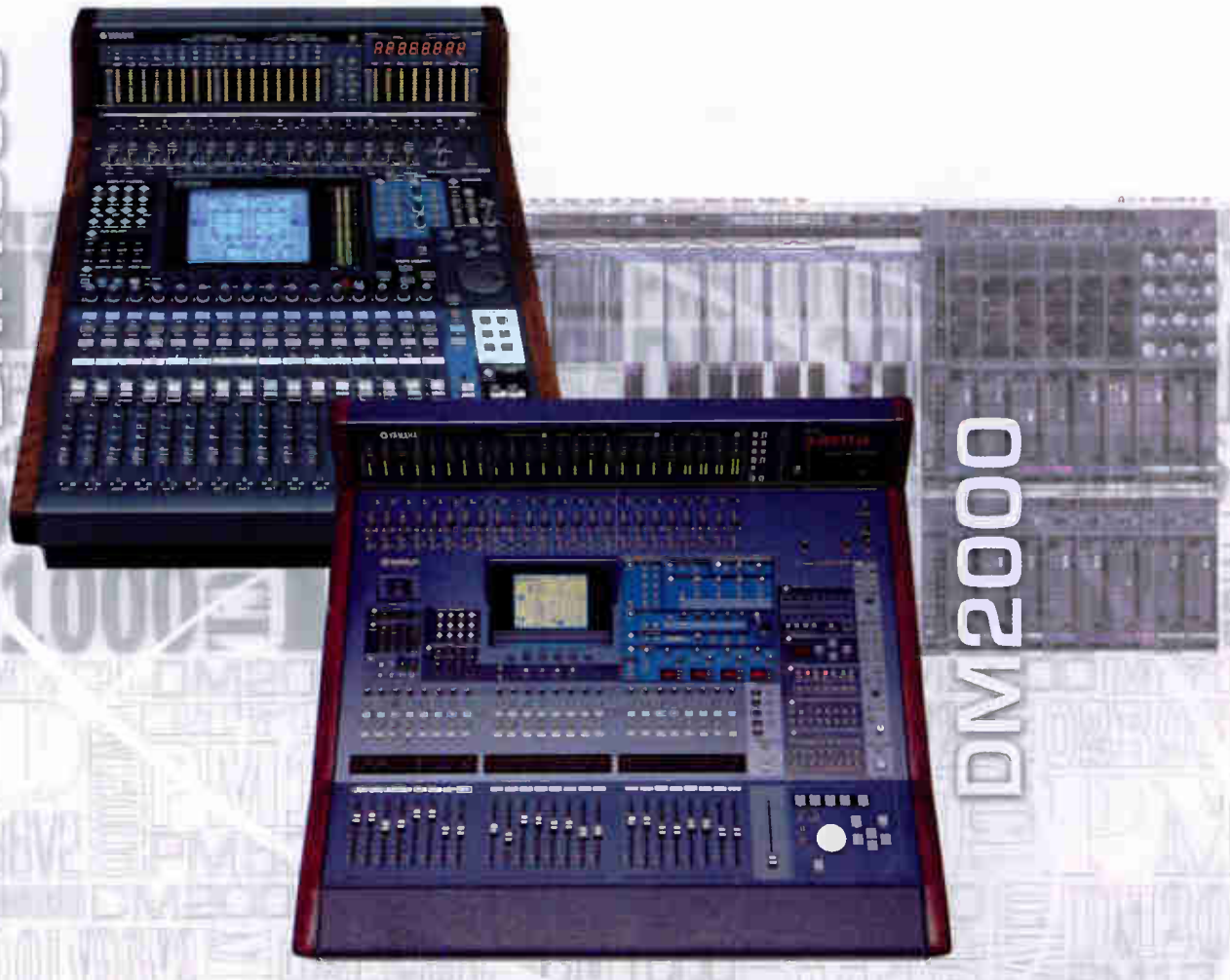

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that's about it. I wanted to take everything, but I had a dog, a baby and a Volvo. I was limited to what I could fit into the car. I couldn't risk getting caught in traffic in the excruciating heat with a baby. I should've taken pictures, tax returns, my passport, Irish linen from my great-grandmother, my turn-of-the-century Pittsburg lamp, my paintings—the list goes on. Everything I valued at its most basic level is what I took. What do you take, family photos or baby food? Compressors or diapers? Neves or my dog that I love?

How difficult was it to evacuate?

It wasn't bad because I got out earlier. I left by 1 p.m. and went to the home of Grayson's father in McIntosh, Alabama, to a cabin in the woods where we still got hit by the storm. Grayson, who is a singer/songwriter, was on tour at the time and couldn't be there to help. It all went down so fast. I was terrified to find out the next morning on Saturday that it was inevitable Hurricane Katrina would hit New Orleans. We had lived in denial for 18 years as a city, thinking this would never happen.

What was your first thought after hearing the news?

It's weird, but my first thought was that my Pro Tools rig and remaining hard drives would be destroyed. I didn't have much time to dwell on that, though. We knew the storm would more than likely hit us in Alabama, too. I had brought as much baby food as I could, knowing we'd probably lose power in Alabama. We watched the TV as the storm began to hit, then when we lost power, we huddled around a 3-inch black-and-white battery-operated television to watch the news unfold. The most terrifying moment came the next morning when I changed the channel to see footage from a helicopter showing the yacht club at Lake Pontchartrain burning and the surrounding area under water. That's when the newscasts announced the 17th Street canal had broken and there was massive flooding. All of this was right near my home.

By 6 p.m. on Monday, we still had no power, so I decided, against the wishes of my family, to take the baby and a girlfriend who had also evacuated and drive to Fair

Everything I valued at its most basic level is what I took. What do you take, family photos or baby food? Compressors or diapers? Neves or my dog that I love?

Hope, Alabama, and find out what was going on. We came to a bar that had power and a working television tuned to Fox News, and what we saw made our mouths drop to the floor. By Tuesday, I found a way to connect to the Internet and began to download satellite images of New Orleans, make calls, wait for calls and view blogs. I didn't even know what a blog was until after this happened. Our lives were upside down and everything seemed surreal. I'd nurse in front of the computer. I'd give the baby baths and change his diapers in front of a TV in a bar.

What did you do in the interim?

While in Alabama, and not long after all this went down, I received a phone call from Queens of the Stone Age to mix their live album. So I packed up and flew to Los Angeles to work. I mixed and kept an Internet-connected computer next to me the whole time so I could keep in touch with friends who had lost everything and to keep up on the latest developments. We waited to be told what to do. I knew my house was flooded, but there was really nothing I could

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do. Sheryl Crow was very kind to extend an invitation for my baby and myself to stay with her for a portion of the time there, which we did.

When did you return and what was it like?

I returned from Los Angeles to a litany of insurance disasters. FEMA sent a $2,300 check, which everyone affected by the hurricane received in the same amount, and four-and-a-half weeks after the disaster, I was allowed to go back under stringent conditions to assess the damage to my property. First we had to prepare bins, rubber boots, ventilators, bottled water, bleach, video camera and insurance documents. We had to go through security checkpoints just to get into the area.

I thought I was brave enough to see it all, but no photos or TV footage could prepare me for the smell, images and the lack of anything green or living. My lush garden-like New Orleans was brown, covered in mud and debris. My wood fence, pecan and Cypress trees, and roof were all gone. The National Guard had spray-painted cryptic code on the side of my house. It looked like remnants of a crack house in a war zone. I had Grayson kick open the front door and I almost fainted from the smell of sewage, rot, chemicals and mold. I started to cry. Everything was in the wrong place. Inches of muck covered the floor. I went outside and puked. I remember not wanting anyone to see me so affected. I went into my studio and dared not walk completely in. The gear was all under a thick sludge comprised of sewage, benzene, gas, antifreeze, bits of dead things and other unspeakable debris. I could make out the outlines of my original API Lunchbox; McIntosh 2205 power amp; Audix Nile 5 monitors; Neve 33114s, 550as, 560s, 512bs; original-issue UA 1176s; and the list goes on. The gold on my Grammy Award was eaten through from the corrosive water that sat for so long.

Did you try to salvage any of it, despite the conditions?

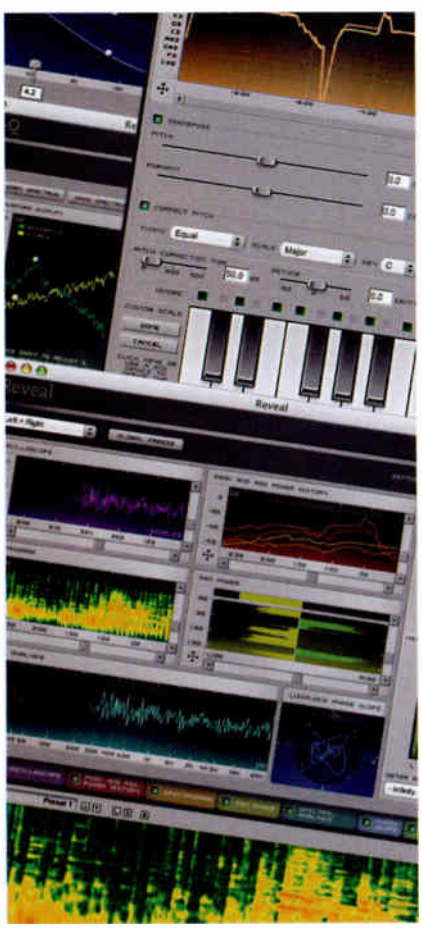
Who's going to fix a damaged, bloated, corroded, slimy box filled with toxic mold that can cause a brain virus? What do you say? "Here, Brent Averill, please die for my API?" I did bag the Grammy Award to send back in hopes they would reissue another. I couldn't even cry about it until I heard Mary J. Blige sing U2's "One," and the words just summed it all up for me. Thanks, Mary.

As far as the gear goes, I had no insurance on any of it. My insurance company wouldn't insure for flood. If it had burned, been stolen or was hit by an asteroid, I'd have gotten something. But it is a complete loss. It is what it is.

That sounds pretty bleak.

Yeah, but there is a silver lining to this story. At the end of September [2005], I received another phone call to come to Nashville and mix Joanna Cotten's album. While in Nashville, the producer, Peter Collins, learned of my situation and introduced me to Beth Hooker, a local real estate agent, who took me out to an 11-acre property with a barn that had been converted into a home that was for sale. I bought the property and immediately moved in with my baby boy. It's been a great career move. I don't desire to travel with a baby, and being in New Orleans made me have to do that. You just have to take what you're given and do the best with it you can. New Orleans is a legacy and an important part of my life journey. Now Nashville is the next phase, and I'm happy where I am. ■

Kregg Barentine is a producer and writer in the Phoenix and Nashville areas.



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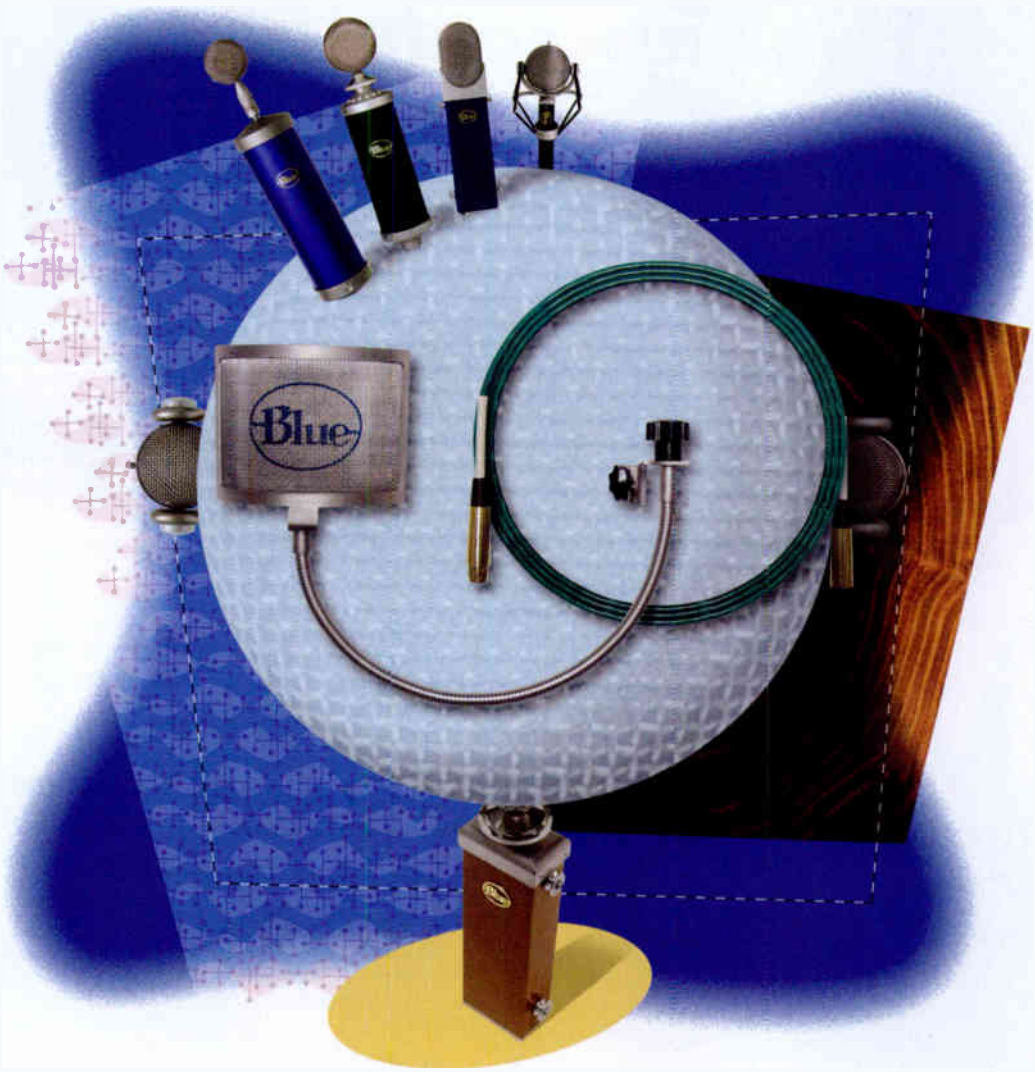

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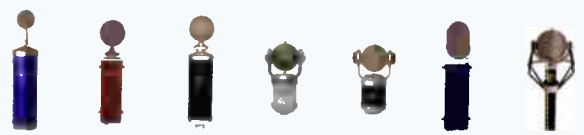

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BY HEATHER JOHNSON

Re-Starting From Scratch

3 Doors Down Guitarist Rebuilds Post-Katrina

"Imagine coming home from work to a house that looks like someone stuck it on rinse. All of your furniture's in a big pile; the pictures of your family, your kids, your wedding are all gone. Everything's gone." That's what 3 Doors Down guitarist Chris Henderson says he came home to after Hurricane Katrina ravaged his rural town of Gautier, Miss. The storm destroyed his home, his recording studio and pretty much everything around him—houses, cars, churches, markets, police stations, entire communities. Henderson lives 22 miles from the Gulf Coast, and one year after the tragedy, the citizens of Gautier continue to pick up the pieces of their lives.

Henderson fared better than many of his neighbors. His family lost nearly all of their possessions, but his wife, four children and two dogs were all unharmed. 3 Doors Down was on tour when the hurricane hit. When Henderson and band (the others hail from nearby Escatawpa) made it back home, he found his house under about five and a half feet of water and his studio eight feet under. He pulled out all of his submerged equipment and let the studio sit for about three months while he tended to the more important task of rebuilding a home for his family.

Because most contractors in the area were booked solid, he undertook the cleanup process and spent at least 12 hours a day for months clearing out debris. Late at night, after everyone else had gone to bed, Henderson trudged out to his studio to dig out mud, power-wash walls and clean it up to a point where the mold wouldn't take over. He opened the doors to let it breathe, and walked away. "It was about a month and a half before I could get back in there and start working on it properly," he says.

With his home finally in livable condition, Henderson could focus on his home away from home—the project studio he built in 2004, admittedly without much emphasis on the room itself. This time around, he contacted Auralex for help with the acoustics. The company found a way to meet his limited budget (his insurance company didn't cover his studio) and helped him design and build the studio, revising his hand-drawn plans and advising him on construction, room treatments and soundproofing materials.

He used mineral-fiber insulation for soundproofing, Auralex Sheetblok around windows and doors, and room treatment products such as AudioTile, SpaceArray and SpaceCouplers, as well as ProPanel fabric-wrapped acoustical panels and bass traps. He also raised the ceiling in the 24x35-foot main room to 11.5 feet, which helps him get good drum sounds. "It's way more than a project room now. It's an overdub room on steroids," he says.

The spacious control room centers around Pro Tools HD 3. "I didn't want to sink 50 grand into a console because I was afraid we'd get water again," says Henderson. For outboard, he acquired Universal Audio 2610 and 8110 mic pre's, two Focusrite ISA 428s and a UA 1176 compressor. He uses a PreSonus M80 for bottom toms and a Central Station for monitoring and talkback.

Chris Henderson is up and running again.

Equipment manufacturers stepped up to the plate to help Henderson by, at the very least, expediting the shipping process. "I don't know if they felt sorry for me or what, but I really appreciate what they did," he says. Though he lost most everything, a few microphones survived. "I had a Neumann M147 that survived. It was underwater—salt water—for 18 hours," says Henderson. "It was wet, but it didn't look damaged, so I put it to the side. I've been singing with it! It's a $3,000 mic; I didn't want to have to buy another one." He also hung on to a couple of KM184s and a Sennheiser 421. "They didn't look too bad, so I put them in a box and let them sit for about six months," he says. "I plugged them in, and they worked."

He also managed to keep 35 of his 37 guitars, with Gibson, Fender and Paul Reed Smith offering free or discounted repair services. "I lost two because we couldn't find them. They sat in the muck for about six months," Henderson says.

Since completing the studio this past spring, Henderson has produced and recorded hard-rock band Five Bolt Main's Rock Ridge Records debut, followed by Half Down Thomas, a band in development with Rock Ridge. (Henderson's a partner in the label.) He's also recorded tracks for local band Orphan Soul, but he won't charge them a dime. And if other bands from his hometown want to make a record, he won't charge them either right now. "I'm the only studio in my town, so the musicians don't really have a place to get a quality recording without driving to New Orleans or Nashville," he offers. "I'm doing this gratis because I need to tweak the room and because of all the people who helped me. I'm just doing everything the way that it needs to be done right now." ■

Heather Johnson is a Mix *contributing editor.*

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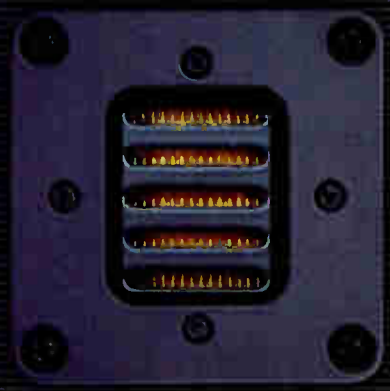

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BY RICK CLARK

Scott Billington

Rounder VP Makes Music for the Soul

Since its beginning in 1970, Rounder Records has been one of the country's preeminent labels for regional and roots music. It is home for the hugely successful multi-Platinum act Alison Krauss and Union Station and helped launch James Hunter, The Grascals, Nicolai Dunger and Madeleine Peyroux (whose debut just went Platinum), among many others; established artists such as Bruce Cockburn, Grant Lee Phillips and Irma Thomas have also been longtime roster mates.

As Rounder's VP of A&R and staff producer, Scott Billington has produced and developed legends of blues, zydeco/Cajun, R&B, bluegrass, folk and rock, as well as projects that drew from ambient and hip hop. His body of work is especially focused on New Orleans and the Louisiana Delta region, and as a result, he has a unique understanding of that artistic community and its culture in the aftermath of Katrina.

Billington got his start at Boston-based Rounder in 1976 as a part-time sales person while playing around the New England area in a swing band. Before long, he became the label's art director and quickly moved into A&R and staff producer duties. Since his first production with blues artist Johnny Shines in 1978, Billington has amassed a huge list of credits, including Clarence "Gatemouth" Brown, Solomon Burke, Charlie Rich, Elvis Costello, Buckwheat Zydeco, the Dirty Dozen Brass Band, Ruth Brown, Beau Jocque, Johnny Adams, Corey Harris and many others. He's also produced two Grammy-winning albums and garnered seven nominations. In 2002, he received the National Blues Foundation's "Keeping the Blues Alive" award for Producer of the Year.

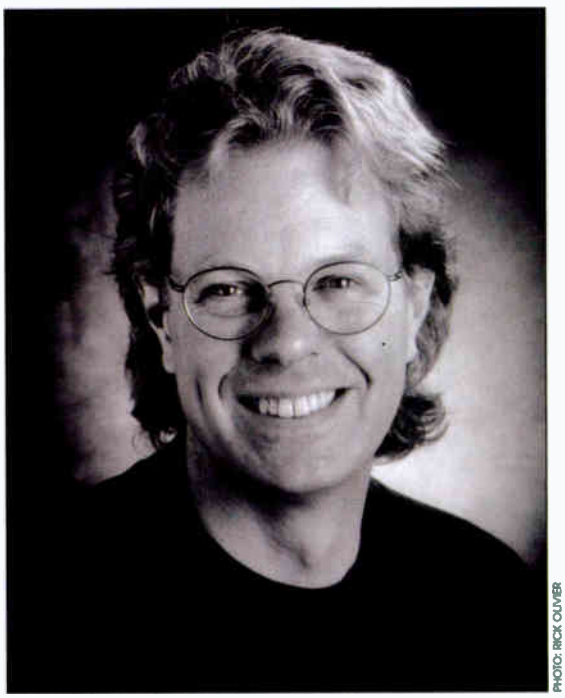

PHOTO: RICK OLIVER

It's now a year after Katrina. What can you tell us about the state of this city.

If you only visit neighborhoods along the river, such as Uptown or the French Quarter, everything looks pretty good. However, vast areas of the city remain abandoned, and there's still not enough infrastructure in place—schools, trash collection, stuff like that. What's left of the city still feels like New Orleans, but there's a lot of uncertainty in the air. I know quite a few determined people who returned, but who are now considering relocating elsewhere.

Many of the ruined neighborhoods are poor and mostly African-American. If you think of most of the things that people admire and enjoy about New Orleans—brass bands, Mardi Gras, creole food, jazz funerals, even jazz itself—it came from these neighborhoods. It remains to be seen whether many of these people will ever come back. If they don't, the city will have lost its cultural spring. Sometimes it seemed as if the music just bubbled up from the sidewalks in places like the Lower Ninth Ward or the Tremé.

I think New Orleans music will be okay for the time being because there are great New Orleans musicians out there, even if they're living in Houston or Austin. But I worry about the fabric of the community and the extended families that nurtured them, and whether that can survive anywhere but New Orleans. Several recording studios were spared—Piety Street, the Truck Farm and Word of Mouth—but the guys at Ultrasonic, which was destroyed, haven't felt there's enough business for them to find a new location and reopen in the city.

The musicians I've talked with all have incredible stories of what they endured.

After Katrina, every recording session began with people telling stories of what they'd been through. Before a session in October, drummer Raymond Weber, who's now playing with Trey Anastasio, showed me photos of his wrecked home and cars in New Orleans East. He moved his family to Houston. Saxophonist and singer Charles Elam III lost his home on the unfortunately named Flood Street in the Lower Ninth, and now lives with relatives Uptown. Right after Katrina, pianist David Torkanowsky got past roadblocks by concocting convincing identification—posting a "Disaster Relief Team Leader" sign on his dashboard and installing a yellow light on top of his pickup truck. He was able to rescue instruments for many musicians.

Irma Thomas was on the road in Austin during Katrina, so she never was able to retrieve even a few of her possessions. She also lost her nightclub, The Lion's Den, and

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several rental properties. Yet she seems to have been able to move on. She and her husband bought a new home near Baton Rouge, and her career has definitely benefited from the attention she's gotten. You get to see how resilient many people can be.

I've worked on three New Orleans projects since Katrina: Irma Thomas' *After the Rain*, tracks for the kids pop group Girl Authority and rehearsals for the debut Rounder album from 15-year-old violinist, singer and entertainer Amanda Shaw. We've been recording at Dockside in Maurice, Louisiana, outside Lafayette, with engineers Steve Reynolds and David Farrell from Ultrasonic.

Irma's sessions were very emotional. They brought together musicians who sometimes had not seen one another since the hurricane. I think you can hear it in the music. We had chosen most of the songs for her album before the storm, so they weren't overtly about Katrina, but it's uncanny how most of them seem to resonate with that story. Irma got so deeply into some of the songs, especially "If You Knew How Much," that she cried while she was recording. If you listen to the final take of that song on the album, you can still hear her voice break in the second verse, but she pulls herself back.

You worked with Rounder to put out one of the very first benefit albums to hit the stores for the victims of Katrina.

We released *A Celebration of New Orleans Music*, in conjunction with Marsalis Music, only five weeks after Katrina, and we've been able to make a good donation to MusiCares.

One of the very first productions you ever took on was James Booker, probably one of the most brilliant pianists to ever come out of the Crescent City. The result was Classified ***(1982), easily the best album of his career.***

Of all the people I've worked with, I'd say he's the one that came closest to genius. He was a child prodigy who could play Chopin at the age of 3 or 4. Later in life, he developed a wicked sense of musical humor, mashing up jazz, R&B, classical, blues—you name it. I've never again heard anyone play that much piano—a bass line and a syncopated chord pattern with his left hand, and dazzling, polyrhythmic stuff with his right hand. He was one of Harry Connick Jr.'s teachers, and Harry comes closest to what Booker could do.

When I first saw James, he was working at the Maple Leaf Bar, which in 1981 had a washateria or Laundromat in the back. He was erratic. Some nights he would blow your mind, and on other nights he would barely play—stagger around or taunt the audience. He had a lot of problems that he tended to try to smother with substance abuse. Mostly, I think he was a very lonely guy.

We put quite a bit of pre-production work into the album. A few weeks before the sessions, he had a nervous breakdown and was briefly hospitalized, but he wanted to go forward with the recording. Still, when the first day of the sessions arrived, things were a mess. He wouldn't talk to anybody, and he'd lost the upper plate of his dentures, although his bass player was able to locate a spare pair, with Booker's trademark gold star on the opposite front tooth. We got him to the piano, but he played songs the musicians hadn't rehearsed, leading them on a futile cat-and-mouse chase.

When he finally spoke, he asked that Cyril Neville and Earl King come to the studio, but when they showed up, he ignored them, too. It was stressful because nothing I said or did to get the sessions on track worked. I was relatively new at this, and I was thinking, "Oh, man! I've spent all these thousands of dollars of Rounder's money, and I'm gonna go back and not even have a record!"

Finally, on the third day, Booker was waiting at the door when I arrived early at Ultrasonic, hoping to sort through the tapes to see if there was anything worth releasing. Booker was ready to play. He asked me to sit by him at the piano while he played all the solo material on the album. He recorded the band tracks when the guys arrived. The one song on the album from the previous days, "Angel Eyes," is the spookiest version of that song you'll ever hear.

James was a fragile and brilliant man who tragically died at the age of 43. I wouldn't say that he ever made a definitive recording, but I'm glad to have made *Classified*.

What was your production lesson in there?

I learned that the most erratic and unpredictable artists are also often those capable of the most beautiful and soulful performances. This has been true of many of the people I've recorded, especially Charlie Rich and Solomon Burke. You can't just push the Record button and expect a brilliant performance, nor can you create a brilliant performance by punching and pasting. But when you get it, you have something that can't be denied.

Your production career is very deep in rural Louisiana's music fabric, especially Cajun and zydeco music.

I got involved in zydeco in the early 1980s. I saw Buckwheat at the New Orleans Jazz and Heritage Festival in probably 1982. He was also doing something somewhat new: combining an R&B show band sensibility with traditional zydeco. This is music played by descendants of French-speaking African-Americans in Louisiana, and it's been their social music for a long time.

One of my favorite records from that world is the one you did on the late Beau Jocque called Pick Up on This!, ***especially a song called "Don't Tell Your Mama, Don't Tell Your Papa." Then "Give Him Cornbread" on*** Beau Jocque Boogie ***was a huge regional hit when it came out in the early '90s.***

PHOTO: BARBARA ROBERDS

Irma Thomas and Scott Billington

When we released Beau Jocque's "Give Him Cornbread," these tiny, local radio stations got so much response to the record that they'd play it two times in a row, and you could hear it on every boom box in South Louisiana. When Beau Jocque played the song at the 1993 Zydeco Festival in Plaisance, Louisiana, people threw corn bread at him from the audience. It was a nice local hit, and it was a lot of fun. The groove on those Beau Jocque records was unstoppable.

Even though there is this whole perception of Rounder as a roots-oriented label, you've really tried to explore ways to expand upon those forms. You and your production collaborator, Steve Reynolds, put out Tangle Eye, ***a project that melded music from the Alan Lomax roots music archives with an eclectic blend of players and synthesized house and ambient grooves.***

Steve Reynolds and I started doing remixes on zydeco records probably 15 years ago now. We did a couple of Beau Jocque dance mixes. We started in the very early days of Pro Tools and saw the possibilities of being able to move things around—to use it as a composition tool. I think we made five or six zydeco remixes that targeted the Houston dance market. It was then that we started thinking, "Wouldn't it be great if we could do a whole project like this?" Since Rounder Records was working with the Alan Lomax Archive, we thought we'd approach them

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and see if they would make available to us Alan Lomax's field recordings. We built the *Tangle Eye* record around vocal samples from Lomax, sort of re-composing the original recordings, adding new music and beats.

We used mostly New Orleans players because that's where we did the project—bassist George Porter Jr.; trombonist Delfeayo Marsalis; keyboard players David Torkanowsky, Davell Crawford and Henry Butler; Galactic guitarist Jeff Raines. We also got a few bluegrass players involved, such as Ron Stewart, a wonderful Nashville fiddle player, and Tony Trischka, the great banjo player.

In a way, it seems this is the complete opposite of so many of the records I've been involved with, where the goal is to elicit the very best performance from the artist. But with the *Tangle Eye* record, we were already starting with these incredible a cappella vocal performances. Alan Lomax recorded many of the songs we remixed in Louisiana and Mississippi prisons. Men were singing as they worked, chopping a tree or hoeing. We rearranged the vocals a little bit and tried to create tighter song structures. Then we had fun with our collaborators re-harmonizing this material.

Of course, Moby had done this kind of thing with a Lomax field recording on his track called "Natural Blues." We tried to do something a little more organic, where the direction of each remix was suggested by something in the original performances rather than taking the vocal performances and grafting them onto a dance beat.

What is your biggest challenge in getting public exposure for Rounder's artists?

I think the trend toward fragmentation of all media lately makes it more difficult to make an impact anywhere. On one end, you've got a whole lot of places to go, but fewer that make a big impact. For us, it still comes down to having an artist and album with a real story to tell and then working all the angles.

You've got to have a story that's gonna grab somebody at *The New York Times* or National Public Radio. It may not specifically be about the music, but it has to be something that will break through the constant barrage of releases—there were something like 40,000 last year. That's not even counting everybody that sells off the bandstand. The "story" has to be more than great music, but something that will pique human interest.

I would imagine more roots-oriented music would have a particularly tough time.

You can't always blame the marginalization of a music style on the media or retail. You need compelling artists and music that will inspire people and make them feel something. I look at the W.C. Handy Blues Awards, and you have basically the same cast of musicians getting awards as were there 20 years ago. It's becoming like Dixieland music—a caricature of what once represented passion and freedom and fresh sounds.

That said, the media can be pretty tough on roots music. I've seen various kinds of music go from "discovery" to old news—bluegrass, Cajun music, blues, African music, the R&B revival. It's interesting to see these music styles peak in the media and then be completely ignored.

I think it's important that, from the onset of a project, the producer be able to come up with a story, be able to communicate a simple idea that will hook the marketing and promotion people at the label, as well as the customer. It's like you're coming up with the marketing story to support your belief in the music and the artist.

These past couple years have been among our best. At this point, we're not turning our back on anything we think can generate sales for us because it gives us power to continue doing what we want. ■

Rick Clark is Mix's Nashville editor.

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2006 TECnology Hall of Fame

Audio Innovations That Changed the (Pro Audio) World

BY GEORGE PETERSEN

The history of pro audio is a short 125 years—barely a ripple in geologic time. But a lot has happened in that century and a quarter.

Three years ago, the Mix Foundation created the TECnology Hall of Fame to spotlight pro audio's history. Selecting a few inductees each year from a 125-year heritage is not easy: An elite committee of more than 50 industry leaders, engineers, producers, designers, educators, journalists and historians volunteered to help.

Once the results were in, I wrote narratives putting each into a historical context. Many manufacturers are long since out of business. At some companies, no one remains with any knowledge of the product. Unfortunately, the history of pro audio—our very lineage—is woefully neglected. Sources are scarce, sometimes impossible to find.

Information about the 40 previous inductees can be found at www.mixfoundation.org. But meanwhile, set your time machine (analog, of course) back and enjoy this ride through the annals of audio.

EC Wente

1916 THE CONDENSER MICROPHONE

Edward Christopher "EC" Wente had a fruitful career during his tenure at Western Electric/Bell Labs from 1914 to 1954. Working to improve telephone audio, in 1916 he patented a "telephone transmitter"—better known now as the condenser microphone. This first design was fairly crude, but provided remarkably flat performance compared to the carbon mics used at the time. His design featured a 1.9-inch diameter and 22-micron diaphragm with a 15kHz bandwidth—astonishing in the days when 78 rpm acoustic recordings topped out around 3 kHz.

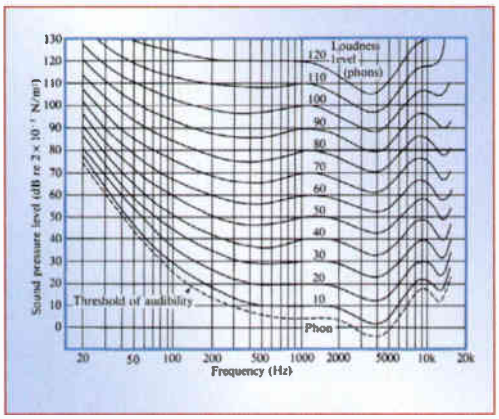
Over the years, Wente's condenser designs fueled the impending revolutions in the electrical recording process and motion picture sound. Western Electric's condenser lineup expanded with models such as the 7A/8A/9A/10A/47A/53A offering tabletop, floor stand and hanging variations.

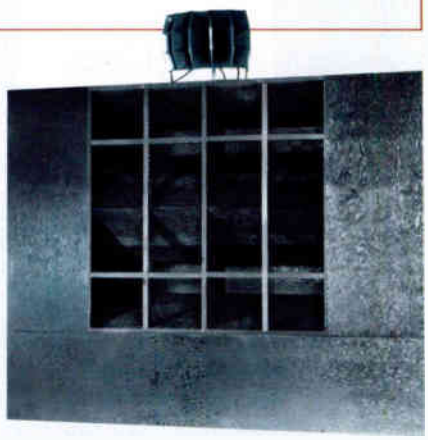
Wente's other innovations were many, including the compression driver, the dynamic mic, the multicell horn, a "light valve" for translating audio into variable-density patterns for film soundtracks, and contributions in auditory perspective, anechoic room design and acoustical wall materials.

1933 FLETCHER-MUNSON LOUDNESS CURVES

Nearly 75 years ago, Harvey C. Fletcher and Wilden A. Munson—two Bell Labs engineers studying subjective loudness—changed our understanding of the hearing process. Asking a large number of subjects to compare the relative volume of two tones to a standard 1kHz tone at a set level, Fletcher and Munson defined human hearing awareness at various frequencies.

In the October 1933 edition of the *Journal of the Acoustical Society of America*, Fletcher and Munson showed that hearing is frequency-selective—more specifically, hearing is most sensitive to pure tones in the 3 to 4kHz range and less so above and below that. To perceive that a 100Hz signal is of equal loudness to a 3kHz tone requires an actual SPL of the 100Hz tone that's much higher than that of the 3kHz tone, particularly at low volumes. This phenomenon was referred to as "Equal-Loudness Contours," and although this original research was later updated (most notably by Robinson and Dadson in 1956), Fletcher and Munson's pioneering work laid the groundwork for industry-standard measurement curves, from the classic A/B/C/D-weighting filters to the current ISO 226:1987 standard.





Shearer Horn, with plywood extension wings

1935 SHEARER HORN

In the late 1920s, cinema audio playback was dismal. Western Electric had a single driver on a large re-entrant horn. It didn't sound very good, even after the company added a separate HF unit and extra 18-inch woofers. RCA's competing system was no better.

Dissatisfied with these bulky, 5kHz bandwidth systems, MGM's sound department head, Douglas Shearer, set out to create something better. Shearer asked John Hilliard to head the team, with Robert Stephens and Harry Kimball. Consultant John Blackburn suggested using James B. Lansing's new high-performance components. Essentially, Shearer created a dream team with some of the best minds in audio. Other ideas came from William Snow, who worked with Harvey

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Hammond B-3 with Leslie cabinet

Fletcher at Bell Labs, and RCA's John Volkmann and Harry Olson.

Known as the Shearer Horn, the two-way system had a large multicell horn coupled to Lansing's new 284 compression drivers. One or more "W" bin folded horns loaded with two 15-inch Lansing woofers handled LF. On its debut, the Shearer Horn was a near-instant success, offering high-SPL/high-fidelity performance from a package that could be easily shipped and installed. Thousands of Shearer-style systems (from a variety of suppliers) were in theaters everywhere, and the system received a technical Academy Award in 1936.

The Shearer Horn began the age of modern sound systems. Equally significant was its role in launching an entire industry of pro audio with an awareness for fidelity. The system's lifespan was cut short by Altec A-4 Voice of the Theatre models in the mid-1940s (designed by Hilliard and Lansing), but innovations such as the "W" bin design stayed in use for another half-century.

1954 HAMMOND B-3

When clock manufacturer Laurens Hammond introduced his first tone wheel organ in 1935, he had no idea that he'd launched a groundbreaking instrument that, more than 70 years later, would still have a major effect on musical styles. Initially, the Hammond organ was intended for churches and homes, but the semi-portable (only 400-pound!) model B-3 in 1954 brought this instrument to the forefront of jazz, R&B and rock 'n' roll. The B-3 was the right instrument at the right time, but its soulful versatility and great voicings (combined with a Leslie rotating speaker from Don Leslie) soon made the instrument a mainstay in every genre of pop music.

With two five-octave keyboards; nine drawbars on each manual; two pedal drawbars; 10 presets; and switches for percussion, volume, decay, and harmonics and chorus/vibrato scanner, the B-3 is almost synthesizer-like, providing an incredible variety of sonic textures.

The tone wheel design uses a series of notched rotating wheels that create a tone picked up by magnetic coils, where each wheel's rotational speed and number of notches determines its pitch. Minor variations at each point in the tone wheel help create the organic Hammond sound that simply can't be duplicated by samplers and synthesizers.

1955 AMPEX SEL-SYNC

The development of Sel-Sync™ (Selective Synchronous) recording by Ampex a half-century ago eventually turned the recording world upside down, yet it was a quiet step with little fanfare. The impetus for multitracking came from Les Paul, who was doing sound-on-sound recording as early as 1949 on a tape deck modified with an extra head and a switch to defeat the erase function. However, the technique was risky: One bad pass and the recording was ruined, and each additional pass added noise and distortion.

Les Paul with a cassette 4-track and his 1-inch Ampex 8-track

With the concept for an 8-track in mind, Paul met with Ampex, which started the project in 1953. The task required designing new record/play and erase heads, and the difficult switching of very low-level/high-impedance circuitry to achieve exact sync for monitoring previous tracks while overdubbing new ones. Ampex engineer Mort Fujii felt it could be done, and the first 1-inch Sel-Sync 8-track (based on an instrumentation deck) went to Paul two years later for $10,000—a sum that could have bought two nice houses at the time.

Ironically, Ampex's attorney advised the company that the concept was "obvious engineering" and non-patentable, so no patent for multitracking was ever issued.

1959 TELEFUNKEN (AKG) ELA M 251

There are many fans of Telefunken mics, with its U47 and ELA M Series leading the pack. However, Telefunken never built mics, instead outsourcing manufacturing to Neumann and AKG, which made models that bore the Telefunken name.

In the late '50s, Neumann established its own U.S. distribution and stopped supplying U47s to Telefunken. Seeking a high-quality studio replacement, Telefunken asked AKG to create a multipattern tube condenser that had its pattern control switching on the mic body and the result was the ELA M 251 and ELA M 250. The latter was an omni/cardioid design, while the three-pattern 251 added a figure-8 pickup. All used the proven CK12 capsule employed in AKG's famed C-12.

Nearly a half-century after its introduction, hundreds of vintage Telefunken ELA M 251/250s are in use worldwide and still prized by engineers for their smooth vocal reproduction and sparkling high-end response. But credit should be given to AKG for designing this timeless, enduring classic.

1967 NEUMANN U87

When a microphone remains in production for nearly 40 years, words like "studio standard" certainly apply, but the roots of the U87 go back much further. In 1960, Neumann launched the U67, a three-pattern tube mic for close-miking that was intended as a replacement for the U47. Designed by Neumann's Dr. Gerhart Boré, the U67's great sound and modern, tapered, shaft body made it an instant success. In 1966, Boré's team was asked to create a solid-state version of the U67. The transistorized U87 was unveiled in 1967.

The U87 used the same K67 capsule as the U67 and did not require an external power supply. This was a major conve-

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nience, although the original U87 had a internal battery compartment housing two 22.5-volt batteries to augment the phantom power to the capsule's 60V requirement. Later, a DC/DC converter was installed in place of the difficult-to-find 22.5V cells, and the new model U87A could run solely on phantom power. Replacing the Tuchel output connector with a standard XLR jack, the mic was designated U87 Ai. The model is still in production, with thousands in use throughout the world.

1967 TIME DELAY SPECTROMETRY

In 1967, Richard C. Heyser, a research engineer at the Jet Propulsion Laboratory of the California Institute of Technology published a paper in the *AES Journal* titled "Acoustical Measurements by Time Delay Spectrometry." It described a technique whereby loudspeakers and other electro-acoustical systems could be measured in real-world spaces—without an anechoic chamber. Unfortunately, the horsepower to perform such computations using 1960s technology was impossible, but Heyser's TDS concept drew wide acceptance.

TEF System 12, the second-generation TDS analyzer

Later, educator Don Davis organized a seminar for 20 leading audio researchers, with California Institute of Technology offering them licenses to build and operate TDS devices created by combining off-the-shelf products with a custom Heyser-designed interface.

TDS went big time in 1983, when Crown's Techron division unveiled the TEF System 10, the first portable TDS analyzer/acoustical measurement system. Encompassing the gamut of TDS measurements, TEF (Time-Energy-Frequency) included energy time curves and the ability to show waterfall displays of audio spectra. The 40-pound suitcase unit included 96 kilobytes of RAM and a 9-inch green-phosphor screen, and it cost $14,500. However, acoustical research would never be the same, as for the first time, complex on-site measurements of systems and spaces were possible from a commercially available unit.

1971 THIELE-SMALL VENTED ENCLOSURE PARAMETERS

Speaker design has long been considered some kind of black magic. Yet a major step forward came when two researchers, following earlier work by Leo Beranek, published their findings regarding the relationship of loudspeaker parameters to low-frequency performance in vented cabinet enclosures and simple methods of measuring them. Among these were the driver's free-air resonance, electrical and mechanical Q, DC resistance, efficiency, piston area, thermal power rating, etc.

Neville Thiele (left), Richard Small

In 1961, an Australian broadcast engineer named Neville Thiele published a paper in a radio/electronics journal describing his work in simulating loudspeaker response as electrical filters as a means for speaker design. Several years later, Richard Small, an American studying in Sydney read the paper and convinced the University of Sydney to let him enroll for a Ph.D., expanding and refining its premise. With the help of colleague Robert Ashley, Small convinced the AES to reprint Thiele's original paper in 1971 and followed it up with a series of his own papers. The effect of the Thiele-Small research was dramatic, not only influencing manufacturers to provide more details about the drivers they built, but also bringing about a new era in the predictability of loudspeaker response based on enclosure volume and port dimensions.

1977 UREI 813 STUDIO MONITORS

In the mid-'70s, UREI founder Bill Putnam—unhappy with the sound of the Altec 604 monitors in his United Western Studios—worked with UREI's Dean Austin and Dennis Fink on ways to improve the 604. They replaced Altec's multicell horn with a wider dispersion design and added a 15-inch Eminence woofer to boost LF output. Ed Long applied his Time-Align™ crossover techniques to achieve time-coherent, true point-source performance.

Engineers and producers mixing on the system were so enthusiastic about its sound that UREI started producing the monitors as a commercial product, with the first UREI 813 debuting in 1977. Typically soffit-mounted, these large, double-15 monitors were ideal for the larger, higher-SPL control rooms of the time.

Two years later, Altec replaced its Alnico 604-8H with a ferrite model, requiring modifications to the 813 design, including a foam diffraction buffer, crossover mods and small Helmholtz resonators in the horn flare. This 1979 model was the 813A, followed by the 815A (a 604, plus two extra woofers) and the single-driver 811A, but the 813A was far more popular.

Financial and QC problems at Altec led UREI to find a new driver source, now mating PAS coaxial 15 to a JBL 2425 compression driver. The new 813B version debuted in 1983. Later that year, Putnam sold the business to Harman, with UREI becoming a division of JBL Professional; the 813C, a new model with all JBL drivers, launched in 1984. But in its various incarnations, the UREI 813 was the most successful large-format studio monitor ever made.

1978 LEXICON 224 DIGITAL REVERB

Unveiled at the AES show in 1978, the Lexicon 224 was not the first digital reverb (that honor goes to EMT's 250), but the 224 (and its 224X and 224XL cousins) was the most ubiquitous and popular high-end studio reverb in history.

The reverb was conceived when Dr. David Griesinger, a nuclear physicist/musi-

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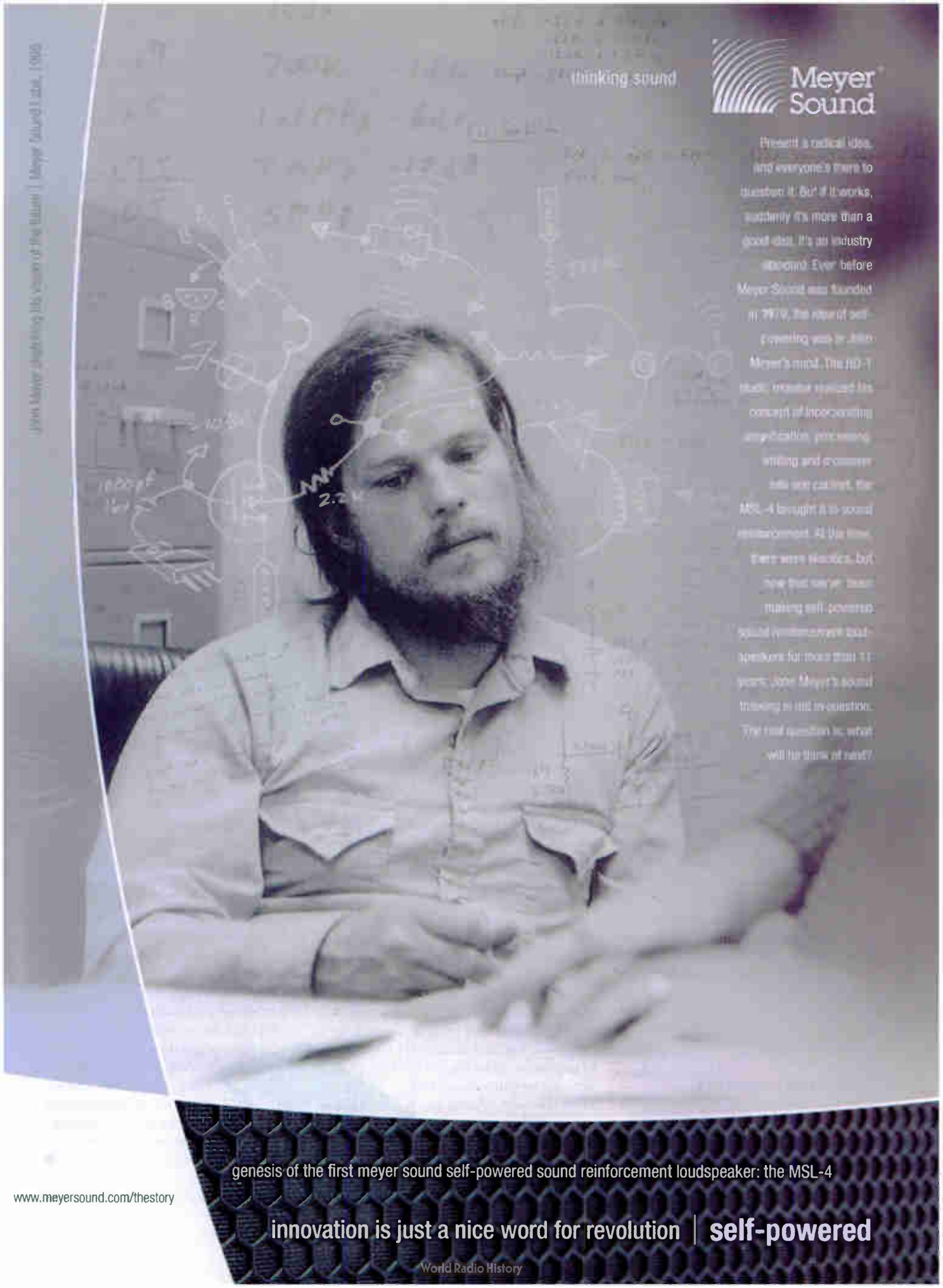

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cian/classical recording engineer, started working on a digital solution to reverb. Seeing EMT's 250 encouraged him to merge a microcomputer with his reverb design. He pitched his rough prototype to Lexicon, which bought the invention and brought Griesinger on board to help refine the product. One of Griesinger's concepts for the new reverb was creating a separate control unit for parameter adjustment and program access, and the Lexicon 224 was unveiled at the AES show in 1978.

The 224 reverberation system had a console-top controller with a four-rack-space brain, two inputs, four outputs and interchangeable programs to simulate chambers, plates and rooms. The 224 was "affordable"—meaning $7,500 with two programs or $7,900 with four programs. But at half the price of EMT's 250, the 224 was a hit. Eventually, the 224 evolved into the improved 224X and 224XL, which included the LARC (Lexicon Alphanumeric Remote Control), offering fingertip access to programs and parameters, dedicated function keys and a 24-character LED.

1979 TEAC PORTASTUDIO

The music industry forever changed at the 1979 New York AES Show with the introduction of the TEAC Model 144 Portastudio®, an integrated 4-track cassette recorder with Dolby B noise reduction, 3.75 ips operation and a 4x2 mixer with pan, treble and bass on each input.

The most famous Portastudio recording was Bruce Springsteen's 1982 *Nebraska* album. Originally cut on a 144 with a couple of Shure SM57s, it was intended to be a demo. However, The Boss liked the feel of the songs so much that rather than recut them, he used them as the master tracks.

For musicians seeking a sketchpad for recording demos, the 144 was a runaway success with a legacy of thousands of artists and engineers today who made their first multitrack recordings on Portastudios.

1981 SONY PCM-3324

In the late '70s, Sony launched a program to provide pro users with tools to support the impending consumer digital audio revolution. Toshitada Doi led a team of 30 researchers set on bringing digital to the pro market.

At the European AES Show in 1978, Sony showed a prototype 1-inch, 24-track digital recorder. It never went into production, but it laid the groundwork for Sony's popular line of half-inch DASH (Digital Audio Stationary Head) format multitracks.

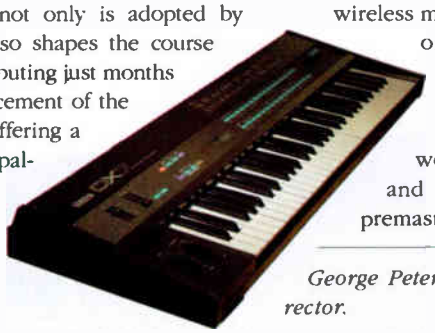
Toshi Doi and Frank Zappa listen to PCM-3324 playbacks.

In 1981, as Mitsubishi began delivering its X-800 digital 32-tracks, Sony countered with its PCM-3324 digital 24-track, which was two years from shipping. The original 44.1/48kHz, 16-bit PCM-3324 weighed 440 pounds, but had a maximum record time of 65 minutes and could easily be synched for 48-track work. Even with its $150,000 price tag, the PCM-3324 found early adopters such as Stevie Wonder, Frank Zappa and remote trucks, and a new industry emerged offering digital rentals.

The DASH spec included other variations such as 2/4/8/16-track decks, yet it was the 24-track machine that gained popularity, especially with each new generation sounding better and costing less. But the real attraction was DASH's thin-film head technology, which supported double-density tracking so tapes made on a 3324 could be played on the PCM-3348 48-tracks that followed.

1983 YAMAHA DX7 SYNTHESIZER

Every decade or so, a keyboard instrument comes out that not only is adopted by musicians, but also shapes the course of pop music. Debuting just months after the announcement of the MIDI spec and offering a new and varied palette of tonal textures, Yamaha's DX7 was the right synth at the right time.



The magic behind the DX7's FM synthesis engine was discovered in the early 1970s by Dr. John Chowning at Stanford University. In the mid-'70s, Yamaha licensed the technology and spent nearly a decade working on the project, both in Japan and with Chowning in California.

When the DX7 launched in 1983, users were amazed by its purity of tone and its ability to mimic certain instruments—particularly struck percussion, chimes, electric pianos, etc.—and its wealth of cool synthesizer sounds. During the instrument's short tenure, Yamaha sold a then-unheard-of 200,000 DX7s. The DX7 also marked the beginnings of custom VLSI integration into musical instruments, making it affordable.

1987 SONIC SOLUTIONS NONOISE

In 1984, Lucasfilm and Convergence Corp. formed The Droid Works, and under the leadership of Andy Moorer, showed its SoundDroid™ workstation at NAB in 1985. The product was years ahead of its time and too expensive for the typical studio. In 1986, former Droid Works execs Bob Doris, Jeffrey Borish and Mary Sauer left to found Sonic Solutions.

NoNoise screenshot, circa 2006

Some months later, Andy Moorer joined the Sonic team and the company debuted NoNoise®, a Macintosh-based system that applies proprietary DSP algorithms that eliminate broadband background noise, as well as AC hum, HVAC buzz, camera whine and other ambient noises. NoNoise could also reduce overload distortion, acoustical click/pops, transients caused by bad splices and channel breakup from wireless mics—without affecting the original source material. Sonic Solutions eventually expanded into 2-channel and multichannel workstation development and developed the first DVD premastering system. ■

George Petersen is Mix's editorial director.

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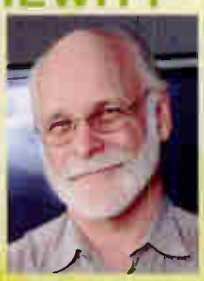

TEC Hall of Fame

JOIN pro audio's top manufacturers, engineers, producers and other sound professionals to recognize the cutstanding achievements of the past year in audio production and product design, and honor the creative genius of David Hewitt and Steve Miller.

2006

SAN FRANCISCO

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AND THEY CALL IT TECHIE LOVE

Donny Osmond Creates Surround DVD

BY AVI HERSH

Forget everything you think you know about 1970s teen sensation Donny Osmond. While he was busy co-hosting the hottest variety show on the air, behind the scenes, he was reading manuals, building Heathkits and wielding his solder gun on his family's console and Ampex tape machines.

When it comes to production chops, Osmond is the real deal. He is equally as comfortable aligning a tape machine as he is coming up with work-arounds for the data limitations of FireWire. For the past couple of years he has immersed himself in a huge project: bringing the *Donny & Marie* show to DVD, with musical numbers and skits in 5.1 surround, due out in November.

On a summer's day in Provo, Utah, *Mix* was invited into his converted pool house, and there he was. Donny Osmond. Sitting behind the console. An entire array of hard drives adorned his desk, holding every one of his 54 albums, songs, demos, photos and *Donny & Marie* episodes. He was looking quite relaxed with his trusty BlackBerry by his side. For the next three-and-a-half hours he made us feel right at home. In his home.

You've been into production for a long time. How did you get started?

It goes way back, before "One Bad Apple" days. It was 1968, I think. We were living out in the San Fernando Valley [near L.A.]. My dad bought this old used console. It was homemade, with round pots. The EQ was basically switches. And an old Ampex 4-track.

It had these modules that were meters.

Exactly. And I used to live underneath that console. I used to look at where the wiring ran. I'd get my soldering gun out. I'd find some cold solder joints and I'd fix them. I must have been between 10 and 12 years old when I started doing this. I would go to a studio and start asking engineers questions and learn from the best. Ed Greene [audio engineer for *Donny & Marie*] was the main guy that I learned from.

When we started, we did a lot of recording at MGM, which I think is now Cherokee out on Fairfax [Avenue]. In hindsight, I don't know why Ed did this—he gave me carte blanche, except for one place. They had these EMT chambers and right next to them were actually real rooms that were shellacked and they had a speaker and a mic in it. It's how we did reverb. He said, "Go wherever you want, but don't go in those rooms."

I understand that armed with that knowledge, you built a home studio.

I used to be intrigued by James Bond, so I built this room and had to condense it. I had my work bench where I used to build my Heathkits and tear things apart. Then I thought, "Where am I going to put my bed?" So I put it over the top of it. It was motorized, so it could go into the ceiling. I could work on my bench, and when I was done, I could hit a button and it came down. I tell you all this because Harrison, who sends the manuals when someone purchases a console, sent this long thin poster. On it was at least one representation of each module—the output module, the channel module—everything was there, and it was on my ceiling for a month or two. I had the manuals right next to me on my bed. Every night I would be studying because I love reading manuals. I'm a geek when it comes to that.

So Westlake [Audio] calls me and says the engineer's stuck in New York. The console was delivered and it's just sitting there. I said, "Screw that! I'm gonna install this thing." So I undid the crate and had a bunch of guys help me bring it through the window and set it in place. For a week I worked on this console. The engineer showed up the following week, changed a couple of grounding points and said it was done.

And that was the greatest compliment.

Yeah. I was 14.

Fourteen!

And man, I thought I had just died and went to heaven!

Regarding the* Donny & Marie *show, I understand that you insisted that the show audio be recorded in multitrack and the producers balked.

Well, audio always seems to get the short end when it comes to television. Mind you, audio has always been a huge part of my life even though I've always been in front of the camera. Same thing with my brothers. We had engineers, but we oversaw them. All of us were in the studio ever since we were little kids, and so it was a huge, important part.

So years later, where did you find all those elements for the upcoming* Donny & Marie *DVD release?

Here's the scary part: Osmond Studios made a huge mistake and hired people that didn't know what they were doing. They drove the studio into the ground, and in bankruptcy, doors are locked, things are sold at fire sales. I was able to find most of the tapes, but in the most obscure places. They were in storage units, and they weren't temperature-controlled. Brigham Young University ended up with a lot of the stuff, and it was all over Utah. I've spent [time] since the early '80s finding as many tapes as I could find. I'm probably missing 10 percent in all.

That's not bad.

Not bad at all. But then I started thinking, "Well, wait a minute, tape will degrade." So I started to do all this research about baking and started calling people. George LaForgia was the first one I called and the first who gave me a formula. He said 130 degrees. Then I talked to Paula Salvatore at Capitol. She put me in touch with some other people and they gave me their formula of 115 degrees. Then I started checking out the costs for doing all that stuff and realized this is going to be cost-prohibitive. Plus, I just like

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to do things myself, as you can see. So I called the local appliance store [laughs], "Ya got something that'll cook a tape?" My oven doesn't go down that far.

So I did some research and found a beef jerky drying oven. [Laughs louder] I'm a little embarrassed to tell you all this. So I bought this oven. I did some research on it and made sure it was convection. It needed 220 so I installed 220 downstairs in the main breaker and started baking my tapes and testing them. I said, "Ya know, this is working!" So then I started on the 2-inch. That was scary to deal with those masters.

What happens then?

I have these three Yamaha 2400s. The reason I have three is that there is a throughput problem with FireWire. If I transfer 24 tracks all at the same time, I'm going to miss some data. So I decided to get three machines and do eight tracks each at a time. Those that had 16 tracks I'd just play the 16 on the 24 head and separate it out and put it through two of the 2400s. The Yamahas have these really good preamps so I didn't get any external preamps. I was thinking I would just take the drives out, but found it was just as easy to USB it, put it into my little laptop, then take it out in the studio and transfer it. There was a little bit of a sync problem getting all three machines to start at the same time through MIDI. So I put a reference tone on the tape that would go into one channel of each of the Yamahas. This way, I could line up that tone later in Nuendo and all three sets of eight tracks would be aligned again.

So everything is digitized and you have to start thinking about 5.1.

I found some interesting things in mixing the show that goes against Elliot Scheiner's theory. I talked with him for a long time and was getting his advice before I jumped into this project. He said to get drastic; get as drastic as you want. So I did. It didn't work. It works if it's just audio, but not for the TV show because everybody is so used to having it in the center channel.

I mixed the entire show with this guy in Salt Lake, Mike Ross Kelly. I found that mixing 5.1 in a studio can really trick you. It sounds great, but when you put it on a home system, it's a whole different thing. You know who taught me that? George Massenburg. I did this whole project with him and we would mix in his studio, then take it upstairs on this little dinky system and then make the decisions. I didn't treat it right, because you'd have this phantom center [in stereo mixes]. It's got to stay consistent. Mike and I spent a lot of time talking about where we are placing stuff.

What would be your 5.1 philosophy?

I don't just put vocals in the center because you don't know where people are going to put their satellites. If they're close, you're safe. I specifically put them way out because that is the most drastic thing. Then it's real evident where you place things in the surround field. With vocals, I lock it in the center and then I very slowly spread it out. So it gets softened into the left and right. So it doesn't matter where you put the front right and left in the home. Now I know that might be compromising 5.1, but for this kind of project, I think it's paramount to make sure there's consistency. I put brass in the back, I put percussion in the back and I put a degree of the audience in the back.

The LFE?

I was working with Fred Maher. I told Fred I was going to give him the tracks to master in 5.1. I told him I was just going to give him the LFE and that I was going to be as consistent as I possibly could. I like a lot of bass, which sometimes can hurt you in the mixing process. I never use the bass management in the console.

You have a concept going in of what the project is going to be like. Then you get into the thick of it and then reality sets in. How different were the two?

I knew it was going to be big, but I didn't know it was going to be *this* big. Here's the other problem I had. I couldn't just drop from 5.1 to "1." So I did a lot of research on this TC Electronic System 6000, on the Unwrap. I called [TC Electronic's] Ed Simeone and he told me the Unwrap doesn't work in mono. It works in stereo and uses the phase differences that are not there in mono, and if you try to create a stereo mono and then delay

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it, it does some really weird things.

So how did you create 5.1 out of mono?

I used the 6000 for audience, dialog, skits and things like that to create the delays and 'verb in the back. I used the Z-Systems for stuff I didn't have the tapes of. Each one needed to be manipulated a bit.

The musical performances: Were any of those live?

Everything was prerecorded. I remember getting a letter from Shure because we used their microphones. We added fake antennas. So we get this note that says, "What did you do to our microphones?" We were lip synching so well, they said, "We want this technology; we are willing to buy it."

Are you excited that this will finally be coming out in November?

Yeah. There's a whole generation, and there will be for quite some time, of younger kids who watched *Donny & Marie*. It appealed to the 5 to 12-year-olds and the parents. Teenagers were into Hendrix. They didn't want to hear about Donny Osmond. That generation, now they're in their 20s and 30s. There's Lucille Ball as the Tin Man, Ray Bolger, the original scarecrow, and Paul Williams as the Lion. These people aren't with us any more.

A moment in time on Donny & Marie, *with Lucille Ball (front, right) as* The Wizard of Oz's *Tin Man*

And neither, it seems, is the Donny Osmond of 1977.

Everybody puts me in the category, this pigeonhole of what I used to be at 14, 15, 16—the "Puppy Love" guy or *Donny & Marie* television show guy. I'm doing all this other stuff now, and because of perception and what you're trying to do, people will put a specific label on Donny Osmond and put him with the Disney soundtracks.

I come from a teenybopper background. My image is completely different from the individual. Well, not completely. I was the one who did all that stuff. But while everybody kept me in that pigeonhole, I was doing all these other projects technically and otherwise. To be recognized and able to do this on my own is what's fulfilling to me. ■

Avi Hersh lives in Southern California.

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Composer Alex Wurman

The Genre-Jumping *Penguins* Chameleon

By Bud Scoppa

During his 15 years in Los Angeles, the versatile composer Alex Wurman, who deftly and seamlessly integrates traditional orchestrations, electronic elements and small ensembles, has graduated from AFI student films to such disparate cutting-edge features as *Confessions of a Dangerous Mind*, *Thirteen Conversations About One Thing* and the Oscar-winning documentary *March of the Penguins*.

It would hardly be an exaggeration to say that Wurman, who drew the biggest raves of his career for his work on *Penguins*, was born to the role of freewheeling composer. The Chicago native is the son of Hans Wurman, a composer and arranger who pioneered the fusion of classical and electronic music, at one point painstakingly transcribing orchestral works by Chopin, Bach and others to his Moog synthesizer, which bore the designation Serial No. 2. His son started acquainting himself with the prototypical synth as soon as he could reach the keyboard, at the tender age of 5.

"My first experiment," he recalls, "was to use a square wave tuned so low that you could hear the pulses between the cycles and gradually speed it up with the frequency knob to create the sound of a tank, which I envisioned driving." As his parents were divorcing, Wurman, then in high school, slipped away to the South Side of Chicago, where he spent more than three years playing keys with funk and blues bands. No wonder he's equally comfortable working with 80-piece orchestras and soul grooves.

Wurman was best known in film music circles for his work in comedies such as *Anchorman: The Legend of Ron Burgundy* and edgy scores like that for the 2004 neo-noir *Criminal* before revealing a new dimension of his art with the crystalline, captivating music he created for *March of the Penguins*. "A lot of people feel that *Penguins* is an orchestral score," says the composer, "but more than 50 percent of it is electronic, and the electronic aspects were not created to mimic an orchestra. I did not use orchestral samples, but I did write some of the synthesized aspects of the score in an orchestral way."

Penguins' score "represents the beginnings of a style I aspire to be known for," he says. "It's a hybrid score, but first and foremost, it represents what I feel is cohesive, harmonious music that's good for the soul. It's good for *my* soul; it makes me happy. The score for *Criminal*, while it's funky, makes me want to go out and rob people. If I had to choose between the two, I would choose the passion that went into *Penguins* as opposed to the sinister qualities of *Criminal*. I'm very pleased, of course, to be given the opportunity to do both."

PHOTO: JEROME MAISON; COPYRIGHT 2005 BONNE PIOCHE PRODUCTIONS

It's this versatility that is the basis of the 39-year-old composer's ever-growing reputation. When asked if he has a signature style, Wurman replies, "I think what's emerging out of all this is a tendency to play with rhythms in a similar way, no matter what the genre is; multi-meters—I really enjoy things that are happening simultaneously. I'm also starting to figure out how to get my harmonic tendencies into whatever it is I'm doing. And that is to have a set beginning, middle and end, which is how you get someone to actually feel an emotion—you have to carry them to that place. *March of the Penguins* is a good

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Shawn Clement

Prospering With Music for Games

By Gary Eskow

During the past four decades, some talented guitar players have passed through Mr. C's Music Store, including Jeff "Skunk" Baxter and the owner's son, Shawn Clement. "Jeff used to do repairs in my dad's shop," says the 37-year-old musician, who grew up in Milford, Mass., and now lives outside L.A., where he's kept busy by a constant stream of television, film and—most recently—videogame scoring assignments.

"Music was all I cared about when I was a kid," says Clement. "I used to cut classes to practice and play gigs, but my parents didn't complain because I got straight As." After high school, Clement took some courses at Berklee College of Music and tried to make it in Boston playing in a fusion band. He then set his sights on the West Coast. "It started with NAMM. I played in some booths for several years and got to meet some cool people, including Neal Schon. He introduced me to the rock gods of the time. But I was into Chick Corea. It's funny, but I'd be jamming with Eddie Van Halen and all I could think of was fusion."

Well, not entirely. "Ever since I was a kid, I was fascinated with film music and wanted to do [that] for a living." Clement's demo CD, which comprises more cuts (60) than any other I've come across, shows a mastery of many styles, including composer and arranger Carl Stalling's. "I listened to all those old cartoon scores, and it came in handy when I started writing music for Donald Duck cartoons myself! I love a lot of notes, whether they're found in a Stalling score or a Jimmy Page riff!"

Knowing that Clement wanted to relocate to L.A., a friend from Berklee who was working at a record label gave him a call in the early '90s. "My friend knew a

—CONTINUED ON PAGE 72

Beau Hunks and The Little Rascals

Reforging Classic Tracks From the Classics

By Matt Hurwitz

"Good Old Days," "Dash and Dot," "On to the Show," "Bells." Nearly every person on the planet knows these songs, though most don't know their names or who wrote them. They're those wonderful music cues found in Hal Roach comedy shorts from the early 1930s by Our Gang, Laurel & Hardy and others. And anyone who has any of the Beau Hunks' rare CDs containing their fascinating re-creations of this music in their collections no doubt considers themselves lucky.

"This music evokes a sense of nostalgia for bygone days and better times that may have never existed," says Dutch researcher Piet Schreuders, who, together with co-producer Gert-Jan Blom, were the masterminds behind the recordings made in the early '90s. The tunes were first released in America on Koch Screen under the title *The Beau Hunks Play the Original Little Rascals Music*. "We've met so many people who grew up in the '50s and '60s, who were exposed to *Laurel & Hardy* and *Little Rascals* on television, loved this music, couldn't find it and had been looking for it all their lives."

The music cues grew out of an attempt to alleviate the side effects of Western Electric's early so-called "Noiseless Recording," which, in the late '20s and early '30s, was anything but. "In the early talkies, music was literally used as noise reduction," explains Blom. "When there was no dialog, it sounded like there was a blizzard going on all the time."

Roach's solution was to hire composer Leroy Shield to create music cues to play throughout his films, often heard playing constantly through each short. "Roach

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hired him to compose a huge amount of music for all the shorts, as well as some features, that came out of Roach's studio," says Blom. "Shield was a craftsman that could just spit out any number of tunes per day. If Roach said, 'I need a police theme,' Shield could provide—even very short cues of just three or four seconds."

Once a number of cues—as many as 50 or more—had been recorded after Shield scored five or six films, film editor Richard Currier (and his successors) spotted the films, using Shield's effects and themed cues from previous films. "The selection was often text-driven based on the cues' titles: 'Beautiful Lady' for a scene with a lady, 'Gangway Charley' for a Charley Chase scene, 'Oh Doctor' for painful scenes," Schreuders explains. Such film-loop recordings, Schreuders suggests, may have been played back on a device similar to a jukebox in arrangement, which would pull up the required recording at the correct moment in the film. Later, cue sheets that listed the cues, their composers and timings in the order used in the films were prepared.

Composer Leroy Shield, circa 1930s

Piecing together the music for the cues for the re-creations was no small feat—particularly considering that no sheet music was available. During a 10-year period from 1981 to 1991, Schreuders researched which tunes appeared in which shorts. The trouble was, a 60-second cue might play for 30 seconds cleanly in one film before dialog would appear or Oliver Hardy would tumble down a chimney, while another film might feature the same recording cluttered during its first 30 seconds, but clean for the latter half. "Piet made up an impressive chart, with each cue identified by a letter designation on one axis and on the other all the film titles," recalls Blom. A discovery in a Dutch library of the original cue sheets, naming the cues used in order for each film, let Schreuders eventually identify the cues by their true names, as written by Shield.

Working at Dutch radio station VPRO (where Blom also worked), Schreuders spent months splicing together clean versions of the cues from the various films. "He might have the whole theme, except for one note, which he would find in a Thelma Todd film, and then splice that one note in to finally have a complete 20-second reconstruction," Blom says.

After a video distributor heard a live performance by Blom and a Dutch orchestra playing *Laurel & Hardy* music for a fan club and requested a recording, Schreuders brought his spliced recordings to Blom to see if he could be of assistance. "Gert-Jan had a reputation for starting strange orchestras from scratch," says Schreuders.

"I had formed a group of specialists," recalls Blom, "so we gave Piet's tapes to our arrangers to transcribe the tunes. I really wanted to give the impression of how this music must have sounded had you been in the studio with Mr. Shield in 1930."

The reed players mid-session at Dutch Recording Company

Once the music was transcribed, says Blom, "We invited musicians that are style specialists. You have these people who collect old instruments. If you say, 'It has to sound late 1920s,' they will bring the appropriate saxophone or trumpet that's from that era. And they'll use the type of mouthpiece or thickness of reed to get a specific tone."

The 20-plus ensemble—comprising trumpets, a trombone, three saxophones, a rhythm section of guitar, piano, bass and drums, and a small string section—were gathered at the now-closed Dureco (short for Dutch Record Company) studio in Weesp, Holland, for the first recordings in 1992, along with engineer Sytze Gardenier, who would record nearly all of the Beau Hunks' records. "I didn't want to make a hi-fi recording," says Blom, "so I suggested to do it with as much bleed as we could allow—to not record with total separation."

The brass section form one part of the recording circle.

Though details of Shield's original recordings have never been found, the musicians for the Beau Hunks recordings were placed, essentially, in a circle, as Shield may have done. "The only reference I had for the sound we were going for were Piet's crude cassette recordings," Gardenier recalls. "We could have recorded with a huge roll-off of the highs and boost the mids, but we wanted to start fresh and allow ourselves as many possibilities as we could."

Though Blom was interested in minimal miking—using one to three mics—Gardenier opted to leave the door open to allow any changes necessary in mixing, should they arise. "I basically put a Neumann M49 tube mic, set on omni, in the center of the circle and used U87s on omni—sometimes two, sometimes four—as room mics. Then I used U67s and U87s for spot mics for individual orchestra sections." Up to 16 or 18 tracks

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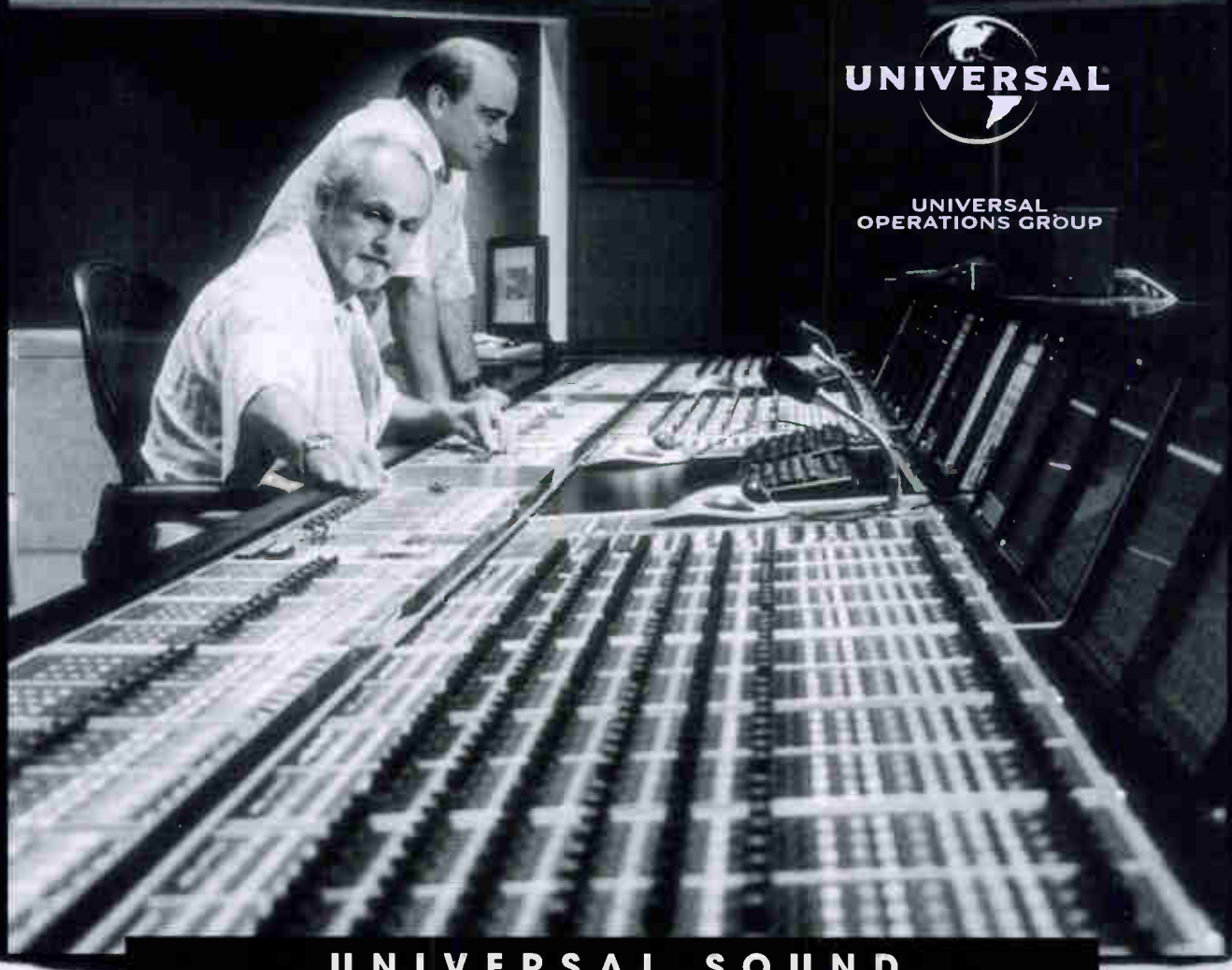

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were recorded through an old Cadac 40-channel desk onto 2-inch, 24-track tape; the extra channels were just used for backup to allow for flexibility in mixing, should a particular section need a boost. "We tried to get a balance as close as possible on only the room mics and the main mic."

The true balancing came from within the orchestra itself during live recording—something that took a while for the musicians to acclimate to. "At first, we did a couple of takes, and I ran back to the booth to listen—I was anxious to hear how it would sound," recalls Blom, who plays bass in the orchestra. "I was *stunned* by the recording. The musicians had been grumbling, but I called them into the booth. So 20 people came in, we played them the tape and they couldn't believe it. They said, 'This sounds like an old recording, but without the crackles and pops of a 78.' Then they started going out to their cars and finding pieces of cloth to put over the bell of the saxophone to try and mute it or [find] some other creative way of creating the sound we were after."

The recordings were first issued in Europe as two *Laurel & Hardy* discs released a year apart before being released by Koch as a "best of" 50-track disc in the U.S. But it wasn't until later research by Schreuders and Blom in the U.S. turned up actual sheet music for some of the tunes they had recorded from transcriptions that they realized the quality of their work. "With the exception of a few notes, we were quite close," says Schreuders. "The only difference was the key, which tended to be off because the music had been transcribed from PAL VHS tape recordings, which were off by five percent."

The greatest compliment Blom received about his Beau Hunks recordings came from an American Shuttle astronaut who brought the music with him on his Space Shuttle Columbia flights. "Astronauts can take three CDs onboard with them, and this guy took the *Laurel & Hardy*/Leroy Shield music with him. He wrote me a note that said, 'I never leave Earth without your CDs.'" ■

Alex Wurman

—FROM PAGE 66

example because I had the time in the film to do it. That's when I'm going to be known as being valuable—when I'm given the time to take somebody to where it is they want to go."

Scoring films is an intricate exchange between the composer and the filmmaker. As an example of the sort of interaction that takes place, Wurman cites his work with filmmaker Adam McKay, whose idiom is comedy—he directed *Anchorman* and the summer 2006 release *Talladega Nights*, both starring Will Ferrell and featuring Wurman's music.

"Writing the score for a Will Ferrell comedy directed by Adam McKay is a unique experience because its sensitivity to the application of the music is extremely high," says Wurman. "It's one parody after another, and often they're joined together with seconds to spare. The juxtapositions can be very fleeting, yet very important, because if it doesn't work, it can 'step on the funny,' as they call it. Trust me—everything in the music for that movie is humorous. If you're hearing something serious, it's funny. In a way, the music, instead of making you laugh—which is often the case with this music in this movie—is building the story."

For Wurman, creating music for a specific project involves both aesthetic and practical considerations. "It begins with watching the film, and at the same time, I'm coming up with creative ideas; I'm looking for creative solutions to whatever time or financial problems the film might have or any of the needs the film has that might rub up against each other," he explains. "Then I start fantasizing about the instrumentation as a result of that budgetary perspective and the creative perspective at the same time. I'll start to hear melodies and harmonies, sit at the piano and flush them out, and then I'll go into my studio and start slapping them up against the picture.

"A lot of what I do with synthesizer production remains in the final score," Wurman continues. "I use software and hardware synthesizers, including Apple's Logic Pro—they've got some cool synthesizers in there. I love Spectrasonics products because the loops and other instruments have such a great quality and ease of use to them. If I decide to use one of those sounds, I'll usually build the track around that. On *Talladega Nights*, one cue in particular has very heavy Spectrasonics drum stuff in it. And when I recorded that 80-piece orchestra over it, we ended up going with the very dry and percussive approach to the orchestra to help bring it closer to that sonic quality of the Spectrasonics sounds. That's a really fascinating way to go.

"The great thing about using a host of different instruments," he notes, "is that the programming that goes into them is done by different people, so each instrument has its own characteristics. I have a nice old Yamaha KX88 controller that I use to control all my soft synths and [Tascam] GigaStudios."

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Wurman's arsenal of electronic instruments includes a Waldorf MicroWave XT, a Roland JP8000 and, fittingly, a Minimoog Voyager.

"So, I'll take those live tracks and synthesized tracks in Pro Tools and go off to a recording studio to do the orchestras," Wurman continues. "On *Talladega Nights*, I used Joel Iwataki, who I think is a genius, to record and mix. We went to Warner Brothers to record and we had 80 pieces—a large number for that room. If an orchestra is playing really loudly, you can overpower the room if it's not big enough, but Joel has a technique that worked perfectly. One cue was big and strident-sounding in the beginning, and I wanted the second half to sound very Baroque and near-field, so we just did it with spot mics, and it turned out really well."

In a sense then, a finished score is the result of a series of collaborations. "What I love most about movies," he says, "is that I'm not only collaborating with fantastic musicians, but we're given a set of guidelines that focuses everybody on the prize. We just get down to business, and it leaves no time for any sort of deliberation. And then there's all this wonderful collaboration with the filmmakers, who are coming from a place that's so valuable because it's an emotional place that is not musically convoluted. I love having that inspiration from them." ■

Shawn Clement

—FROM PAGE 67

singer who was trying to get a record deal. I came out to play in her band and ended up staying for nine months. I was sleeping on couches—doing anything to keep it together—and met a lot of people."

Clement took a series of day gigs doing grunt work on music video sets. "I met stars on the shoots I worked on, including Michael Jackson and Nirvana. At night I played in bands. I backed up Don Johnson and Harry Dean Stanton. Those gigs were invitation-only, so I met more high-profile types."

Clement eventually burned out and moved back East to get his groove back, but not for long. He returned in 1994 on the day of the Northridge, Calif., earthquake. "Maybe I should have taken that as an omen!" Clement says. "I took a mail room job at Sony Pictures, which was great. Besides meeting my wife, who was a lawyer there, I handed my demo to everyone who came on the lot. I was hustling all the time!"

Persistence, talent and a cassette demo eventually brought in scoring assignments, and Clement quit the mail room gig. "I couldn't afford to put together a studio, so whenever I got a job, I'd ask a friend who had a room to let me work there. I was forced to learn how to operate all different kinds of equipment. These days, I track and mix all of my finals in the 1,500-square-foot project studio I built on our ranch, about 45 minutes from L.A."

Judging by the award Clement received from ASCAP in 2000, there are a lot of finals to work on. "The Most Performed Underscore Award actually refers to the total number of performances a composer has on the air in one year, and that was a very good year for me!" TV work started to flow in after 1997, when he landed the *Buffy the Vampire Slayer* gig. "That was a stroke of luck," Clement remembers. "Every composer in L.A. wanted that job, but somehow a demo of mine landed up in the hands of the right person and I was given the assignment. That gig let me start putting together my studio.

"I learned an important lesson the first time I handed in a score to the mixer of *Buffy*. There was too much bass in the mix

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and the cues were buried. These days, I tend to roll off some of the lower end, particularly since my scores often have lots of parts in them."

Cakewalk SONAR 5 is Clement's DAW of choice. "I'm a big Cakewalk fan and love SONAR 5. I recently did a demo for Cakewalk and Intel that shows off the power of 64-bit processing. I run SONAR 5 on a Rain Recording Element computer, and the pair is rock-solid. The computer I currently have has a 32-bit processor, and so I've ordered another Element that will run at 64 bits. I'm a big Rain Recording fan. Even on the 32-bit machine, I could play about 150 tracks with lots of plug-ins and never come close to a brick wall, although I did have to freeze some tracks, which won't be necessary when the 64-bit Rain Element becomes my main DAW. I had 17 plug-in samplers working in real time, including eight instances of [Native Instruments] Kontakt 2—all slots loaded with sounds, 40 or so plug-in effects—and I automated the hell out of the mix. It was crazy!"

Despite having monster guitar chops, Clement finds himself playing keyboards these days far more than any of the zillion stringed instruments he has lying around the studio. Three Yamaha 02Rs are used largely for monitoring, EQ and internal effects. Pairs of SPX990s and REV500s are comfortably ensconced in his room, along with a TC Electronic TC 2290, Eventide H3000 and Lexicon PCM90. "I've got other signal processors, including an old '60s Echoplex tape delay and a Lexicon LXP-15.

"I tend to leave the REV 500s and the SPX-990s set," Clement says. "One of these units has gate, another a 'verb setting that I use as my main hall and another has a delay. These sounds form my basic template. When I need to create an effect for an individual cue, I generally work inside one of the Yamaha boards. I'm an old-school hardware guy, but I am beginning to use plug-ins more frequently, and 90 percent of the panning and automation moves are executed inside SONAR."

Writing music for videogames has become a larger part of the equation for composers looking to prosper. "Videogame work is a lot different from film and television," Clement explains. "For one thing, you're given a lot more time to compose a game score. Television scoring requires speed; each week you've got to crank out another score. On the one hand, you're writing cinematic stuff [for videogames] like any other assignment, yet there are distinctions. You have to write themes that can be looped without sounding annoying. Cues

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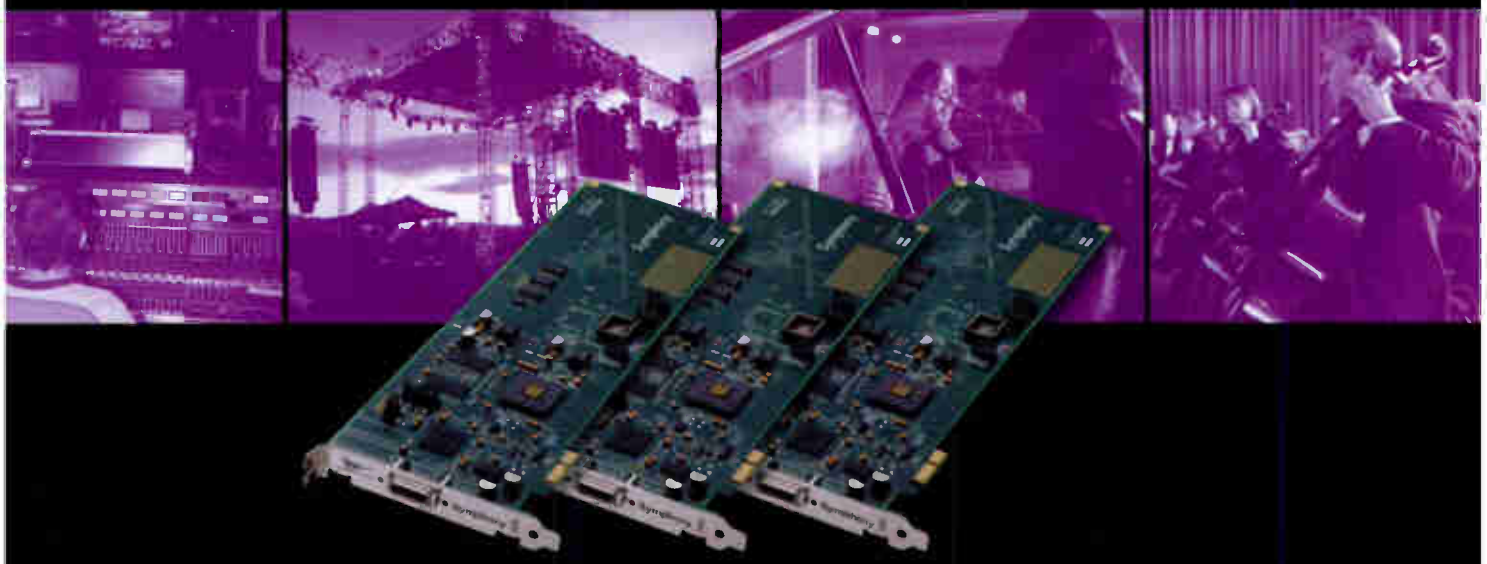

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must be designed so they can transition to a variety of other cues and not sound odd, and that's tricky. It's almost a math problem. You're scoring to concept, not picture, and that's also different."

Another distinction between the two is the need to deliver more stems to game producers, as Clement did on the score for a recent Batman game. "Batman's duking it out with Mr. Freeze in this one, and depending on the skill of the player, either can win. So I had to write a theme for Batman and another one for Mr. Freeze. Next, I had to compose an underlying bed for the fight scenes. This bed had to be written so that elements of the main character's themes can function as countermelodies that sit on top of it. Depending on who's winning at any given moment, one theme or the other is called up by the program.

"Lots of layers have to be written, and all of these cues are delivered on separate stems. I generally deliver about an hour of music per game. I heard about one game where the composer delivered approximately 200 minutes of music—that's a lot of cues, especially since none of them are very long. I'm currently working on Sony Ubisoft's *Open Season*, which consists predominantly of five- to 10-second cues. This game, and the film of the same name, will be released in September."

Still looking for the major film release that will raise his profile even higher, Clement enjoys the diversity of assignments that come his way. Not yet 40, he's been around long enough to witness some major changes in the industry. "There are more composers out here than ever before, and much less work on the low end of the scale—libraries have taken all of that away," Clement adds. "Reality shows have hurt the music business because they've lowered the quality of the product that's deemed acceptable. Don't get me wrong; I've done some of these jobs myself. But these days, it's all looped stuff. Music editors are cutting tracks with beds and hits that are all intended to be high-impact stuff. It's boring.

"But I love this business," he concludes, "and I'm excited about several projects I'm working on, including the games. I'm also getting set to score Clint Howard's feature film directorial debut, *Perfect Bend*. And you never know who's going to call. I was a huge Yes fan growing up, and not long ago the phone rang. It was Jon Anderson—he had my reel playing in the background while telling me that he'd love to work with me sometime. How cool is that?" ■

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Foo Fighters

Photos and Text by Steve Jennings

Dave Grohl sings through a Sennheiser 431, while drummer Taylor Hawkins uses a Sennheiser 945.

The Foo Fighters played a two-night run at the Berkeley Community Theatre (Berkeley, Calif.; mid-July 2006) for their acoustic tour. Rat Sound is providing the gear, including an L-Acoustics P.A., which projects FOH engineer Bryan Worthen's crystal-clear mix. "We're hanging nine of the V-DOSC and three dV-DOSCs, with dV-DOSCs along the front of the stage for front-fills," says Worthen. "The Arcs go wherever I need them to get maximum coverage, mostly for under the theater balcony when there is one."

Worthen is mixing on a DiGiCo D5, which he likes for its functionality. "The worksurface is like looking at an analog console with its multiple screens." Meanwhile, monitor engineer Ian Beveridge is on a Yamaha PM5D, using around 20 mixes and between 33 to 44 inputs, depending on the show. Vocalist Dave Grohl, drummer Taylor Hawkins, bassist Nate Mendel and guitarist Chris Shiflett are all on wedges for the acoustic gigs; Mendel will use a Sennheiser G2 and Future Sonics ear molds for the rock shows.

"I always put myself in the seat of the ticketholders," Worthen says of his mixing style. "I am very particular about hearing every little thing and feeling it, too—whether it be the Foo Fighters loud rock show or Foo Fighters mellow acoustic shows."

Monitor engineer Ian Beveridge (left) and FOH engineer Bryan Worthen

FixIt

PHOTO: STEVE JENNINGS

Rat Sound Systems' Dave Rat is working a 32-channel Midas Verona out on the Red Hot Chili Peppers' European TV and radio promotion tour. For his mixing technique on the U.S. leg, check out next month's "Tour Profile."

I wanted to avoid the increasingly popular trend of wedging highly complex and powerful consoles—digital or analog—into simple and relatively non-complex gigs. A compact and easy-to-setup FOH world—where I can see everything that's going on at a single glance without pressing buttons—can be achieved with a compact analog setup. When the Peppers headlined the 18,000-capacity KROQ Weenie Roast at the Verizon Wireless Amphitheater in Irvine Meadows, [Calif.], I used a 32-channel Siena. Even though the console is more optimized for stage monitor applications, I actually preferred it, as I loved having the extra aux/groups. I went straight into the processors and eliminated an AD/DA conversion, which gave the Peppers a sonic clarity advantage. Plus, it's really fun mixing big sound on little boards!

inside

News

Earmarking $1 million of its construction budget for audio systems, Resurrection Life Church (Grandville, Mich.) relied on Dallas-based Acoustic Dimensions, which spec'd three arrays with five L-Acoustics KUDO enclosures each; SB218 subs augment the system.

DiGiCo is incorporating DiGiCo LLC into DiGiCo UK Limited as a wholly owned subsidiary; the U.S. team of **Alan Nichols** and **Taidus Vallandi** remain...The three-day 2006 **Download Festival** (Derbyshire, England) featured 107 heavy-metal bands playing to a sold-out 75,000-capacity crowd. **SSE Hire** brought in an **L-Acoustics** V-DOSC system, which flip-flopped between two **FOH** consoles for seamless band changeovers. Each console used 10 channels of **XTA** C2 dual-stereo compression; all noise gates were stereo XTA G2s...Liverpool, England–based **Adlib Audio** ordered two new **Soundcraft** Vi6 digital consoles; the company's Dave Kay spec'd the boards for Scissor Sisters' upcoming U.S. and UK tours...Across the pond, the **Maxine Theatre** (Valley Center, CA) hired **Quiet Voice Audio** to implement a new audio system, which included **Allen & Heath** ML5000 Series consoles and **Shure** SLX UHF wireless mic systems...**A-Line Acoustics** launched its A-Line Affiliates network of customers; more info is available at www.A-LineAcoustics.com...**Midas** announces that its large-format analog console sales have doubled in volume since last year; according to the company, most sales have been from European P.A. companies, including Belgium's ARTO.

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On the Road

Pearl Jam

Flying high on the success of their long-overdue self-titled album, Pearl Jam is on the road, hitting stadiums along the U.S. *Mix* caught up with the band's longtime monitor engineer, Karrie Keyes.

You've been engineering for Pearl Jam for the past 15 years. What kind of changes have you seen along the way?

As technology changed, problems were solved. It has been an ongoing process between myself, the band and [sound company] Rat Sound. The only changes management ever requested was to lower or fly the sidefills for sight lines. Flying sidefills for Pearl Jam was not an option because of very specific individual mixes in zones. So we opted for the sidefills laying on their sides, like large wedges. Our road manager, Smitty, tech'ed for me for about six, seven years. I now have Peter Baigent, who is a wonderful tech.

What kind of board are you using?

We are using a Midas Heritage—we love it. Our attempts at using a digital console did not work out because of sound quality and the visual aspect; it just added another three to four seconds to mixing. My job is to watch the band, not a screen.

When we spoke to you on the last Pearl Jam tour, you were using a custom Rat Sound monitor system.

Although the entire band is using Future Sonics in-ear systems with the Sennheiser G2, we still use wedges for Ed and sidefills for warmth and instrumentation. Eddie [Vedder] only uses one ear for his vocal; we augment the vocal with Rat S Wedges that are loaded with TAD drivers on the 2-inch. He uses Rat Radian MicroWedges for his guitar and kick and snare. We use the sidefills for all other instrumentation. Both Matt [Cameron, drummer] and Jeff [Ament, bassist] use Rat MicroSubs to augment their low end. The only processing we use are two [Lexicon] PCM-60s and a BSS compressor. Ed's vocal runs through a Speck Version 5 preamp.

Now Playing

Toni Braxton

Sound Company: Rat Sound (Oxnard, Calif.)
FOH Engineer/Console: to be named/DiGiCo D5
Monitor Engineer/Console: Mike Jones/DiGiCo D5
P.A./Amps: L-Acoustics Arcs, dV-Sub/L-Acoustics LA-48A
Monitors: Sennheiser IEM300G2
Outboard Gear: Lexicon 480L, BSS Audio DPR-901, Tascam DVR1000, TC Electronic Finalizer/M3000
Microphones: Shure Beta 98, Beta 58, Beta 52, SM57, U4D; AKG 414; Sennheiser 609; Neumann KMS184; Audio-Technica AT4050; AKG
Additional Crew: production manager David Norman, tech Dustin Deluna

Slayer

Sound Company: Eighth Day Sound (Highland Heights, Ohio)
FOH Engineer/Console: Tom Quinby/Yamaha PM5DRH
Monitor Engineer/Console: Jim Corbin/Midas XL4
P.A./Amps: d&B Q7, C4, Q1, J-Sub, J8, J12, Q-Sub, C4, B2/d&B M2 wedges, D12, P1200, A1; L-Acoustics LLC15FM monitors
Outboard Gear: Lake Tablet; XTA RT1, RTA MIC, LP8D8, Contour; PreSonus Firepod; Crane Song STC-8; Empirical Labs Fatso Jr., EL8; TC Electronic 2290, D2; Aphex 622, Dominator II; Summit Audio DCL200; Eventide Orville Harmonizer, Eclipse; Lexicon PCM81, PCM91; Avalon VT-747SP; Sony CDP-D12 CD player; Tascam DA-40 DAT recorder
Microphones: Shure Beta 87C, KSM32, Beta 56A, Beta 57A, Beta 58A, Beta 91, SM57, SM58; AKG 460, 391; Audio-Technica 4050; Countryman DI; Electro-Voice RE20
Additional Crew: Martin Tarle, Mark Belicove, Joseph Langholt

Martin Audio Brings Old Blue Eyes to Life

Designed by Autograph Sound's Nick Lidster, the "Virtual Sinatra" live show at the London Palladium has been made possible by the discovery of vintage 35mm archive footage, extensive tape restoration and the resolution of challenging timecode issues—allowing an image of Frank Sinatra (portrayed on nine moving video screens) to be synched to a 24-piece orchestra and the whole production under the direction of David Leveaux.

With an L/C/R line array hang (and 54 distributed Martin Audio Effect 3R cinema speakers), the audio is run in 5.1, with two suspended five-box Martin W8LCs taking care of the two flanks and the vocals coming as a mono signal through the center cluster. Autograph used a custom frame to fly the Martin WSX subs above the W8LCs. "They screw into the dolly boards and ensure we can rig them on trusses," explains Lidster. "We have one WSX each side in the air and another each side on the ground." Six more W8LCs are ground-stacked on each side of the stage with the WSX sub and strategically placed delays and front-fills. Effect 3Rs are spread throughout the different levels.

"This is a good-sounding room, but there are difficult areas," says Lidster. "As the Martin Audio W8LC is fully horn-loaded, we've been able to 'steer' the audio accurately into the different areas. At the back of the circle, the sound is bright, clean and crisp, with no delays upstairs. It means I can turn up the HF without killing people downstairs near the stage."

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Matthew Peskie, Jars of Clay
Production Manager

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TAKING BACK SUNDAY

Coming off the success of their debut album, *Where You Want to Be*, Taking Back Sunday's latest endeavor, *Louder Now*, exudes the melodic, hardcore sensibility that the band takes to the stage. "Unbottling the lightning onstage" is a stellar crew that includes front-of-house engineer Eddie Mapp, monitor engineer Rob Smuder and drum/guitar tech Jeff Pereira. *Mix* caught up with the tour in late July at San Jose State University's Event Center Arena in San Jose, Calif.

Adam Lazzara

Fred Mascherino

Matt Rubano

Mark O'Connell

Photos and Text
by Steve Jennings

World Radio History

The tour is carrying a Showco P.A., comprising 20 Prism cabinets and 12 subs per side, along with four front-fills. According to front-of-house engineer Eddie Mapp, "We went with this setup to allow more flexibility since flying a P.A. isn't always an option. During setup, I use SIA Smaart for alignment of front-fills to the main hang and then everything to the backline. This gives us greater coherency, which helps in the 'musically unfriendly' spaces we often visit." For show time, Mapp switches between spectrograph (for softer sections) to spot feedback and then transfer function so that he can ensure that what he's hearing in the room is relevant to what's coming out of the Digidesign VENUE desk. "Normally I use the phase trace for sub alignment," he says, "but due to some interesting internal processing, we're forced to go 'old school' and rely on our ears."

For the board, Mapp is using 48 inputs and 24 outputs. "I had Clair I/Os sent out with AES inputs to minimize conversions—A/D into the stage rack and D/A out to the amps. All the processing lives onstage and is controlled wirelessly out front, along with the VENUE. This is the first time I've actually spec'd a digital desk for more than a few dates, and it's really been incredible. From the plug-ins to the Pro Tools recording and playback, this has really been a fun experience."

Along with the installed plug-in bundle, Mapp is relying on a few of his own: Eventide Anthology II (reverbs, pitch-shifting), SansAmp (bass), McDSP MC2000 (multiband compression on vocals) and an EMI Abbey Road limiter (bass and overheads). He is also using a Crane Song Phoenix, which he employs on all drum channels. "It really helps to bring everything upfront," Mapp says. "You can soften up instruments by using it lightly or really get things going by cranking it up.

"This has been a fun tour," Mapp continues. "We've pretty much covered everything from 5,000 to 15,000-seat venues, and everything has held up pretty well. Being a summer tour, as long as the FOH cooler is stocked and fan power is on, we're ready to go."

Kicking back at FOH, from left: system engineer Brett Stec, Eddie Mapp and front-of-house engineer for openers Angels and Airwaves, Tom Abraham.

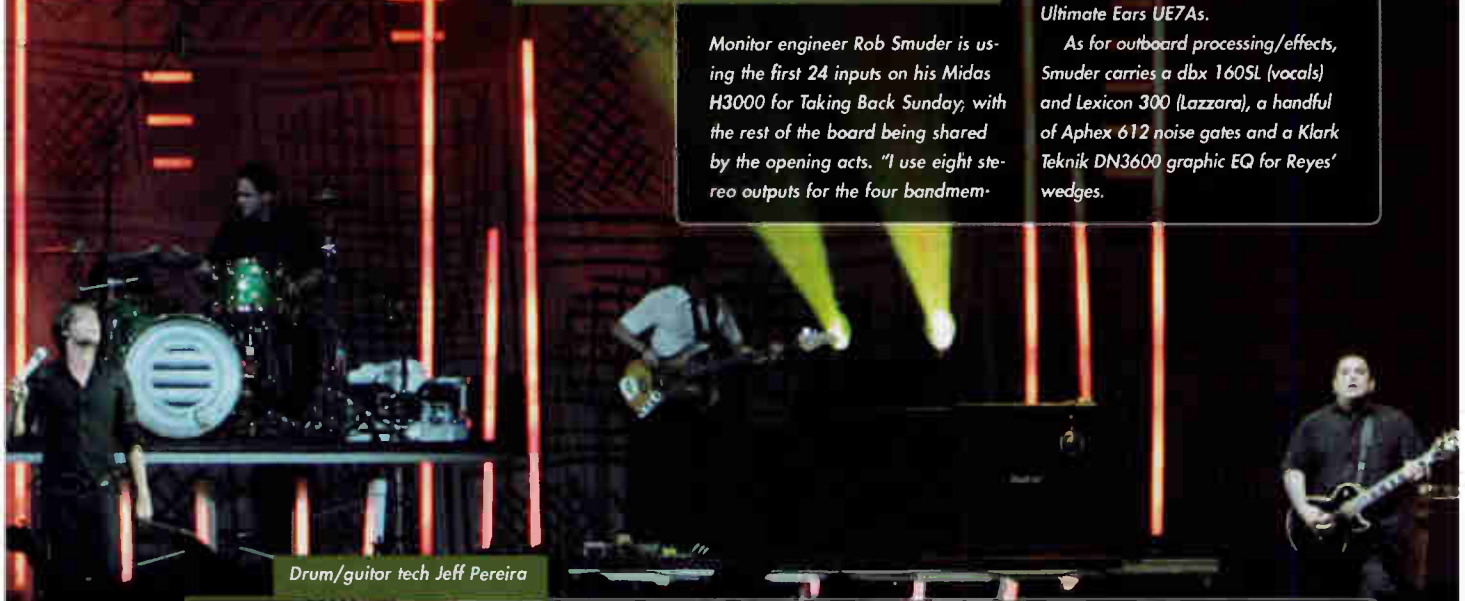
The Digidesign VENUE monitor screen on the left switches between Pro Tools for recording and playback, and SIA Smaart, while the other monitor on the right runs the D-Show software.

Over at monitor world, from left: monitor tech Jason Panks, Rob Smuder and audio tech Matt McCleary.

Monitor engineer Rob Smuder is using the first 24 inputs on his Midas H3000 for Taking Back Sunday; with the rest of the board being shared by the opening acts. "I use eight stereo outputs for the four bandmembers on ears, three mono in-ear tech mixes and a mix far stage-left guitar player Eddie Reyes, who monitors off of three Showco SRM wedges," Smuder says, "and a mix for drummer Mark O'Connell's butt thumper."

Lead singer Adam Lazzara, stage-right guitarist Fred Mascherino and bassist Matt Rubano are on Ultimate Ears UE10s; O'Connell uses Ultimate Ears UE7As.

As for outboard processing/effects, Smuder carries a dbx 160SL (vocals) and Lexicon 300 (Lazzara), a handful of Aphex 612 noise gates and a Klark Teknik DN3600 graphic EQ for Reyes' wedges.



Drum/guitar tech Jeff Pereira

Drum/guitar tech Jeff Pereira at his main rack: a new BadCat Lynx 50 head, a Mesa Boogie Dual Rectifier, two Sennheiser 172 Series wireless units, a multi-selector to make guitar changes between units and a Furman power supply.

According to Pereira, the drums are miked with Audio-Technica AE2500 (kick), ATM23 and AT4051 (snare), ATM35s (hi-hat and toms) and AT825 (overhead).

World Radio History

BY SARAH BENZULY

Gulf Coast Sound

Have Gear and Commitment to Service, Will Succeed

Sometimes, upgrading a piece of gear can mean the difference between garnering a few more clients and becoming a top-rated sound reinforcement provider. For Rayne, La.–based Gulf Coast Sound (www.gulfcoastsound.com), that magical purchase was an Electro-Voice Xlc compact line array. "From that moment," CEO Larry Habetz remembers, "it's been like pouring gas on the fire. Buying those boxes qualified us as a player in the field. It was about two years [later] when we bought our first Midas—the Heritage—and that was the next five gallons of gas on the fire. Again, it improved our status and how we were looked upon in the industry and rider acceptance. The previous console package we had was usable, but not as acceptable as it had been earlier. We were working with higher-profile bands who were demanding higher-profile consoles, so that pushed us out to the next league."

Subsequently, the company (which had been Gemini Concert Systems until Habetz bought the company in 1999 from Randy Pylant—who is back in the business—and renamed it Gulf Coast Sound) has added the Midas Sienna monitor board to offer a more well-rounded package that also includes Klark Teknik processing and Helix EQs, and a "gaggle" of in-demand mics. The whole rig was recently brought out for a Gladys Knight show in Charenton, La., "and their front-of-house guy said he never worked with a better group of guys with better gear," Habetz says. "He said it was first-class all the way around.

"That's the thing about this business; it's worldwide," he continues. "It's a very small community of people who make this business turn. There are a lot of guys willing to help you along the way. [Included in this core is the Telex family.] I was working on an install on a Saturday afternoon in Little Rock and needed a piece to finish and called Rocky, the plant manager over in Morrilton [where Electro-Voice's manufacturing facility is], which is about an hour away from Little Rock, and said, 'I need this one piece so I can get home. Is there any way I can run over to pick this up?' And he says, 'Well, if you can wait a couple of hours, I'll run it out to you.' So a couple hours later, he shows up in short pants and flip-flops and a T-shirt, and I said, 'I didn't mean to interrupt your plans today. What were you up to?' 'Well, I was out at the lake fishing and I had to put the boat away and drop a few things off at the house and then go over to the plant and pick this up and run it over to you.' 'I could have come over and gotten this.' 'Well, I wanted to see the project, see how everything was going.' This is but one story; I can't tell you how many times I have called Monte Wise [special projects manager for Electro-Voice] after-hours, weekends, holidays, et cetera. He is always eager to assist us in any way possible, and it's stuff like that that really shines in this business."

Gulf Coast Sound's Larry Habetz at the company's new Midas board

Habetz points out that as the sound reinforcement community is quite small for a worldwide business, this tight-knit community can feel the drastic effects from a natural disaster. Gulf Coast Sound wasn't hit by the hurricanes—Rita went to the west of the shop and Katrina to the east—and the aftermath of their destruction had a residual effect on his business. "New Orleans was out of commission and still is in large part," Habetz says. "There's not that many venues up and running. Some of the people we were doing work for were working in these venues, and we were picking up some of their other work. We were fortunate that our *direct* work was not based in that area. We do a lot of work in Memphis, North Mississippi, Southeast Texas, Arkansas, Alabama.

"The damage in New Orleans is not to be underestimated, but there are people saying, 'I don't have a roof on my house'; well, 20, 30, 40 miles down the coast in Mississippi, there is no house. There are slabs where there was once a house. Down in South Louisiana, there's nothing there. These were small towns that got washed away. I did a show with Lonestar in Biloxi [Miss.] three months ago and I drove up and down the coastline highway, and it just brought tears to my eyes. I was in New Orleans two weeks ago and the city is coming back online; there are still a lot of blue tarps covering houses, but you're starting to see signs of life."

While the area continues to rebuild, Habetz is looking at expanding his clientele. "We want to build good relationships. I want to know people on a first-name basis and I want people to know me. It's getting harder for me to do this because we're starting to book so much that it's hard for me to be there for every show, but I pride myself on always being at a show. If my company has a show going on any given weekend, I'm there." ■

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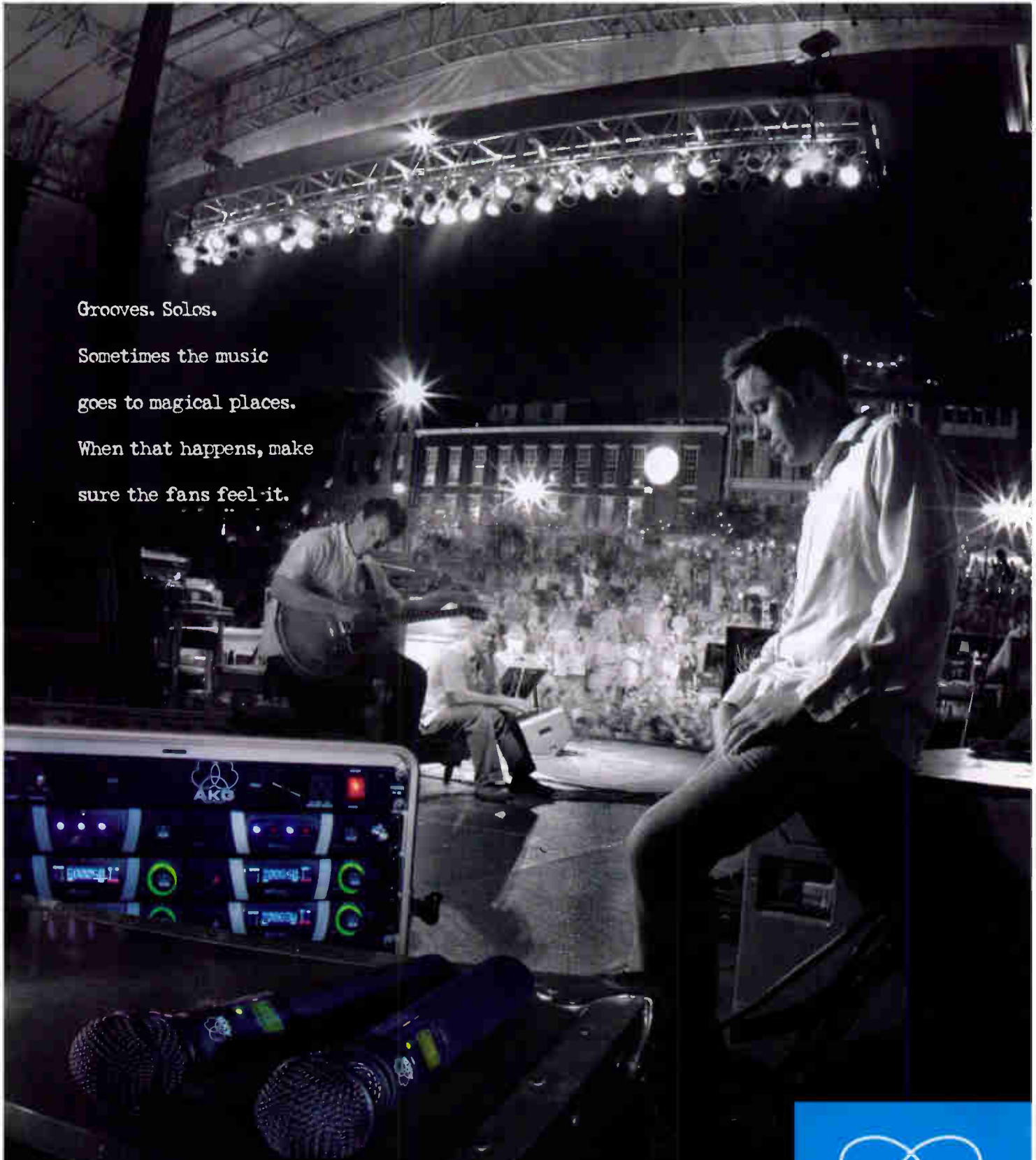

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Tools of the Trade

AMS-NEVE 8801/8802 PRODUCER PACK

Based on the channel strip design of AMS-Neve's 88RS (www.ams-neve.com), the single-rackspace 8801 ($2,295) and 8802 ($2,200) processors boast the signature Neve sound, plus recall. The 8801 channel strip features a mic preamp, high- and lowpass filters, insert point, 4-band EQ, gating and compression. The EQ and filters can be routed to the dynamics sidechain, and the components can be swapped in order. An optional A/D converter includes all standard sample rates to 192 kHz and direct-to-DSD conversion. The 8802 is a fully switchable compressor, limiter and gate. The recall features are supported through a USB port that connects the unit to a Mac or PC and is included software.

PEAVEY KOSMOS VERSION 2

Adding to its expanding Kosmos, Peavey (www.peavey.com) has released Kosmos V2 ($299), which combines the most popular features from the Kosmos Pro and original Kosmos processors. Kosmos is a dynamic phasing technology that manipulates low and high frequencies to deepen bass and widen highs through phasing rather than equalization; it also helps mask the comb-filtering problems common in live sound productions. The new unit features front panel rotary controls of parameters and a special Low Damping button that adjusts the low bass' "tightness." The subwoofer control sets the level of sub in the mix and features a Crossover Disable switch and a Cut Sub Bass From Mains switch that directs the low-frequency energy to only the subwoofers. The single-rackspace unit also offers a mono sum switch, TRS balanced sub output, dual XLR and ¼-inch I/O, and crossover disable.

ROGER NICHOLS PLUG-INS

Engineer Roger Nichols (www.rogernicholsdigital.com) is now offering six new plug-ins—one of them for free. The Dynam-izer ($249) is a compressor that lets the user break audio levels up into zones so they can be controlled as required. The Uniquel-izer ($249) lets users determine their own EQ, putting more bands or filters just a click away. With Frequal-izer ($249), users can build a complex FIR (Finite Impulse Response) filter to their own specs with EQ curves that can be drawn and edited. The Finis Peak Limiter ($249) employs an advanced limiting algorithm. Inspector XL ($299) is a collection of six individual audio analysis tools designed to fulfill a number of familiar analysis tasks. Inspector (free) offers everything from spectral analysis to extensive peak/RMS metering and a balance meter. All plug-ins come in RTAS, VST and Audio Units for Mac OS X, and RTAS and VST for Windows.

SOUNDFIELD ST350

Making surround recording even more portable, the Soundfield ST350 (dist. by Las Vegas Pro Audio, www.lasvegasproaudio.com, $6,700) unit comprises a lightweight, multicapsule microphone and compact mic pre/control unit that generates surround and stereo simultaneously at balanced line levels. The preamps offer discretely switched 6dB gain steps and composite five-segment LED bar graph meter. Polar patterns are continuously variable, and a width control provides everything from mono to wide image stereo. End-fire and invert controls are provided to correct for 3-D microphone positioning while still maintaining the correct stereo and surround perspective. The unit also offers a highpass filter, switchable M/S output and headphone monitor.

TC ELECTRONIC M350

The M350 single-rackspace multi-effects processor from TC Electronic (www.tcelectronic.com, $249) marries hardware and software. Not only does it have 256

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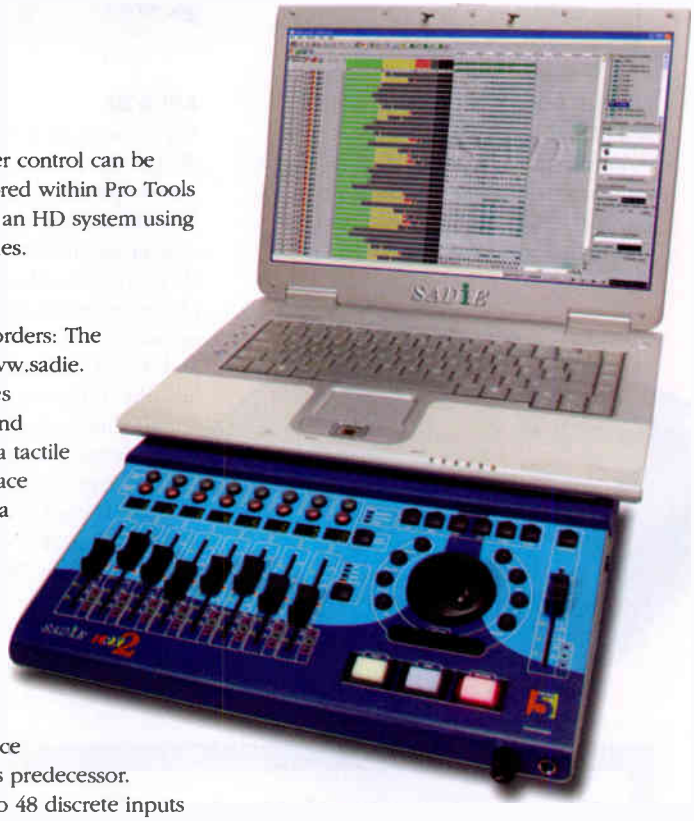
factory presets and 99 user presets, but a free-for-download Audio Units/VST-compatible software editor allows for seamless control and editing integration with DAW systems. The software lets the user fully automate all of the M350's parameters and presets, or control them in real time. M350 also features a front panel user interface for easy and speedy operation in live performance situations. An auto-sensing, 24-bit S/PDIF input automatically switches to analog when no digital input is detected. It also includes an easy-to-read preset display and offers MIDI I/O, MIDI clock tempo sync, pedal-controlled tap tempo and global bypass. The unit provides five direct-access parameters for quick parameter changes. The adaptive built-in power supply (no wall wart!) ensures seamless operation at any voltage.

LYNX LT-HD

Lynx Studio Technology (www.lynxstudio.com) introduced the LT-HD ($395) for the Aurora 16 and Aurora 8 converters. The card is an L-Slot interface that provides digital I/O in a format recognizable by Pro Tools HD systems. LT-HD–equipped Auroras can be connected to HD Core or Accel Core cards with standard Digidesign cabling and can operate seamlessly with all Pro Tools HD–compatible versions, enabling Lynx conversion and SynchroLock word clock, which promises low jitter and low distortion of digital signals. The unit offers two DigiLink ports, one primary and one expansion, for up to 32 channels of conversion per HD Core or Accel Core card (using two Aurora 16s). Users can get full channel count at sample rates up to 192 kHz and accurate delay compensation within Pro Tools with no manual delay adjustments required. I/O functions for parameter control can be controlled and monitored within Pro Tools while interfacing with an HD system using standard DigiLink cables.



SADIE LRX2

Attention, remote recorders: The LRX2 from SADiE (www.sadie.com, $8,280) combines SADiE's audio input and output modules with a tactile hardware control surface and the ability to use a standard PC laptop as the host computer. The LRX2 takes the original LRX concept a step further by providing more DSP and control surface enhancements than its predecessor. Users can record up to 48 discrete inputs at 48kHz/24-bit (or up to 32 tracks at 96kHz/24-bit) from a variety of dedicated input "slither" cards. For maximum compatibility, these cards are the same as those employed in SADiE's flagship PCM-H64/H128 multitrack editing workstations. In addition to the standard 16-channel ADC/DAC and AES/EBU digital I/O cards, a new switchable 16-channel mic/line card is available with 48-volt phantom power and selectable gain steps. A new MADI interface card makes it easy to facilitate connection of up to 64 tracks to studio or live digital consoles. The LRX2 hardware comprises a small assignable mixer with eight motorized faders; pre-fade listen and dedicated record-enable buttons; a complete editorial interface with fully weighted jog wheel and ergonomic editing buttons; locator memories; transport controls; and a headphone monitor output.

ABLETON SAMPLER

Ableton (www.ableton.com) Live users will want to check out Sampler ($199), an advanced sound design and sound-sculpting instrument available as an upgrade within Live 6. When combined within Ableton's instrument and effect racks, multiple Samplers provide depth of control, automation and sonic possibilities. Live users will appreciate the gentle learning curve needed with the familiar GUI. Each instance of Sampler can host any number of sample zones. Key and velocity ranges, as well as crossfades, can be defined using a graphical editor. Users can also set up numerous playback and looping options for each zone. Sampler assists with mapping and helps find appropriate loop points. Sampler avoids RAM shortages and loading wait times by employing Live's disk pre-loading technology. The app also imports common sample formats, including

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Akai S1000 and S3000; Tascam GigaStudio and EXS; Sound Blaster SoundFont; and (non-encrypted) Native Instruments Kontakt. Sampler can also access and edit Ableton's Essential Instrument Collection, shipping with each boxed version of Live 6.

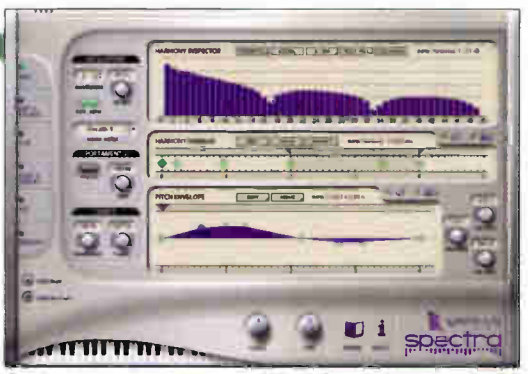
API A2D

Yup, you heard it right: API is going digital. The new single-rackspace A2D (www.apiaudio.com, $1,995) integrates two 312 discrete mic preamps with API's new proprietary A/D converters. The slick, white-faced unit offers 20-segment LED metering on both analog and digital sections, an insert between the analog and digital sections, mic and line inputs, polarity, phantom power, input pad and mic/line switches. The digital section features six sample rate choices and external Super Clock input. Multiple A2D units can be slaved together. I/O is provided via XLR, and there is a balanced ¼-inch TRS plug for the insert.

ALESIS IO|26

Need 26 channels of I/O on your desktop? Then you'll want to see the Alesis IO|26 (www.alesis.com, $599). The box is a FireWire audio/MIDI interface that is compatible with Mac or PC, and features S/PDIF and ADAT digital inputs (44.1 and 48 kHz; eight SMUX ADAT channels at 88.2 and 96 kHz) and 16 channels of MIDI. It also offers eight analog mic/line inputs with phantom power, supports 44.1/48/88.2/96/176.4/192kHz sample rates, and provides a switchable high-impedance input for instruments and a switchable phono preamp. The unit offers a five-segment signal/clip LED on each input, two headphone outs with individual level control and dual FireWire ports. For ultimate portability, the IO|26 can be either AC- or bus-powered, and comes with Steinberg's Cubase LE DAW software.

Upgrades and Updates



Kjaerhus Audio (www.kjaerhusaudio.com) **has released an update of Spectra**, the synthesizer plug-in that combines multi-stage additive synthesis with subtractive synthesis. Version 1.1 is free for all registered users and includes 318 new presets from sound designers DJ Bach, Claude Climer and Emdot; a German user's manual; and some bug fixes...**PreSonus** (www.presonus.com) **is now shipping the DigiMax FS** microphone preamplifier. The box offers eight channels of digital optical Lightpipe ADAT and 96k dual-SMUX input and output, balanced analog direct output and TRS inserts on each channel...**Synk Audio** (www.synkaudiostudios.com) **announced a new lower price on its Musicbed DV** interactive music software bundled with Season One, a customizable cinematic stock music library. Together, the two products provide custom music beds for video, audio and multimedia productions for $199...**McDSP's** (www.mcdsp.com) **RTAS Project Studio has been expanded to seven plug-ins** and now includes the tape saturation modeling of Analog Channel LE and the new ML4000 LE brick wall limiter. In addition to the new plugs, Project Studio supports Windows XP and Intel-based Mac systems...**The Sound Guy** (www.sfxmachine.com) has **added VST SDK 2.4 support** for its latest Windows updates—SFX Machine RT 1.06 and SFX Machine Pro 1.01—which now run on 64-bit machines with apps that require VST 2.4 support. In addition, the company **added Mac OS X Universal support to its sound design plug-ins:** SFX Machine RT and SFX Machine Pro...**VirtuosoWorks** (www.notionmusic.com) **has released five Sound Kits**, adding extra sounds and techniques to the standard orchestra that ships with NOTION software. These new samples were recorded in Studio One at Abbey Road Studios using the London Symphony Orchestra players and include expanded strings, percussion, brass, woodwinds and harpsichord...**Ueberschall** (www.ueberschall.com) **has released Liquid Player 1.1**, a new VST engine for its Liquid instrument series for Mac and PC. The upgrade offers Universal Binary support, bug fixes and a variety of new features and improvements...**Submersible Music's** (www.drumcore.com) **DrumCore 2** is out with **enhanced sync and drum module features**, plus new content and REX2 compatibility. Other features include continuously variable tempo, tempo synchronization with ReWire hosts and separate outputs with pitch, as well as pan controls for MIDI drum sounds. The new version also increases the number of included loops, fills and drum kits...**CEntrance** (www.centrance.com) has **released an upgrade for its Universal Driver for FireWire audio interfaces.** The Windows audio software enables users to combine FireWire audio interfaces from various manufacturers into one system. Version 2 promises high stability and ultralow-latency (just over 5ms) analog input to analog output...**Cakewalk** (www.cakewalk.com) now **offers a Universal Binary update to the Audio Units version of Rapture**, its wavetable synthesizer. The update is available as a free download for registered Rapture customers. ■

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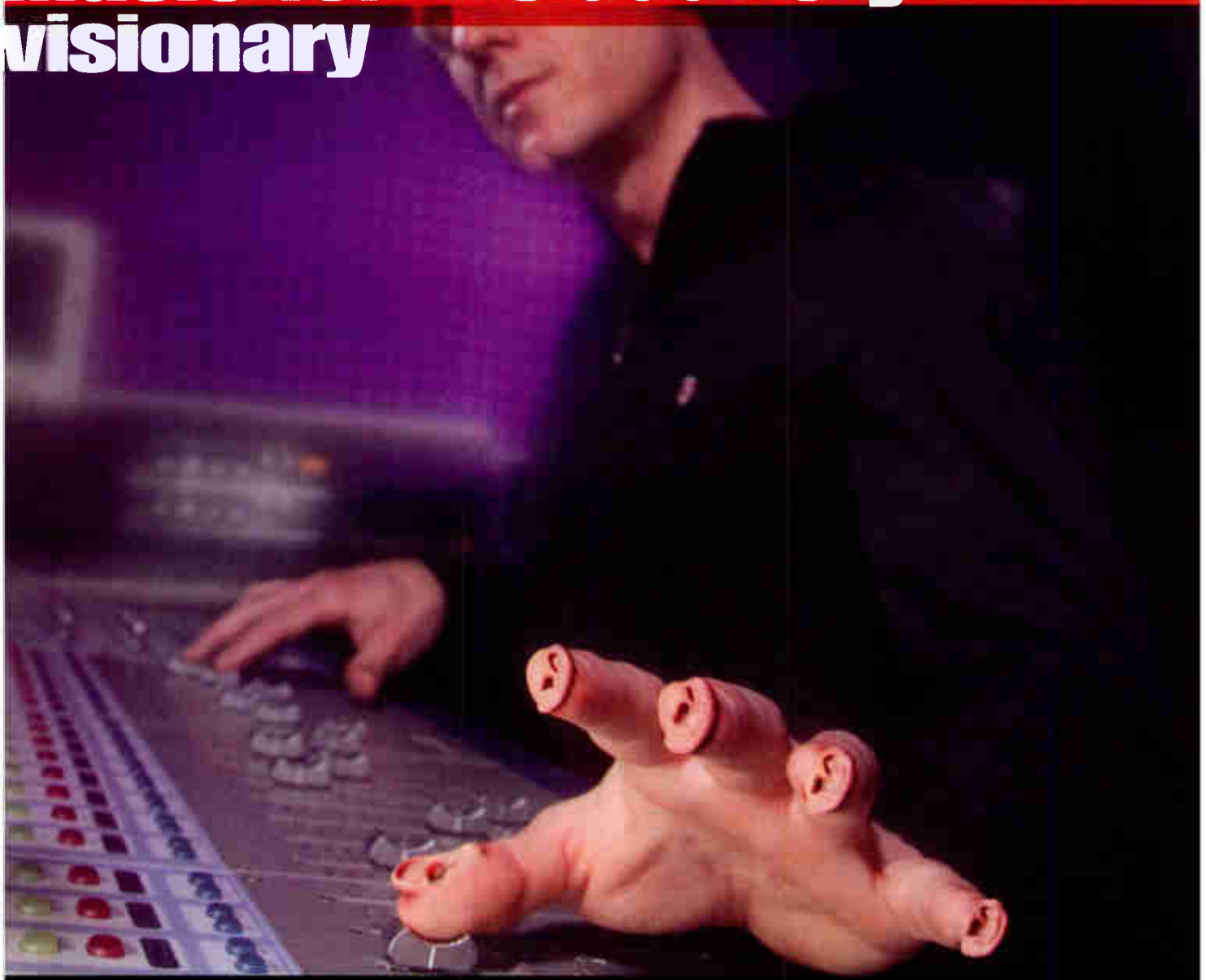

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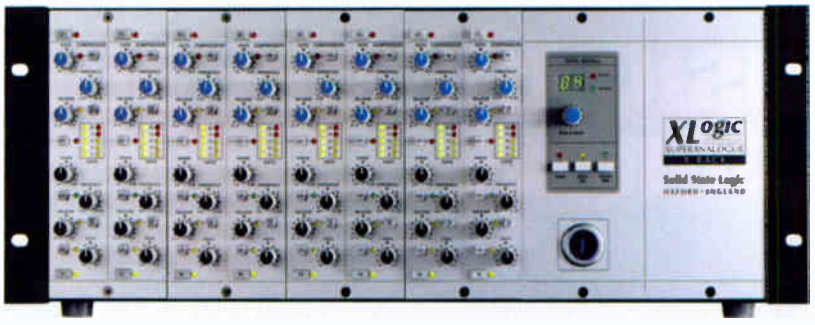
BY MICHAEL COOPER

Solid State Logic X-Rack Dynamics Module

SuperAnalogue Processing in a Rack



Most mortals can't afford a Solid State Logic XL 9000 K Series console (a 48-channel frame is in the high six figures), but the same SuperAnalogue processing that board boasts is now available in a rackmountable, 4U powerhouse: the XLogic X-Rack. The X-Rack is a modular, powered system that can be fitted with up to eight SSL Dynamics, Mic Amp and Channel EQ modules—or blank panels as needed—in any combination. My review unit came with eight Model 729618X1 Dynamics modules installed.

All of the modules' pots and switches can have their settings stored in Flash memory and recalled using SSL's onboard Total Recall computer, which can be accessed via internal memory, MIDI or remote commands over 9-pin from a console such as the SSL AWS 900. Whether it is used in a stand-alone setup or patched to console inserts, the X-Rack makes the fabled SSL sound accessible for both studio and live applications.

I CAN RECALL

X-Rack's central nervous system is its Total Recall computer, which stores and recalls 32 internal control setups. Total Recall's front panel user interface comprises a combination rotary-and-push-switch control and three momentary switches used to save, overwrite, delete, recall and write-protect setups for all installed X-Rack modules. Setups can also be copied from one module to another or swapped between the two. Status LEDs and a large, numeric LED readout guide the user.

Total Recall uses status LEDs on all installed modules' pots and switches to indicate whether or not they are set to the current setup's stored values. LEDs labeled Sel at the top of each module flash when any of its control settings don't match those for the current setup. Status LEDs for a module's two-way switches light for those switches that need to be set to their alternate position to match the current setup. Bi-color status LEDs located above each rotary control knob light either green or red when an associated knob needs to be turned clockwise or counterclockwise, respectively, to restore the recalled settings. I found Total Recall to be an elegant, fast and intuitive solution for analog systems recall.

Nine-pin I/O connectors on the X-Rack's rear panel can be used to daisychain up to three X-Racks together for connection to serial port 1 on an AWS 900 console. A 6-foot cable is supplied with each X-Rack for such purposes, and it can be extended up to 48 feet with a suitable extension cable; this allows the AWS 900's Total Recall system to store and recall settings for connected X-Racks. The X-Rack also provides MIDI In and Out connectors for storing and recalling settings via System Exclusive bulk data dumps and loads, respectively, using any MIDI sequencer or DAW that implements Sys Ex.

Audio I/O connections vary for each module installed. World travelers will appreciate X-Rack's auto-sensing power supply, which accommodates 90 to 264 volts. The detachable AC cord is securely held in place by a metal hinge—a nice touch.

IT'S DYNAMIC

The VCA-based compressor/limiter and expander/gate processors in the Dynamics module are simultaneously activated or bypassed using the same In switch. All rotary controls are continuously variable, and all switches latch (except for the Sel switch).

Rotary controls for the compressor/limiter section include those used for adjusting ratio (from 1:1 to ∞:1), threshold and release time. Depressing the PK button changes the knee from soft to hard, and peak detection from RMS to peak-sensing for true limiter action. Attack time is program-dependent and varies from 3 to 30 ms, unless the Fast ATT switch is depressed; in which case, the attack time becomes fixed at 3 ms. Makeup gain is automatically applied, making setup (and A/B comparisons) a snap in most applications.

The expander/gate's four wide-ranging rotary controls are used to adjust its range, threshold, and hold and release times. Activating an ENV switch changes the gating action to that of a 2:1 expander. Depressing this section's separate Fast ATT button changes the attack time from 1.5 ms to 100 µsec for 40 dB of gain reduction—the maximum depth—in both cases.

Two five-segment LED ladders—one for the compressor/limiter and the other for the expander/gate—are provided to show the respective amount of gain reduction for each processing section. Depressing a Key switch routes signal received at the module's rear panel key input (more on this later) to the sidechain used for both processors. Each module also features a Link button, which, when depressed, sums the control voltages for all linked modules so that the module with the greatest amount of gain reduction determines the depth of processing for all other linked modules.

Each Dynamics module's rear panel includes separate XLRs for audio path and key inputs, and audio output. A latching switch sets nominal operating level for either +4 dBu or -10 dBV.

PROCESS THIS

My first tests of the Dynamics module was recording male lead and background vocals using an AKG C 12 VR mic. Light compression transparently smoothed the tracks' dynamics and slightly mellowed the upper-midrange frequencies. This produced a silky sound that I liked for lead vocals, but didn't find suitable where background vocals needed to cut.

On fiddle, the Fast Attack setting tamed unruly peaks that the program-dependent Attack couldn't quite grab. Upper mids were softened slightly, which was flattering in this case. This timbral coloration also sounded awesome on an electric guitar track recorded with a Royer R-122 ribbon mic, yielding a flattering "brown" sound that nevertheless

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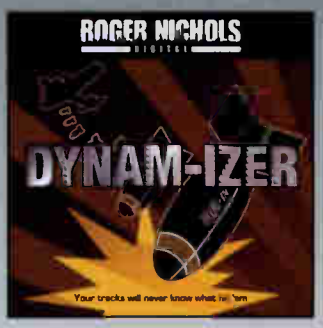

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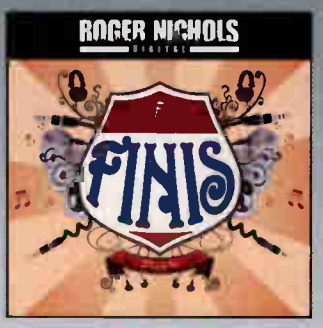

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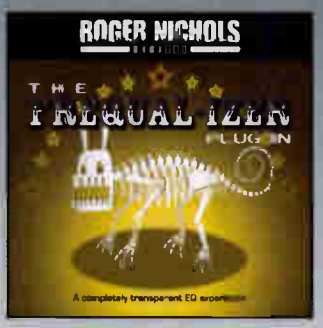

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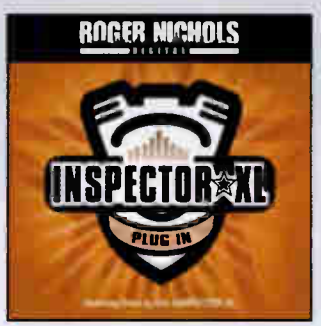

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retained its crunchiness. Fast time constants and low ratio and threshold settings produced a tightly controlled, "in-your-face" assault.

Patching a kick drum track into the key input for a module that was processing a bass guitar's audio signal, I triggered the gate (and compressor) so that the bass would only sound with kick hits. With fast attack and release times, the hold time determined how long the gate stayed open and set the groove. I could easily set the threshold to prevent snare drum bleed from opening the gate. In another bass guitar application, limiting using fast time constants lent a good dose of grunge to the bass that sounded really tough when combined with the original track.

On linked modules serving stereo drum room mics, maximum ratio, minimum threshold and fast release produced a suitably trashy sound with good attack—though not nearly as "spanked" as a Universal Audio 2-1176 gave. The Fast Attack setting clamped down too much on the traps' attack and made cymbals pump too much, but switching out that control yielded great results.

Used as a mix bus compressor, the Dynamics module produced a punchy mix using program-dependent attack times and, alternatively, leveled drum hits and other transients using the Fast Attack setting. As the Fast Attack setting didn't make the mix any louder, I preferred using the punchier program-dependent setting on the mix. Oddly, the linked modules' meters showed different amounts of gain reduction from each other at times, although a headphone check confirmed that the stereo image remained rock-solid. And although the module's maximum threshold is specified to be +10 dBu (fairly low for use on a hot console's mix bus), I had to set it to -20 dBu to get noticeable gain reduction using the very low ratio suited for this application.

In comparison, my stereo-linked Aphex 651 Expressors (the discontinued, solid-state model) gave a slightly louder yet more dynamic, open and crisp sound. The SSL modules sounded fuller and warmer, and never got edgy or thin on screaming choruses that kept my meters topped.

THE BIG PICTURE

My few complaints about the Dynamics module are minor. The only way to bypass the effect of the compressor/limiter without bypassing the entire module is to set its ratio to 1:1; independently bypassing the expander/gate would require setting the range control fully counterclockwise. A key-listen circuit and output gain control are not offered; the latter omission can be inconvenient when you are feeding a downstream A/D, for example, where inputs may only offer hard-to-access trim controls for adjusting gain. Except for the 0dB marking for compressor threshold, only minimum and maximum settings for controls are noted on the faceplate. The meters should be more finely resolved toward the bottom end of their gain-reduction range, especially for use as a mix bus compressor. Last, the male XLR connectors for inputs don't latch.

However, these negatives do not affect the Dynamics module's sound, which is excellent. And Total Recall is a considerable asset for critical tracking, mixing and mastering sessions. Cost, on the other hand, is a major consideration. An "empty" X-Rack (powered and fitted with Total Recall) lists for $2,425 ($8,550 fully loaded), and any type of module individually costs $815. But if you can afford the scratch, you'll be happy with your investment.

Solid State Logic, 212/315-1111, www.solid-state-logic.com. ■

Mix contributing editor Michael Cooper is the owner of Michael Cooper Recording.

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BY TONY NUNES

Cakewalk SONAR 5 Producer Edition

Welcome to the World of 64-Bit Audio Engines

The Cakewalk SONAR 5 workspace features audio and MIDI tracks, and various plug-ins.

It was just two years ago when Cakewalk released SONAR 4 to rave reviews. SONAR 4 concentrated heavily on surround, boasted a 32-bit audio engine and supported any sample rate, among other features. To keep up with the competitive and evolving DAW world, Cakewalk has now released SONAR 5, which offers some attractive new features, including Roland V-Vocal VariPhrase, Perfect Space Convolution Reverb, five new virtual instruments and BitBridge, to name a few.

Cakewalk's biggest upgrade to SONAR 5 is a double-precision, 64-bit, floating-point engine on 32- and 64-bit native systems. Since the release of Mac OS X "Tiger," the industry has been heading toward 64-bit processing, but it has never really capitalized on that technology until now. As the first true 64-bit DAW, SONAR 5 brings Windows users to the forefront of digital audio.

To take full advantage of the 64-bit architecture, AMD provided a powerhouse 64-bit processor machine running Windows XP x64 that includes two Dual-Core AMD Opteron Processor 280s running at 2.41 GHz. The AMD machine is configured as a dual-boot system, allowing me to launch either Windows XP Professional 32-bit or Windows XP x64 (64-bit). The hard drive setup included an OS drive partitioned for Windows XP Professional 32-bit and x64. A 300GB data (audio) drive was set up in a RAID 0 fashion for speed and reliability.

Because SONAR 5 ships with 32- and 64-bit versions on a DVD, I was prompted to install the 64-bit version on Windows XP x64. [*Eds. note: Version 5.2 update patch is now available.*] You don't need a 64-bit processor or Windows XP x64 to run SONAR 5, but if you do have a 64-bit Intel or AMD processor, there is a fully functioning trial of the official release of Windows XP x64 edition that runs for 120 days.

Cakewalk boasts a 20 to 30-percent performance increase when SONAR 5 is installed on a full 64-bit system. If you are upgrading from SONAR 4 and don't want to change your current system but still wish to partake in the 64-bit excitement, you can install the 32-bit version and still take advantage of the new 64-bit mix engine. The double-precision, floating-point engine improves calculations during intensive applications, such as sessions that combine heavy automation with virtual instruments, plug-ins and high sample rates; in my experience, this is when most current systems and mixes start to suffer audibly. As for I/O, check Cakewalk's site and your current interface manufacturer for updated 64-bit drivers. I used an M-Audio 1814 because the company offers a beta download for its FireWire interfaces, and that worked perfectly.

A big perk of 64-bit architecture is the ability to break the RAM barriers. Current 32-bit processor applications max out at 3 GB. The new limit with Intel EM64T- and AMD64-based systems is a whopping 128 GB of RAM. This is big news for those of you who employ virtual instruments, samplers and loops. Instead of streaming the data off of hard disks, you can load instruments and audio clips into RAM, allowing SONAR to access the data more quickly. The 4 GB that shipped with the AMD system was sufficient for all my applications.

SESSION FENG SHUI

Some of the best that SONAR 5 offers has to do with workflow enhancement and innovative ways of processing audio. Features include a new way of inserting plug-ins over clips of audio or MIDI via the FX Bin. By selecting any audio or MIDI clip and right-clicking, you can insert real-time effects (with automatic delay compensation) directly over the clip instead of the whole track—a much more efficient way of processing audio than in the past. Once one or more plug-ins have been inserted, they can be easily accessed; simply click on the "FX" flag within the clip.

You can view waveforms for buses and synth tracks, providing a visual of the envelope with the ability to scale up or down, just like audio tracks. This proved to be a nice preview before printing virtual instruments to an audio track. Also, SONAR users will instantly notice the new peak markers following playback in the Track View screen. Peak markers are an indispensable way of detecting overs and peaks; a numeric value is conveniently displayed next to the transient. I got so used to this that after returning to my other DAW, I really missed this feature. Automation can now be edited with an intuitive new feature called Add Nodes at Selection. This means that right-clicking on any selection of time can conveniently add

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nodes for simple level changes.

As for MIDI upgrades, there is a new Inline Piano Roll view, allowing you to edit note and controller events in the Track View screen. This allows you to conveniently work on audio and MIDI clips within the same view, definitely a bonus for users with only one video monitor. Cakewalk has also updated the MIDI FX plug-ins, and step recording has been improved—there are now immediate visuals of what's being recorded and it offers unlimited backstep deleting.

VOCAL MASSAGE

SONAR 5 now ships with Roland's V-Vocal, which incorporates VariPhrase technology, allowing you to alter tempo and pitch. V-Vocal creates a clip of your selected audio, analyzes it and defaults to the Pitch View screen over a scale. Corrections to vocals can be made automatically, manually or with the scale. Move a selection up or down the scale; the original pitch remains red while the new pitch is yellow.

The LFO tool proved to be very effective, allowing me to visually adjust the amount of scale modulation or remove the original vocal modulation. You can draw your own modulation with control over amplitude and wavelength. Once the pitch is corrected, V-Vocal can also adjust timing of any words or phrases. By selecting the Time tab at the lower-left corner, you can drag words or phrases and change their position without affecting other words or phrases. V-Vocal also allows you to work within the Formant and Dynamic views, where you can use a pencil tool, line tool or the LFO tool to change the waveform's envelope from subtle to ridiculous. With all this flexibility, V-Vocal isn't just for vocals; I used it on guitar solos and on a fretless bass to correct tuning problems and a few performance mistakes.

PLUG-INS AND INSTRUMENTS GALORE

If virtual instruments and samplers are your thing, SONAR 5 now includes the PSYN II subtractive synth, Pentagon I vintage analog synth, Roland GrooveSynth, SFZ SoundFont sampler and the RXP REX Player groove box. I experimented with the GrooveSynth and was pleasantly surprised by all of the authentic sounds, including the original 808 and 909 kits. However, I did experience an issue where the GrooveSynth did not work within a session running at 88.2 kHz.

As for plug-ins, all of my favorites from SONAR 4 are still available, including the Cakewalk and Sonitus suite. The popular Lexicon Pantheon Reverbs were always a favorite, but there's a new 'verb in town: the Perfect Space Convolution Reverb. The integrated 340 sampled impulses include acoustic spaces and hardware reverbs with 64 ms of low-latency monitoring and 64-bit processing. While the Pantheon 'verbs are surround-compatible, Perfect Space provides more realistic and experimental spaces, including the inside of pianos, acoustic guitars and bass amps.

One of the drawbacks of the 64-bit leap is the inability to run Legacy plug-ins and instruments. However, Cakewalk has addressed this issue with SONAR's BitBridge, allowing you to incorporate 32-bit instruments and plug-ins into the 64-bit realm. (The 5.2 update includes support for new VST 2.4 extensions and shell support for Waves VST plug-ins.) With BitBridge, not only can you still use your old effects and instruments, but you can also take advantage of the extended RAM allocation afforded within the 64-bit architecture—a sweet deal.

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PLAYING WITH SONAR 5

During my mixing sessions, the machine running fully at 64 bits (processors, OS and drivers) was impressive. The first session was loaded with 35 audio tracks running at 24-bit/88.2kHz and a slew of plug-ins: 10 Sonitus gates, 15 Sonitus compressors, five bus sends feeding three Lexicon Pantheon reverbs, two VST Perfect Space Convolution Reverbs and heavy automation across most tracks. The CPU usage was at 10 percent and disk at 50 percent with the buffer set in the middle (90 ms of latency). So I loaded an instance of the Pentagon I synth and PSYN II subtractive synth, and finally the CPU meter jumped to 40 percent. I rebooted and launched the 32-bit Windows XP OS, and the CPU usage jumped to 20 and 60 percent with the Pentagon I synth. The 64-bit advantage is undeniable, and it's certainly the way to go with SONAR 5.

But the advantage doesn't stop with just performance. Listening to the 64-bit system also proved to be satisfying and impressive. My mix had more detail and depth, and the image was better than when I played it on other DAWs. I chalked this up to the extra dynamic headroom provided by the 64-bit system. The mix wasn't as one-dimensional—rather, it was closer to what I usually encounter by summing through an analog desk. To be honest, it was the best that mix has ever sounded on a DAW.

To audition the 64-bit mix engine on and off (under Options/Audio), I solo'ed up a bus return with a Sonitus Phase, Sonitus EQ, Lexicon Pantheon Reverb and Sonitus Compressor. Both 32- and 64-bit systems shared a noticeable improvement with the 64-bit mix engine on. The definition was better and the Lexicon Pantheon reverb tail was smoother. The overall sound of the bus with all of the plug-ins combined was fuller, proving to me that even 32-bit users can take advantage of the new 64-bit mix engine.

TAKE THE LEAP

Building on the success of its predecessor, SONAR 5 Producer Edition is definitely jammed with everything needed from a DAW. But for the aspiring engineer who doesn't need all the extra bells and whistles, Cakewalk offers Studio Edition, which leaves out a few key features such as Roland V-Vocal, multiformat surround support, the Lexicon Pantheon Reverb, the Perfect Space Convolution Reverb and some instruments (PSYN II synth, Pentagon I synth and the RXP REX Player groove box).

The way I see it, the future of audio on a computer is here. The 64-bit leap is audible, improves performance and is the next logical step. Even if you remain in the 32-bit realm, you can still take advantage of the 64-bit mix engine, but it was with the full-blown 64-bit system that my mixes sounded best. You don't even pay a plug-in price; Cakewalk eases the 64-bit transition by allowing you to use your current 32-bit effects and instruments via BitBridge.

If SONAR 5 is installed on a 64-bit machine, the ability to break the RAM barriers is going to be very satisfying for those who rely on virtual instruments, high plug-in counts and high sample rates. V-Vocal, Perfect Space Convolution Reverb and the 64-bit architecture alone justify the upgrade. Also attractive is the price, which is lower than the cost of SONAR 4.

Prices: SONAR 5 Producer Edition, $799; Studio Edition, $479.

Cakewalk, 617/423-9004, www.cakewalk.com. ■

Phoenix-based Tony Nunes is an audio engineer and daddy-to-be, for the second time.

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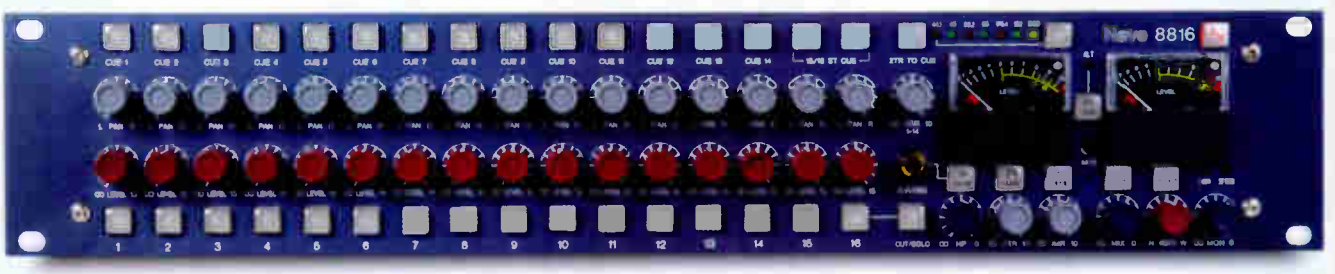
BY BARRY RUDOLPH

AMS Neve 8816 16x2 Summing Mixer

Bringing a New Feature Set to the 88 Series Line

Newest in AMS Neve's 88 Series outboard line is the long-awaited 8816 16x2 summing mixer. But "summing mixer" is a misnomer because in addition to 16 mixer channels, the 8816 has complete control room monitoring facilities, separate cue mix derivation, talkback system with mic, extensive stereo bus control with two insert paths, M/S processing and front panel snapshot recall.

If you add the options (not tested here)—the 8804 Mixer Pack with its 18 100mm faders and onboard 192kHz/DSD A/D converter module—you'd have the 21st-century version of a line-input Neve sidecar console. Multiple 8816s can be cascaded together, and the unit is excellent for live sound recording applications.



BLUE AND BEAUTIFUL

A built-in, two-rackspace steel box with a smart-looking Neve grayish-blue anodized aluminum front panel, the unit is powered by a line-lump power supply connected by a multipin connector. Although the line inputs are not transformer-coupled, the 8816 uses the same transformer mix topology as the classic 80 Series Neve console with two custom Carnhill transformers on the stereo bus output.

External +4dBu line inputs to the 8816 require two 25-pin D-sub cables that follow Tascam protocol. There are three more D-subs for all +4dBu outputs and insert points. There are ¼-inch jacks for -10dBv levels to the main and alt speaker systems, -10dBv L/R mix output, talkback footswitch and stereo headphone output.

To fit in two rackspaces, the 8816's very full front panel is properly organized and intuitively laid out. The 16 channels are identical with a mute/solo button (globally set with the cut/solo button), a level control with 15 dB of gain over the mid position, a pan pot with a -3dB center and S-law curve, and a cue button above each channel that routes its audio to the headphones. When the 8804 Fader Pack is connected, 100mm faders replace all 16 channel-level controls that now become effect sends to an auxiliary bus.

Just to the right of the mixer is the 2Track to Cue button for routing external stereo audio to the 'phones, cues 1 through 14 level control (more later) and a handy ¼-inch headphone jack with level control. The HP mon button routes the mixer's L/R output directly to the 'phones. There is also an alternate speaker button, talkback mic with a level trim pot and a ⅛-inch iMon input jack to connect your iPod.

BUS AND MIX FEATURES

The stereo mixing bus facilities are, by far, the most comprehensive of any stand-alone summing system I've seen. It starts with the Mix Level output control (aka stereo bus master fader) that is replaced by two 100mm faders when the 8804 Fader Pack is connected. The first stereo insert point is for a pre-fade processor inserted in between the M/S encoder and decoder matrices and switched in/out with the INS button. When the Mix Level control is pushed in, the left-channel pre-fade processor becomes the mid-processor and the right channel becomes the side processor.

The W button connects the M/S circuitry to the main mix output, and the width control adjusts the relationship between the mid- and side components in M/S mode.

The INS Mix button routes the stereo bus mix audio around and parallel to the pre-fade insert and M/S section and directly to the output just in front of the stereo bus master fader. This second stereo insert point has the IMR (Insert Mix Return) control for mixing up to 10 dB of its processor's output back into the unprocessed stereo mix. Finally, with the 2Tr Mix button and control, you can mix audio from an external 2-track source into the stereo bus. Music mixers might use this facility for a main reverb return path or for two more channel inputs.

In addition to the above mixdown mode (where the mix goes to the headphones), the 8816 is capable of other useful mixer configurations, including when you don't have 16 channels of I/O and just feed a stereo mix to channels 15/16. Touch the Cue button for any of the remaining 14 channels you want to add to the 15/16 mix. The cue 1 through 14 control adjusts the overall level.

LARGE-CONSOLE MONITORING

There is a small monitor level control knob with four monitor source choices indicated by LEDs. Push on this knob to toggle between main mix output (no LED and the default position on power up); 2TR to Mon for a 2-track tape deck; channels 1/2 pre-fade sources for monitoring the input to the optional ADC, which could be yet another stereo audio source (if set by an internal jumper); or iMon for listening to the audio coming in on the ⅛-inch iMon jack.

When you push the width control knob, the main mix audio output is summed with whatever source is selected in the monitor section. A yellow LED indicates that you are monitoring two audio sources

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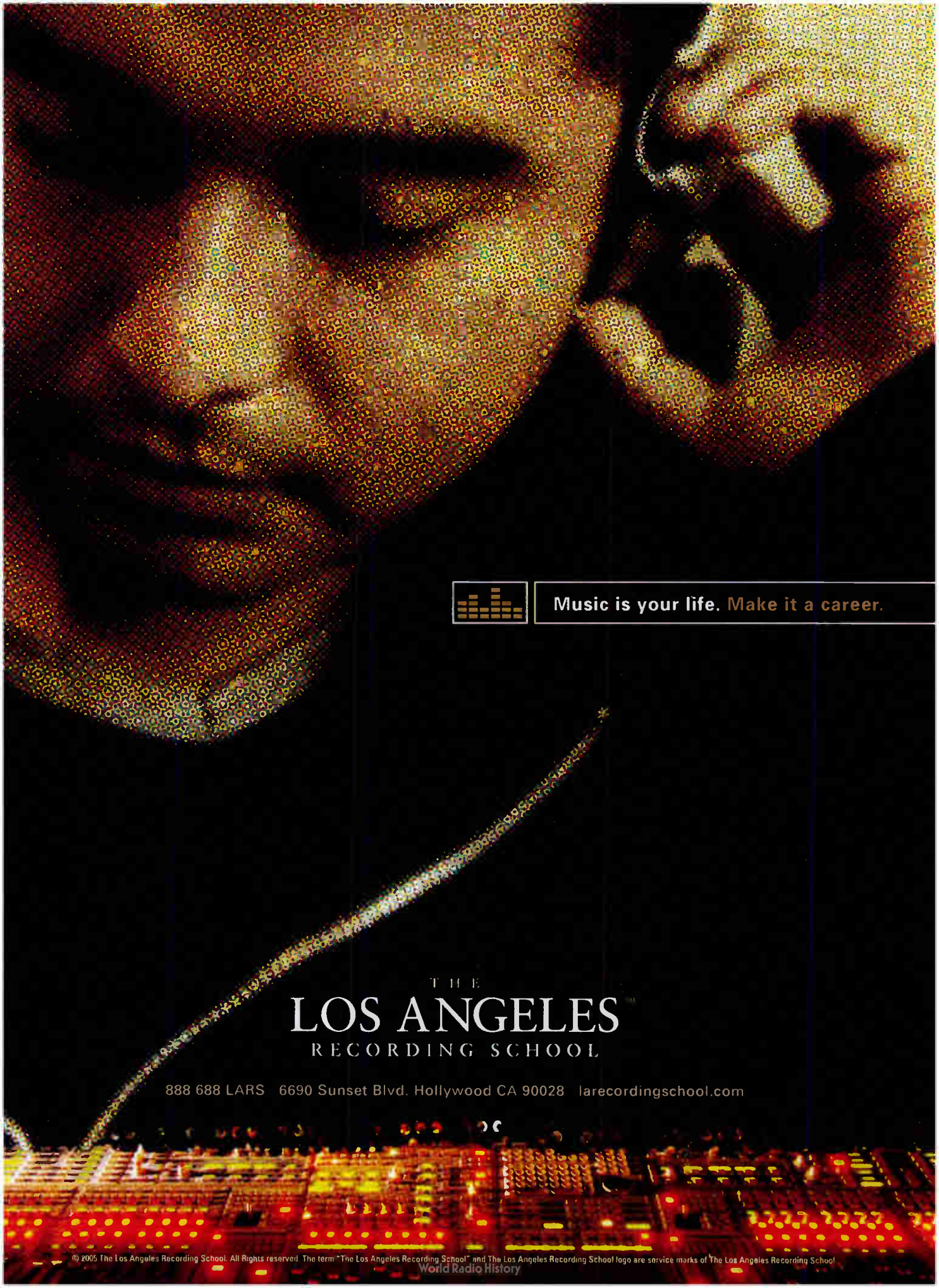

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simultaneously. If you are mixing music to picture, then this is a great tool to quickly check your mix against production sound and/or dialog tracks.

SNAPSHOT RECALL

The 8816, like the rest of the AMS Neve 88 line, employs a recall system whereby a snapshot of all knob and button positions is captured and written to a small (32kb) Microsoft Office text file. Driver and application software for both PCs and Mac OS X are included.

After you load the software in your computer and interconnect a USB cable to the 8816, boot up the application and select which 88 Series unit in your session you want to store/recall settings. If you have more than one, you have to designate the master and slaves.

The software interface has buttons for creating, loading and saving snapshots of settings. When loading (recalling) a snapshot, a picture of the 8816's front panel appears with all knobs that need changing highlighted; the buttons reset automatically. A bigger view of each knob needing adjustment is provided with a purple hash mark indicating where you must turn that knob to match its store setting. Once all knobs are reset, you get a confirmation that the "Unit is Reset!"—so simple!

IN THE STUDIO

I calibrated 16 channels on both the 8816 and the studio's large '70s API console (normaled to the DAW) with a test tone coming from the signal generator in the DAW. I set the controls on the 8816 to about the 2:30 position and used the unit's stereo pseudo PPM meters at the 0dB position to match the level for all 16 channels. I also set all 16 API faders to identical positions as indicated by each channel's equal level contribution on the console's stereo bus meter. Both the API's and the 8816 mixer's stereo outputs were patched to the API's monitor section so I could A/B switch between them while listening to several different music style mixes derived inside the DAW.

For my unscientific comparison, I liked the sound of the DAW mix through the 8816 over this old API. It was more open with good punch—a clearer sound with better transient representation. Both mixes sounded great, and I was surprised, considering the cost difference between them.

The stereo bus in the Neve will overload nicely because there is so much channel gain available to accommodate -10dBV levels from semi-pro gear. The noticeable result is tremendous headroom, and, with 16 channel level pots, you can crank them, do manual gain rides or fades right on the 8816. There is plenty of latitude of adjustment without awful-sounding overload or noise—you cannot really make a mistake here. Sweet!

The recall feature worked flawlessly and is great for trying many balances outside of the DAW. I stored different mix versions such as vocal up/down, drums up/down, etc.

I used the stereo bus inserts with good results when mixing a heavily squashed track back into the original mix using the IMR control—an old mixing console trick made easy. The M/S width control was very interesting for particular moments in the mix where I went from rock-steady mono to superwide stereo with a twist on the width control.

Compressing the mid-signal and not the side signal produces a stereo mix with a dense middle (lead vocals, kick, snare, bass tracks, etc.) wrapped with the airy and transparent ambience from the L/R side components. I used this on a pop/rock song with a lot of different reverbs and delays programmed. The mix was dense and punchy with a wide ambient feeling.

CLASSIC SUMMATION

The AMS Neve 8816 is a great tool for interfacing any DAW and instantly raising it to a professional level with its classically great Neve mixer sound. I like the 8816's small, compact size, although the monitor section's knobs are a little small. I also found that when you push on the engineer's headphone level control knob on the talkback, it produced a very loud click in the 'phones. Also, the stereo bus metering is excellent, although small and not lighted.

Summing, mixing, monitoring, cue mixing and talkback functions are brilliantly accomplished in efficient ways within this compact unit without compromise in utility or sound. The unit comes with an excellent 41-page CD-ROM manual.

Prices: 8816, $3,250; 8804 Mixer Pack, $1,750; and 192kHz ADC unit with DSD output, $800.

AMS Neve, 212/965-1400, www.ams-neve.com. ■

Barry Rudolph is an L.A.-based recording engineer. Visit his Website at www.barryrudolph.com.

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BY JIM AIKIN

Native Instruments Kore Plug-In Host

Combining an Audio/MIDI Interface With a Control Surface

A music system that integrates hardware and software can be a beautiful thing. The components in Kore are not a radical innovation, but Native Instruments breaks new ground by combining them in a fresh way. Kore comprises two elements: a hardware control surface with programmable knobs and buttons, and a computer program that hosts VST/Audio Units plug-ins. The control surface is also an audio and MIDI interface.

In stand-alone mode, the Kore software turns a computer into a multitimbral synthesizer. Unlike a hardware synth, though, it makes no sound of its own: Its sounds depend on the plug-ins you have installed. Kore is also a VST/Audio Units plug-in. In plug-in mode, it provides an intermediate layer between the host DAW and other plug-ins, thereby facilitating management of layered sounds and effects chains. After creating a multi-plug-in patch in Kore, you can save it as a KoreSound and later load it into a different song, a different DAW or even a different computer (as long as the same plug-ins and the Kore hardware are present).

LET'S TAKE A LOOK

When working by itself, Kore has two levels: Performance and Sound. The top level is for Performances; only one can be loaded at a time. A Performance can contain as many Sounds as your RAM and CPU will support. When Kore is operating as a plug-in within a host DAW, only the Sound mode is available. A single Sound can incorporate numerous plug-in synths and effects.

Each instantiated plug-in (at the Sound level) or Sound (at the Performance level) has its own channel strip with up to four insert effects. Each channel strip also has four sends. The send channels can be pre- or post-fader, or pre-insert—a nice extra option. Group channels can be used to adjust the levels of layered instruments and Sounds, or to add more inserts. With plug-ins that have extra outputs, you can add as many output channels as you need.

Apart from plug-in use, Kore software also has audio inputs, so it can be used as a multi-effect plug-in. Basic EQ, delay, reverb, chorus and compression are included, but these are the only effects you can use at the Performance level; third-party effect plug-ins are available only at the Sound level.

At the Performance level, you can store multiple presets. This feature has some slick tools. You can set a crossfade time to move smoothly from one preset to another. Unfortunately, the presets don't store all of the MIDI settings for the channels, such as transpositions and velocity curves. Nor do they store the patch selections or knob settings for synths within the Sounds, unless you've taken the extra step of assigning the Sound knobs to Performance-level knob layouts.

Fortunately, there's a workaround: You can copy an entire Sound channel within the Performance, change the settings of the copy, and then store presets in which one channel or the other is muted. This process is a bit cumbersome, and requires some advance planning, but it will allow you to create a Performance in which, for instance, you can switch a soft synth within a complex setup from an electric bass to an acoustic bass instantly onstage.

SETUP AND LAUNCH

I installed Kore in my 3GHz Pentium desktop computer and used it with a wide variety of plugs, both as a stand-alone instrument and in several hosts. Kore has a surprisingly deep feature set and a rather crowded user interface, which includes a browser/database, mixer channel strips and a Page Manager for sets of user-defined knob and button layouts.

Instantiated plug-ins pop up in their own Edit windows, as in any host. The 1.01 release for Windows had difficulty displaying the Edit windows of several plug-ins, but I'm happy to report that the 1.02 release fixes all of the display problems I spotted in 1.01.

HANDY HARDWARE

The Kore hardware requires USB 2, and provides audio I/O, eight definable high-resolution knobs, eight definable pushbuttons and a few other features. In effect, the hardware unit is a dongle: The Kore software won't run without it. If you already have more capable audio interface and control surface hardware in your studio, this will likely be an annoyance. It will also pose a problem for those who work on laptops while traveling, or who gig with a laptop that doesn't have a free USB socket.

And replacing defective Kore hardware is bound to be more of a hassle than downloading a new license if your iLok is stolen. Let's hope NI changes course and allows Kore to be installed using the same copy-protection scheme as their other software releases.

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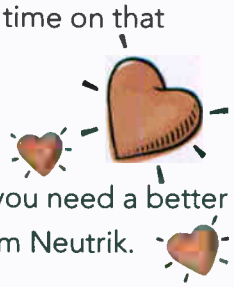

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Studio musicians will appreciate the knobs' smooth, solid feel and versatile programming features. And in a small studio or portable stage setup, a single box that can handle both audio and MIDI I/O will be welcome. The Kore hardware has a small, brightly lit LCD. Normally, this shows the current assignments for the knobs and switches, which can be given rather cryptic five-character names. There's also a Menu mode, but as the computer screen will always be nearby, I'm not sure how useful accessing menus in an LCD is. When you touch a knob, the LCD switches to show its current data value.

Up/down and left/right buttons below the LCD navigate among the pages of knob assignments. This system seems a bit confusing at first, but by the time I had designed a couple of Performance presets, it started to make sense. Each knob can have numerous assignments at once, in the same or different plug-ins within a Sound, and the output values of the knob can be separately scaled for each assignment. I was able to use a single knob to control, for example, filter cut-off on one synth, oscillator balance on a second and a built-in delay's wet/dry balance on a third—all at the same time.

WORKIN' IT

Working by trial and error, I figured out how to assign the user knobs from various Sounds in a Performance to a single knob at the Performance level. This allowed me to crossfade parameters within two separate Sounds with one knob movement.

Assigning synth and effect parameters to the knobs is dependent on the plug-in's VST/Audio Units implementation, which has to "publish" the parameter list to the host for automation. (Most modern plug-ins do this, but not all of them.) Kore publishes the contents of the first eight user-created pages of knobs to its host, and automating these worked as expected.

In stand-alone mode, the knobs can transmit MIDI messages through any available MIDI output port in your computer, and they receive MIDI control change messages in both stand-alone and plug-in mode. Unfortunately, if Kore is running as a plug-in, the knobs can be used only to control Kore-hosted plug-ins. To control everything else in the host DAW, you'll need a second control surface.

Above the LCD are non-programmable level knobs for the audio inputs (unbalanced ¼-inch), audio outputs (balanced ¼-inch) and stereo headphone out, which can be used as a separate stereo mix output. The coaxial S/PDIF output mirrors the main audio outs.

The Start and Stop buttons on the hardware unit communicate with Kore's internal clock, but can't be used for starting and stopping host software when Kore is being used as a plug-in. Two footswitch inputs and a sweep pedal input can double the operation of buttons and knobs, respectively. A large data dial to the right of the LCD serves only to duplicate the function of the up/down buttons. In future software revs, I hope this dial will be assignable like the knobs and also usable for data entry.

EASY SONIC SEARCH

The integrated browser/database provides quick access to plug-ins and their presets. Category search words can be assigned to presets. For example, you can instantly search for warm brass suitable for funk/

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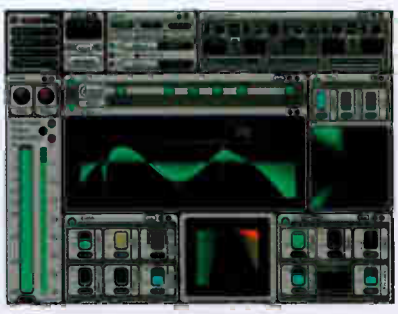

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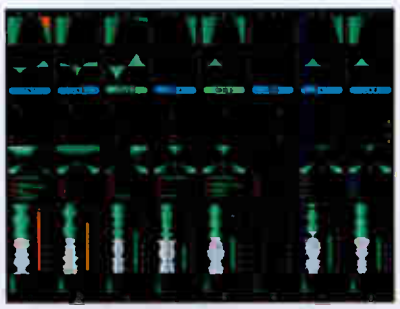

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soul. Owners of NI's Komplete software instrument package will find thousands of factory presets already neatly categorized. Categorizing your own presets for third-party plug-ins will be time-consuming, and there's no way to create your own keywords.

Standard copy/paste commands can be used to combine the channel into a new composite layer. This greatly facilitates the process of reorganizing your performances for different musical situations. The company's statement that Kore is a "universal sound platform" is belied by the fact that it won't host DXi plug-ins and is not a ReWire host. In addition, Performances stored to disk can not be loaded into Kore when it is running as a plug-in, so it isn't even fully compatible with itself.

MIDI MATTERS

Each channel strip in Kore, at both Performance and Sound levels, can load one or more MIDI files (either type 0 or type 1). Playback can be started or stopped from a MIDI note played on your master keyboard, and the start can sync to Kore's bar or beat. This is a terrific feature for interactive live performance.

I tested it with a multitimbral sequence created in Cubase using Steinberg Hypersonic, and the playback worked perfectly. Kore doesn't "zero out" pitch bend and mod wheel moves if stopped in the middle of a sequence, but this is a minor problem and easily avoided once you know about it.

I also tried dragging and dropping MIDI files from Stylus RMX into Kore, and RMX played them without trouble. MIDI files are automatically saved with the Performance.

Each channel strip also has real-time MIDI input filtering, which includes channel, key range, velocity range and event-type selection (notes, control change, channel and poly after-touch, pitch bend and program change). Several velocity curves are provided, as is a transpose parameter. Unfortunately, velocity cross-switching is not possible. A channel can be programmed to respond only to high velocities, ignoring low ones, but not the other way around.

GETTING TO THE KORE

As computers come to dominate music production, Kore is a breakthrough product—not just an entry-level audio/MIDI interface, but also a versatile control surface and a software platform that conveniently integrates synthesizers and plug-in effects. As such, it stands poised to fill a definite need.

But while it scores high marks conceptually, the initial version comes up a bit short. The fact that the hardware unit is a dongle is not likely to be popular, especially among those who already have more-capable audio interfaces and control surfaces. The knobs need to be able to transmit MIDI controller data to a host DAW, not just to the Kore plug-in. And because I use Propellerhead Reason as a software synth, Kore's inability to host ReWire applications makes it less useful in my productions. If Native Instruments is able to address these issues, then Kore is sure to be the apple of many a musician's eye.

Price: $559.

Native Instruments, 323/467-5260, www.native-instruments.com. ■

Jim Aikin writes regularly for Mix *and other music production magazines.*

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BY JOE HANNIGAN

Grace Design m802 Remote-Controlled Preamp

Transformerless Design With 130-Volt Option

When I first opened the box containing a review unit from Grace Design, I thought that it would be difficult for the company to improve upon its original Model 801R. But Grace Design has succeeded in taking the 801R a few steps forward. The new m802 remote mic preamp features control directly from Digidesign Pro Tools HD systems; an improved output current capability that is three times greater than that of the 801R, which allows for longer cable runs without incurring signal loss (down to 50-ohm loads); and a provision for adding a high-definition, 24-bit/192kHz converter card. The signal path has also been updated to fully balanced transformerless ins and outs, allowing a greater dynamic range.

CONTROL FREAK

The m802 can also be controlled by a variety of MIDI devices, which allows for an even wider range of uses that extend far beyond basic location recording, such as theaters, interactive events, etc. The Remote Controller Unit (RCU) can control up to eight separate preamps for a total of 64 channels from as far away as 1,000 feet. (That's a lot of serious preamps!)

In addition to a local/front panel lockout function, the 15 user-definable presets include phantom power, input gain and polarity reverse for each channel. While powered up, the remote is always in touch with the preamps, and as long as lockout is not in use, you can use either panel to control or modify settings at any time. Any loss of power with the remote will leave the preamps in their current state, unaffected until you update them locally. A factory-supplied extension cable allows medium runs with full functions from the remote, while supplied XLR adapters provide for longer runs with a balanced mic cable.

The m802 is a solidly built box that does not compromise on cabling, circuit boards and hardware. Its jam-packed interior shows serious attention to detail and inspires confidence whether the m802 is part of a touring rack or lives peacefully in a studio installation. Clearly, lots of TLC happened before the box was closed and shipped.

Inspecting the preamp cards, I noticed that the audio path doesn't have electrolytic capacitors. In transformerless preamp designs, film- only capacitors are used in the phantom-power decoupling circuitry. Grace Design states that its preamps use "transimpedence current feedback vs. voltage feedback," allowing for a more musical sound.

MORE POWER, CAPTAIN

Users of DPA's 4003, 4004, 4012 and 4016 microphones are in for a nice surprise with the m802. The m802 sports a new 130V power option to power these mics, available on a per-channel basis. (A separate 4-pin XLR connector ensures that only the correct mics are plugged into the 130V inputs.)

The reviewed m802 was a hot item, only available for about a month before it had to go back. In the brief time I experimented with it, my varied classical and jazz recordings sounded about as I expected: stunning. Running a pair of DPA 4006-TLs through the m802 gave me the best detail and dynamic range that I have found anywhere—period. I performed an A/B comparison between a full dress rehearsal one day and a live performance the second day with a full chorus and chamber orchestra in an oratorio concert setting. The sound of the dress rehearsal with various MOTU and Mackie Onyx pre's would have been enough to satisfy any serious listener, yet at the concert, the m802 added transparency and seemingly endless headroom, which immediately sold me on its value for any recording project.

In real-world use during other sessions and concerts, my assistant and I found the bright, backlit RCU easy to read, fun to use, reliable and safe enough to keep us out of trouble and avoid "pilot error" with the phantom switching and gain settings. It's all clearly marked, keeping disaster at bay. A minor complaint was having to use a separate wall wart power supply for the remote controller, but considering what it does and how well it does it, it's a small inconvenience.

Most installations will likely have the remote far enough away from the preamps that a power supply cable strapped to the controller cable won't raise an eyebrow. (I know what you're thinking, but Grace Design's techs confirmed there's just too much power consumption and data flow to make the RCU wireless.)

SAY GOODNIGHT, GRACIE

With all of its improvements in output power and line-driving capabilities, the m802 is another perfect "loft" unit for large concert halls, cathedrals, theaters or any other space where it is important to keep the preamps near the mics and drive a longer line down to the recording rig. Owning eight preamp channels like this would be heaven; 16 would be out of this world. I was never more sorry to have FedEx come pick up a package.

Prices: $4,995; 130V option, $295; and M802 RCU remote, $1,495.

Grace Design, 303/443-7454, www.gracedesign.com. ■

Joe Hannigan runs Weston Sound & Video in Philadelphia.

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The Yellowjackets, from left: pianist Russ Ferrante, bassist Jimmy Haslip, drummer Marcus Baylor and saxophonist Bob Mintzer

THE YELLOWJACKETS AT 25

ALWAYS CHANGING, STILL IN THE GROOVE

By Gary Eskow

Back in 1981, The Police were in full flush, the recently murdered John Lennon was still being mourned and on the charts with a pair of hits, and Kool & The Gang's "Celebration" was a crossover smash hit on pop and urban radio. Meanwhile, a quartet of young jazz musicians looking for a sound of their own was woodshedding and getting ready to release their first album. None of them, including pianist Russ Ferrante and bass player Jimmy Haslip, dreamed that a quarter-century later, The Yellowjackets would still be successfully recording and touring.

To commemorate the Yellowjackets' silver anniversary, the group's label, Heads Up, released *Twenty Five*, a live CD/DVD set that features the band's current lineup—Ferrante, Haslip, tenor saxophonist Bob Mintzer and the newest member of the Yellowjackets, drummer Marcus Baylor. Appropriately, the material the band performs on the CD is culled from the group's entire history.

The two-time Grammy Award winners (1986 Best R&B Instrumental Performance for "And You Know That" and 1988 Best Jazz Fusion Performance for "Politics") have always traveled a road somewhere between the popular "smooth jazz" format and more adventurous jazz styles. Ferrante notes, "I wouldn't say that we're smooth jazz pioneers, and to tell you the truth, I'm not a fan of the genre at this time. My wife says we should call our music 'rough jazz'!

"Our first three or four recordings—made in the early '80s [when guitarist Robben Ford was in the band]—had more of a groove, an R&B sensibility to them. As the years have gone by, that element is still there, but the grooves are looser and more fluid; we're not a 'part'-oriented band. Smooth jazz has become so formulaic that it's lost any sort of originality or spark of inventiveness. You have to paint by the numbers because the radio formats are so strict. None of the guys in our band is remotely drawn to playing by those rules."

Haslip laughs when asked about the band's place in the smooth jazz universe. "We hate the term now on a certain level! That terminology wasn't in existence when we started. Quiet Storm—that was a hip format, with lots of R&B and some smoothness. Don't get me wrong—there are guys doing some cool things in smooth jazz and I'm a fan of several artists that are cemented in that genre, but my goal is to stretch the boundaries."

Twenty Five includes an audio CD recorded at the New Morning nightclub in Paris and a DVD that features nearly four hours of live concert footage (recorded in Forli, Italy), interviews with current and past Yellowjackets members and a series of retro concert video clips. All of the new live material was

—CONTINUED ON PAGE 116

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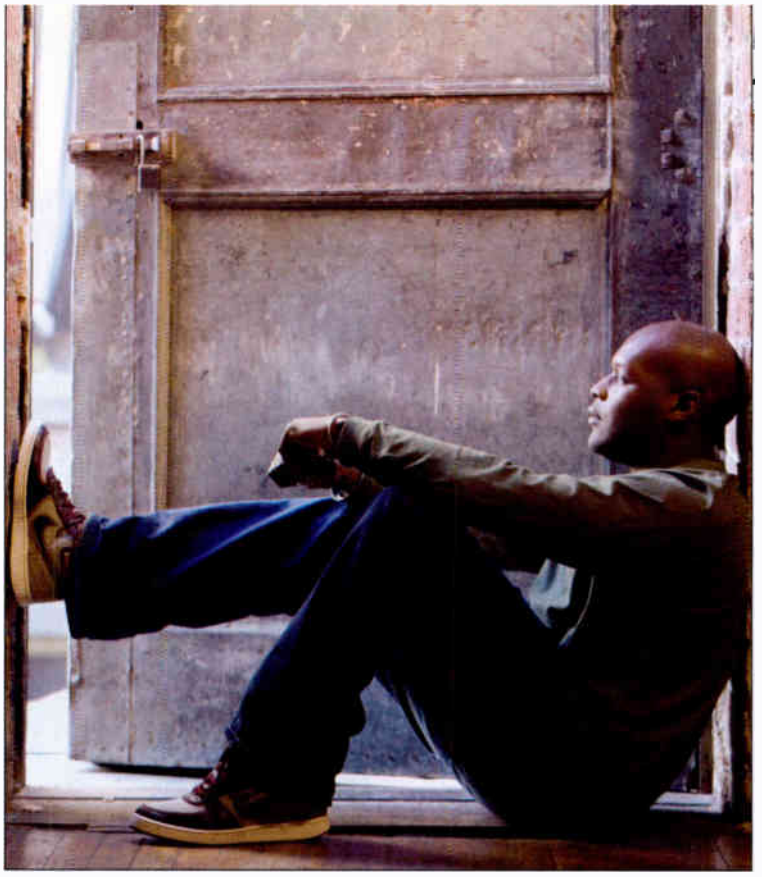
DJ LOGIC'S TURNTABLE ZEN

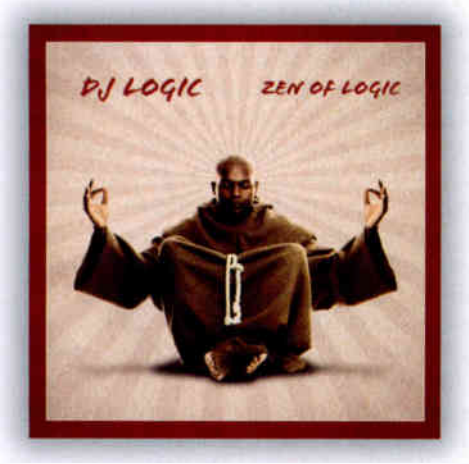
KEEPING HIP HOP ORGANIC

By Robin Tolleson

DJ Logic has taken his axe down avenues few would have imagined. Redefining the role of the turntablist, Logic performs with guitarist Vernon Reid in Yohimbe Brothers. He has also recorded with the late Chris Whitley, toured with Ben Harper and the Grateful Dead, and he is coveted by jazz artists such as Medeski, Martin & Wood and John Scofield. His third solo album, *Zen of Logic* (Rope-a-Dope) continues to grow hip hop organically with some great instrumental performances and the vocal talents of MC Subconscious, Creature and Latasha Nevada Diggs.



Logic has long thought of the turntable as just another instrument in the band. "When I started out, it was just a hobby," he recalls. "I was 15 or 16 when I started playing with other musicians; it was in an improvisational jazz setting, as well as alternative rock. I was just learning and listening." From playing



community events around his home in the Bronx, N.Y., Logic (real name Jason Kibler) joined the rock band Eye & I, which opened for Living Colour and Body Count. "Playing around musicians, you're hearing sounds and textures and you want to fit in with the textures going on around you. You want to have a role to play like the saxophonist and keyboardist and drummer," Logic explains. "Everybody's passing the ball around. Sometimes I might lay down a groove or sometimes I might just find a certain color to add to what's going on to be in the mix. So it might not just be scratching; it might just be an artistic thing, doing some abstract sounds or some vocals and manipulating them with either the turntable or the Korg Kaoss Pad. Just having a good ear and playing my role like one of the other musicians."

Logic and guitarist Reid were among the founding members of the Black Rock Coalition in 1985. Logic was soon also venturing into the jam and jazz worlds, striking up lasting musical relationships with Medeski, Martin & Wood, Charlie Hunter, Joshua Redman, Bob Weir of the Grateful Dead and many others. He recorded his debut, *Project Logic*, in 1999, followed three years later by *The Anomaly*. For *Zen of Logic*, he chose to work again with producer/engineer Scotty Hard (Wu-Tang Clan, Prince Paul). "Scotty is the magician and the maestro of just creating and cutting, and he deserves as much credit as myself," Logic says. "It's always good to have that second ear, somebody that's on the same page as you. Before I started to record, we sat down and I let him hear all the pre-production stuff and we got a game plan.

"A lot of thinking and listening comes before the pre-production 'cause I'm just getting into a zone," he adds. "[I'm] thinking before I get onto the keyboard or start messing around with the turntable. Those are the tools that I'm getting ready before I start painting my picture. You're gathering your brushes and looking at your white canvas, and you're like, 'Okay, this is what I'm thinking.' There are a lot of different moods and each track has its own individual feel."

Logic has a small, windowless studio in Manhattan that he refers to as his "sanctuary." This is where he frequently loses track of time with his Korg Triton, Moog Voyager, Numark turntables, Vestax DJ mixer, Akai MPC2000 and Korg Kaoss Pad effects processor. "This is what I use to start writing with—just messing around, programming beats and chopping up certain samples and things like that. I'll go in early in the morning and not leave until the next morning. Things get flowing. That's how things came about for this record.

"I wanted to have everything right and in place before I went over to [Hard's] spot," says Logic. "I basically moved all my equipment and set up shop at his studio [LeBob James in Brooklyn] for about two months—there was a lot of scheduling to do with different musicians." Tom Camuso co-engineered the record, and Mike Fossenkemper did mastering at TurtleTone in New York City.

The turntablist is constantly collecting beats and sounds. "I have a lot of records

—CONTINUED ON PAGE 118

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RAY PARKER JR.'S "GHOSTBUSTERS"

By Blair Jackson

By the time Ray Parker Jr. hit the top of the charts in 1984 with that instantly infectious slice of R&B/pop fluff called "Ghostbusters"—the Number One theme song from the hit comedy film of the same name—he had already enjoyed a long and very successful career in music: This was no one-hit wonder in action.

Ray Parker, Jr. at the MCI console in his Ameraycan Studias, where he recorded "Ghostbusters"

The Detroit native took up the guitar at a young age, and by the time he was in his early teens, he was already backing local groups. "When I was about 13, I used to go on tour with The Spinners," he relates from his L.A.-area home/studio. "Then I worked regularly at a club called the Twenty Grand [with] so many Motown acts that performed there—Gladys Knight & The Pips, The Temptations, Smokey Robinson & The Miracles. I was part of the house band there and really learned a lot from that experience."

It wasn't long before young Parker was brought into Motown's studios and became an in-demand session guitarist. "Really, the first person I started recording for was probably Marvin Gaye," he says, "but my big break, recording-wise, came when [songwriter/producers] Holland-Dozier-Holland left Motown—they couldn't take the Funk Brothers [the label's top session players] with them, so Holland-Dozier-Holland had to get their own musicians, and luckily for me, I got to do a lot of their records. It was a great time for me. I was 15 years old and as happy as a clam."

Parker's world changed even more when he was drafted to play guitar in Stevie Wonder's band for the Motown artist's historic 1972 tour opening for the Rolling Stones. Subsequently, Parker played on two of Wonder's biggest albums, *Talking Book* and *Innervisions*. "I owe Stevie so much," Parker says admiringly. "He was the one who really gave me the idea of how to write songs—how to actually compose. Before that, I was just a guitar player. But he would listen to my ideas and help me twist them around, and the next thing I knew I was writing songs. When I left his band, I changed from being a guitar player to writing songs and putting together a band and still being a guitar player."

Parker got plenty of work in L.A., recording with the likes of Barry White, Stanley Turrentine, Tina Turner, Boz Scaggs, Herbie Hancock, Lee Ritenour and many, many others, and in 1977, he started his own group, Raydio, who enjoyed several big hits, including "Jack and Jill," "You Can't Change That" and "A Woman Needs Love (Just Like You Do)." As the '70s progressed, too, Parker got more and more interested in recording.

"I guess I picked up engineering originally because in the old days at ABC-Dunhill, I'd go in and rent studio time and it would be late at night and I'd get a discount deal and the engineer would be falling asleep at three in the morning...so I learned what I needed to know to get my music recorded." he says with a laugh. "Pretty early on, too, I had a studio built in my home, and I did a lot of the Raydio stuff there. Lamont Dozier's brother, Reggie Dozier, was an engineer and he came over to my house and helped me. I bought a mixing console—an MCI JH-16 board, with 16 faders—and me and him got some soldering guns and just wired everything together ourselves. Actually, we wired it out of phase. I remember I got to Bernie Grundman Mastering and he said, 'Hey, you've got eight of the tracks out of phase!' But it turned out okay. 'Jack and Jill' came out, and we sold a million-eight!"

By 1979-80, Parker and an engineer friend named Steve Halquist had opened a commercial facility, Ameraycan Studios, and this became Parker's base of operations for many years, though he also kept a home studio up and working. "I always liked working at home alone," he says today. "Besides, once [Ameraycan] got rolling, I couldn't always get in there myself!" In the early '80s, as well, Parker left Raydio behind and started recording under his own name exclusively, often playing most of the instruments on his records. He also wrote and produced hits for outside artists such as New Edition, Diana Ross, Deniece Williams and Cheryl Lynn during this period. Parker co-owned Ameraycan until 2000.

And then came "Ghostbusters." It was an old friend

World Radio History

named Gary LeMel (now head of Warner Bros. Music) who suggested Parker try his hand at writing a song for the film. "Gary said, 'They've had all these different musicians writing songs and they spent a fortune, and they don't even have a song with the word "Ghostbusters" in it! So will you take a look at this film and write a song?' And he said, 'Oh, and by the way, I need it in two days,'" he says, laughing. "The film was just about to come out.

"I immediately liked the film, so I agreed. But then the problem was, how do you put the word in a song? I wrote the music pretty fast, but I was struggling with the words. Then, about three hours before I had to turn in the song, I was dead, half-asleep—it's about 4:30 in the morning—and a commercial comes on—I think it was a drain company—and they flash this phone number, and it reminded me of a spot in the movie where the Ghostbusters have their packs on and they show a phone number, like they're advertising. And that was it! I came up with the idea of 'Who you gonna call?' And then I thought, there's no way you're going to *sing* 'Ghostbusters' in a song and make it sound good, so instead of singing it, I'd have a crowd answer me."

Time was of the essence, and he didn't have enough time to call a band, so Parker ended up playing nearly all the instruments himself and engineered the track (with some assistance from studio partner Halquist) working at Ameraycan, which by that point had an MCI 24-input console and MCI multitracks, and plenty of good mics, including vintage Neumanns and AKGs. "I really put it together almost like you'd do a quick demo," he says. "I laid down the guitar part first because that's still the instrument I play the best, and then I just kept adding things. But there really isn't as much on there as you might think. It sounds big, but it's really just one rhythm guitar part, one lead guitar part, a horn keyboard [synth] part, one bass part, one drum part and some synthesizer overdubs. Then I overdubbed the sax later. The main synth was a Korg Poly 61, a relatively cheap little thing. I used a Jupiter 6 on the bass line because I couldn't afford a Jupiter 8! Nothing is doubled—it's just single lines that really fit together well. It was one of those days when everything came together—*bang, bang, bang*—and it didn't seem like I could do anything wrong. The bass part sounded great, the drums were big. Everything sounded fat."

And who was the lively chorus shouting out "Ghostbusters!" with such gusto? Parker laughs: "I was 28 years old and I was dating this young girl—17 years old—and I told her my idea and she quickly got a bunch of her high school friends to come by and yell on it. They were genuinely excited to be in there recording, and that was exactly what the track needed."

Parker says that his original version of the song was just one minute and 15 seconds long—riff, verse, chorus—and was intended to simply run at the beginning of the film, but director Ivan Reitman liked it so much, he encouraged Parker to go back and turn it into a full song for the soundtrack album, which he did by renting a second 24-track, looping sections of the song, creating three verses and choruses, and then adding a short breakdown section in the middle. (Later, too, he stretched it to six minutes for the all-important disco mix!)

Though the record shot to the top of the charts and became a true cornerstone of his career, Parker could not have predicted the long life the song has had—as a Halloween classic. "I hear it's one of the top Halloween songs of all-time now," he says. "It's been on so many [Halloween] collections. I love it!"

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"Ghostbusters" also has some notoriety attached to it: Huey Lewis sued Parker claiming that the song had been lifted from his own "I Want a New Drug." The pair settled out of court many years ago and Parker has retained full ownership of the song. Parker continues to write and record and tour (and makes a point of always playing "Ghostbusters" at his concerts). His latest album, recorded entirely at his Pro Tools–based home studio, is a fine effort called *I'm Free*. ■

THE YELLOWJACKETS

FROM PAGE 112

recorded in stereo and 5.1 by Gerald Albo, who handles live sound on the band's European dates and has been mixing concert and club venues for the past decade.

"I started playing keyboards in a local band in the Dordogne in [central] France," Albo says. "I was a big Yellowjackets fan back then, so working with the band has been like a dream come true for me.

"I mixed FOH on the equipment at each venue, and the P.A., desk and other gear were different each night. Schoeps was kind enough to lend us microphones for this tour; they also loaned me mics for a tour I did back in 1998 with the McCoy Tyner Latin All-Stars.

"We used lots of microphones, including a ton of [Schoeps] MK-4G capsules on the drums, along with CMC-5s and -6s. We used this same combination to capture the audience in four channels and the piano.

"We also brought along a Mackie Onyx 800R 8-channel mic preamp unit. I decided to use the converters in the Onyx to avoid potential clock problems since there was no spare time on this tour. At some of the concerts, I had to mix FOH, monitor FOH and record—all at the same time! Sometimes we would arrive at the venue in the afternoon, just a few hours before doors opened, so having the simplest and most reliable system possible was vital.

"Another challenge was figuring out how to monitor the recording and mix FOH at the same time. I decided to feed the FOH mixing desk from the output of the Mackie SDR 24/96 we were using. That way, if something went wrong, I and everyone else in the venue would hear it in real time! The Mackie setup was extremely reliable. We didn't have a single problem during the entire tour.

"The SDR 24/96 has a USB port, which I used each night to back up the evening's performance once I got into my hotel room," Albo continues. "It took anywhere from six to eight hours to back up one concert. Some overnight stays were too short to complete a backup, which meant that I was often busy on my days off. When time permitted, I would check the recording on my headphones for any potential issues, monitoring the digital audio through MOTU's Digital Performer 3.11.

"I was concerned about the acoustics each venue presented—how a room plays can make the difference between good and bad track separation. Drum spill into the piano was always an issue. I don't like to have the lid fully closed; for these recordings, the lid was always on the short stick. But I had to close-mike the piano to maximize separation and then add a Shure Beta 98 in one of the holes for onstage monitoring."

Although Albo states, "The Yellowjackets sounded and performed so well that it was easy and great fun to mix them every night," he says the tour did present some challenges. "Recording the DVD in Forli was actually a bit of a nightmare," he remembers. "The venue's acoustics were the worst of the tour, and the promoter provided the wrong backline—the piano was a baby grand and the bass amp was something made locally. Neither Russ nor Jimmy was impressed! After a long 'negotiating' session, a grand piano was delivered several hours before show time. Also, I didn't know the Paris show was going to be mixed in 5.1, but by pure coincidence, I decided to throw up four audience mics—fortunately!"

> It's always a challenge when you have the drums and bass pouring into the piano on an electric date.
>
> —*Rich Breen*

Mixing both the audio CD and the bonus DVD was handled by Rich Breen, who mixes out of Dogmatic, his home studio located in Southern California. Breen has been working with The Yellowjackets for about 10 years now and has an extensive discography that includes many acoustic jazz, pop and orchestral productions.

"I know the guys had been bouncing around the idea of recording a live DVD for some time," says Breen. "Gerald Albo is a fine soundman, and we spoke about economical

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ways to shoot the whole tour without bringing in trucks. We decided on the Mackie SDR 24/96 and a handful of FireWire-connected mic pre's. We used a total of 24 channels of mic pre's, and I sent over a handful of drives.

"I've been mixing in a guest house behind the main house on my property for the last 10 years or so, and I'm extremely comfortable here. I was technical manager at Universal in Chicago for many years, so I tuned the room myself. I mix on a Pro Tools HD 3 system with a Control|24.

"With a band like The Yellowjackets, the drummer is always the issue," Breen continues. "They're a backbeat, as well as a jazz band, and on these dates, the piano was sitting about 10 feet from the kit, with the lid open. It's always a challenge when you have the drums and bass pouring into the piano on an electric date. Fortunately, the Schoeps mics were in fairly close and the lid was on the short stick.

"Still, there are always going to be spillage issues. You have to EQ the piano judiciously and live with the rest. Mostly, we ended up taking out some low-mid resonance, in the 200-ish range, because of the open lid. I also added a highpass filter at around 80 or so to calm down some of the low-frequency stuff coming from the stage. But we didn't do anything radical—no more than a 5dB cut on anything. I can't say enough about the Schoeps microphones. They sound fantastic on the piano.

"As far as the 5.1 field, I would have preferred to have had four microphones across both the front and back, but due to track count and the fact that the show was traveling daily, we went with a total of four instead. To create ambience in the mix, I worked with an [Audio Ease] Altiverb 'small club' setting and an ambient setting on my TC [Electronic] System 6000. The 6000 is a four-engine reverb, and it sounds beautiful. I had all four engines going: a general plate, a 'room' for the drums, another little short [reverb] to add some more fat to the drums and a 'club' going for the front ambience. The plate is for the sax, piano and keyboards. I'm a little old-school in that I like plates a lot."

Ferrante and Haslip seem genuinely humbled by their success and by the willingness of their fan base to share their journey with them. "It's been fun and sobering, as well," says Ferrante. "My overwhelming feeling—all the guys feel this way—is gratitude. We're fortunate that we happened into this situation, we appreciate it a lot and we're having fun. When you're young as a musician, you want to come out and play the hippest stuff, be out on the edge every moment. Although I still enjoy that, I'm appreciating that these songs that people have connected with are a gift. If you realize as a musician that it's a gift you're sharing, you enter into that joyful place when you're making music. That awareness has transformed things for me and taken the pressure off. Connecting with your band mates and those people that are listening to you—and not in some phony, contrived way—is the essence of the experience."

"I can't believe it's been 25 years'" adds Haslip. "But when I look at it on paper, it's undeniable! To have been in an outfit that's been ebbing and flowing, with all the ups and downs, for that long—that's awfully inspiring. I feel honored and privileged to have been part of this band." ■

DJ LOGIC

FROM PAGE 113

from my travels and touring because I'm always digging, looking for obscure stuff. Just from listening to records you get ideas, as well. I wanted to do an Afrobeat thing on this record, so I was listening to a bunch of Afrobeat records to get inspired. I programmed a groove on the MPC and called the wonderful musicians in Antibalas, who are friends of mine."

Logic still uses the reliable Technics 1200 turntables on occasion, but he's been won over recently by the capability of the Numark TTX. It allows him more flexibility in fitting in harmonically and rhythmically, as he shows skillfully on the song "Afro Beat." The voices you hear meshed so well with John Medeski's keyboard part are being played by Logic. "Those are some African voices, some ladies and some children," he says. "The cool thing about it is with the Numark TTX, you can do certain things where you tune things in a certain pitch, and if you have a good ear, you know how to sync it up to what's going on around you. Basically, I just tried to find the right colors to match to what was going on in the track and just kind of blend. It gives it that live feel in a way."

"Afro Beat" features Medeski playing an oddly processed Hohner String Organ. "It's great working with Medeski because he just has an open mind," says Logic. "He collects vintage keyboards, so you never know what kind of toys he's going to bring to the table." Logic actually went to Medeski's Shacklyn studio in Brooklyn to record the keyboards. "He was like, 'Hey man, I've got this cool vintage keyboard from the late '70s, and we

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just *have* to use it.' I just let him do his thing all through the track and edited it when I got back to my studio. It sounded awesome."

Medeski plays a Farfisa organ and a Mellotron on "Rat Pack," and an ARP String Ensemble under Subconscious' flowing rap on "Hypnotic." Keyboardist Chris Brown adds clavinet on two tracks and gets a great vintage tone on "9th Ward Blues." "I think that's a [Wurlitzer]," recounts Logic. "I love the vintage sounds in the keyboards—how you can put it through effects and pedals. With the [newer] digital stuff, you can't really put your hands on it; you've just got to program it or play it from MIDI. When you're doing it live, straight from the keyboard—organically—it's like a whole different feel. You can tell in the sound, too. I know they're trying to catch up in the sound quality between the analog and digital, but you can still hear a difference. The warmness, that's what I like. The vintage stuff brings something unique to the track."

Hard and Logic recorded some of Medeski's keyboards and some drums to quarter-inch tape using a Studer B67, then used an Apogee Rosetta 200 24-bit A/D converter to send it into Digidesign Pro Tools MIXPlus with 24-bit 888 I/Os. "There's a difference coming from one [format] to the other," Logic contends. "There's a different type of seasoning. You get that warm sound. You're getting a little extra going into the digital. I always notice that when I listen back to different tracks and CDs. We also used a Neve 8014 mixing console that Scotty got from Bill Laswell, and it's a great tool, as well."

Logic's tribute to the people of New Orleans' 9th Ward also features Charlie Hunter on bass, six-string guitar and a bit of tweaked harmonica. "I wanted a bluesy vibe and had Charlie come in and play bass. I was just coming up with ideas about what I had seen and experienced in New Orleans. I got this bluesy record and found a harmonica rhythm kind of thing and tried to manipulate it in the track, along with some bluesy vocals. And that's Charlie on guitar at the end. He wanted to try something different. Everyone knows him from his signature [8-string] guitar, so he wanted to play regular guitar. I thought that was cool—stepping out of his own thing and just doing 'Charlie.' He loved the beat and he was coming up with all different types of rhythms."

Hunter also put some "chickin' pickin'" guitar on the dub-flavored "Hope Road." "Hope Road is where Bob Marley lived," Logic explains. "I talked to Charlie about the vibe, and he just started plucking away, came up with a couple good grooves and we grabbed it up." The flugelhorn sounds that Logic is manipulating on that song are taken from a turntablist tool record made by Stephen Webber, resident guru of DJ art at Berklee School of Music. "His records are great because I always used to use my old jazz records and mess up my good records that I paid so much money for. I was like, 'Man, I can't be scratching up this Miles Davis *Kind of Blue*," Logic says. "I met Stephen at the right time, and those are the types of sounds and textures that I was using: trumpet, sax, bass, keyboard stabs—things like that. He showed how you could use the turntable in different ways."

On "Simmer Slow," Logic uses something that sounds like gated crickets for the backbeat. "I use a lot of animal sounds: crickets, frogs, dolphins," he says. "Certain sounds when you manipulate them—bird sounds, squirrel sounds—you put those through some effects and make it sound like some other creative keyboard or percussion sound. Like on those early dub records, King Tubby and Lee 'Scratch' Perry, you hear all those interesting sounds in the back, and so I was just trying to be abstract like that—putting in colors and things for the listeners to admire."

Logic also injects tabla and harp into the mix; the tabla is performed live by Suphula. (Logic previously worked with Suphula on *The Anomaly* and with tabla breakbeater Karsh Kale on *Project Logic*.) "The harp I sampled from a record of Japanese harp and flute sounds. I grabbed that 'cause it felt good for that track," he explains. "Something Distant" features a contagious dancehall beat played by drummer Deantoni Parks and bassist Melvin Gibbs, a sampled and manipulated Arabic vocal and the Moroccan musical stylings of Brahim Fribgane on oud, dumbek and cymbals.

"Smackness" has a slightly unpredictable groove. "That's me showcasing my turntablism on the hip hop vibe," he says. "I wanted to come with that '80s Beastie Boys/Public Enemy vibe." Logic also gives respect to the Funk Fathers on "One Time." "That's the guys that I admired and grew up listening to, 'cause you learn from everybody. You put in your own thing, but you still take a little bit from what you hear. That's the best teacher."

And speaking of teaching, Logic does leave his Zen footprint. "Peace Y'All" is all Logic, with beats programmed on the MPC, synched on the computer. "I programmed that and just grabbed stuff up 'cause I have live drummers playing for me. I'll just grab up a certain edit and start cutting and pasting basically, finding percussion-type sounds to use for the backbeat or the hi-hat.

"And, you've got to leave a message in the mix. All positive wisdom." ■

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World Radio History

L.A. GRAPEVINE

by Bud Scoppa

Over the years, veteran bands fall into certain patterns in their collective creative processes. What often starts out as an idiosyncratic approach born out of necessity may shape itself into a familiar and reliable way of working. Los Lobos has been doing the drill so long and so fruitfully that the outfit fondly and euphemistically known as "just another band from East L.A." has achieved the hard-earned status of Great American Band, right alongside other still-active groups such as The Heartbreakers and the E Streeters.

From L.A. to Britain: Tchad Blake mixed Los Lobos' latest effort, The Town and the City, *at Peter Gabriel's Real World.*

Unlike their fellow icons, however, Los Lobos has always lived and worked at the margins of the mainstream. For these musicians, it's always been a matter of making a living out of a shared, durable passion. They've excelled with limited resources for so long now that they now prefer to keep it close to the ground, and that means paying particularly close attention to detail. In the April 2006 issue of *Mix*, Los Lobos horn player and studio artisan Steve Berlin explained to *Mix* senior editor Blair Jackson, "What I learned from Mitchell [Froom]," Berlin said then, "is that those details matter. It's not just Mitchell, either, of course. It's true on Motown records, Beatles records: The weird little sounds matter."

At that very moment, Berlin and company were applying that lesson to the final stages of Los Lobos' 13th studio album, *The Town and the City* (Hollywood). We caught up with Berlin, the group's Louis Perez and mix master Tchad Blake soon after the band-produced project was completed. Contrary to what the album title may suggest, this album was a global effort, with tracking and overdubbing done in guitarist Cesar Rosas' So Cal home studio and most of the mixing done by Blake in the UK. However, each of the players indicated that those details, those "weird little sounds," remained a big part of this album, which is being hailed as Los Lobos' strongest effort since the Froom-produced *Kiko*.

The band has tracked and overdubbed at Rosas' Pro Tools–based CRG since 1999. "We've cut enough stuff there that we are certainly comfortable," Berlin says of the cramped environment, "but it's hard to do all six of us at once unless we move into the dining room, which is a different scenario and setup. And none of it happens unless we have one of our co-conspirators—[engineers] Robert Carranza, Mark Johnson or Dave McNair—around to keep us out of trouble. As far as who does what on the recording side, the baton gets passed around a bit, but Dave [singer/guitarist Hidalgo, the band's primary co-writer with Perez] and I are always the last to leave."

Although working with familiar gear in a familiar atmosphere, the band was inspired to move out of its comfort zone in the making of *The Town and the City*. "When we do a search-and-destroy mission," Berlin explains, "it mostly comes from us wanting something new—what we haven't done or heard before—and usually with the most low-tech and ghetto tools we can find."

Perhaps the most important of these tools is one that has long been at the genesis of the band's creative process—"an incredibly archaic Tascam 8-track cassette recorder," in the words of Perez, onto which

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NASHVILLE SKYLINE

by Rick Clark

I've always been a hardcore geek for revved-up Anglo pop/rock. I'm probably one of the only Cheap Trick fans to like their noisy, Jack Douglas–produced, self-titled debut better than their more successful follow-up. I'll gladly put The Raspberries' "Tonight" or Badfinger's "No Matter What," as well as any early Kinks, The Yardbirds or The Who single and Big Star's should've-been-a-hit "Back of a Car" at the top of the playlists of the perfect guitar pop/rock radio station in Heaven. One of my favorite bands at the end of the '60s and through the early '70s was The Move. Over the years, I'm certain I played their albums more than a thousand times, particularly *Shazam*. That album is such a perfectly realized blend of playfully audacious heavy rock, psychedelia and beautifully sung melodies and harmonies that it is no surprise that The Move's enduring artistic album statement became the name of a band who have embraced the same commitment to inspired creative lunacy and great memorable songs. Ever since I heard "Let's Away" and "Oh No" from The Shazam's 1997 self-titled debut, I was immediately hooked by this Nashville-based quartet.

Even though The Shazam (singer/songwriter/guitarist Hans Rotenberry, drummer Mike Vargo, bassist/singer Jeremy Asbrock and singer/guitarist Scott Ballew) sometimes seemed too much of a well-kept secret in town, their melodic, big *rawk* guitar rave-ups have caught some ears that matter, including former Jam frontman Paul Weller, who invited The Shazam to play a show in front of 20,000 people at Earls Court, the UK's biggest indoor arena. The Shazam was also one of only two U.S. acts invited by the BBC to play at Music Live, and for their performance, they were joined by members of The Move (Carl Wayne and Bev Bevan) for a live broadcast from Abbey Road's Studio One.

It's been a while since The Shazam's 2002 album, the fabulous Not Lame release *Tomorrow the World*. That album was produced by the exceptionally talented Brad Jones. A friend of mine, Mike Vargo,

World Radio History

NEW YORK METRO

by David Weiss

who played with a cool alt-country rock band called The Magills, is now playing bass for The Shazam, and he let me know that they were currently in the studio cutting their next album with another one of my favorite producers in town, R.S. Field.

Field never seems limited by genre and achieves authenticity no matter whom he's producing. A few of his lengthy credits include Allison Moorer, Todd Snider, Phil Keaggy and Webb Wilder, as well as Grammy-nominated albums by Sonny Landreth and John Mayall.

Field took the band to record at House of David, a favorite studio venue in Nashville. "I just about always use House of David because of staff, gear and price," he says. "I share an affinity for gear with the studio's manager and head engineer Richard McLaurin. Richard is the main engineer I work with. He's also an accomplished musician and record producer. He knows what I like, what I worry about, et cetera. Mixing is a lot of fun with him. Also, whenever possible, I only work with

—CONTINUED ON PAGE 126

Seated in the House of David for The Shazam sessions are (L-R): chief engineer Richard McLaurin, Hans Rotenberry, Jeremy Asbrock. Standing behind Asbrock: assistant engineer Adam Bednarik. Behind the console (L-R): R.S. Field, Scott Ballew and Mike Vargo.

Poking around for New York City audio pros who understand sound-for-picture? Actually, in Manhattan and the surrounding boroughs, it's much easier these days to count the sonic-minded men and women who *aren't* interested in the business of locking music to visuals. A new highly functioning for-media music/post house opens at least once a week, but only a few can nail the sweet spot that leads to robust performance and consistent growth in New York City's incredibly competitive environment.

Rich Macar of Buttons Sound works to educate his clients about the sonic benefits of surround for sound-for-picture projects.

As a dependable top player in the sound design/mixing arena since 1988, Buttons Sound's (www.buttonssound.com) founder, Rich Macar, has seen countless technologies, industry trends and facilities come and go. The increasingly sophisticated standards of the viewers, however, are what the often outspoken Macar sees as the driving force in his sector today. "There's more demand than ever for good-quality audio," he observes. "I think the one thing that viewers will agree on is that the difference between well-done media and not-well-done boils down to the sound."

The numerous film, TV and commercial clients that Macar and his team mix and sound design for include the likes of Francis Ford Coppola, Saatchi & Saatchi, Animal Planet and MTV.

Listen to one of Macar's enveloping 5.1 mixes in his Paduak suite, which runs Pro Tools HD through a Dolby-certified accurate Meyer HD1 surround system with Bag End dual 12-inch sub, and you quickly find out that he considers staying on the forefront of audio technology to be a top priority. "My mantra for a long time has been that I never wanted to *not* get a job based on equipment," explains Macar. "Once you get over the hardware issues, everything is software, and the question is, 'How is it going to directly impact the client?' They're interested in results, so if you can get them four or five quick, alternate results, they love that. And the more spontaneous you can be, the better. So when you're evaluating a plug-in, it comes down to, 'How quickly can it deploy a particular task? Can you do it on the spot?'"

While whether or not to offer surround capabilities is a question that many audio houses continue to grapple with as HD uptake remains slow (but steady), Macar has made 5.1 a mainstay of every aspect of his business. "Even the simplest of surround mixes, when downmixed to stereo, sounds better than a regular stereo mix," he points out. "I'm at the point where I don't even want to mix in stereo. Instead, I'm developing processes so that I can do surrounds so fast that I'll mix in surround, whether the client is paying for it or not. When they come in, just by pushing a button, I'll say, 'You could have this [the stereo mix], but you could have *this* [the

—CONTINUED ON PAGE 126

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BEHIND THE GLASS

DIRTY DOZEN: *WHAT'S GOING ON?*

REINVENTION OF MARVIN GAYE'S MASTERPIECE

It takes nerve to remake a masterwork like Marvin Gaye's *What's Going On?*, an album revered for its complex, groundbreaking arrangements; deep social significance; and beautiful soul singing. But having weathered the physical, political and emotional devastation of Hurricane Katrina, New Orleans' Dirty Dozen Brass Band earned the right to jazz up whatever they want.

The remake was conceived by co-producer Shawn Amos, VP of A&R at the band's current label, Shout Factory, while en route to Las Vegas for a band/management meeting last October. "I'd heard stories from Mark [Allen, band manager] about most of them losing their homes, being displaced, losing friends," Amos says, "and I heard a Marvin Gaye track on my iPod. So when I sat down with the band, we were talking about what was going on with them—where they were living, insurance claims. I started talking about the timelessness of the [Gaye] album, and I threw out to them that it would be amazing if they covered it."

Miking Efrem Towns' trumpet

The bandmembers seized on the idea and suggested that Amos produce them. "I was flattered and terrified," Amos says, "and the first call I made was to Anthony Marinelli." Co-producer Marinelli and his production partner, engineer Clint Bennett, have worked on numerous Shout Factory releases, including the surprising remix of Herb Alpert's *Whipped Cream (And Other) Delights*, in their Music Forever studio (Hollywood).

"The one sonic thing I wanted on the record was for this to sound like a studio record," Amos says. "It's important to get them all together because that's how they play and they're an improvisational band, but I wanted a lot of presence. I wanted to hear air coming through the horns and the keys clanking, and finding a room to do all of that was key."

The project began in Westlake Studios (L.A.) with an attempt at the awesome title track, which features explosive new lyrics performed by rapper Chuck D. Drums, sousaphone and guitar were each in an iso booth, and the rest of the players set up in a semicircle in the main live room in Studio D.

"On 'What's Going On?' the band had worked up a big-band arrangement, but I pulled drummer [Terence Higgins] aside, and we came up with just a funky beat and then a bass lick and laid down basic tracks. Most of what we did in Westlake was conceptualizing and getting those basic tracks," Marinelli recalls. Bennett recorded to Pro Tools at 96k, but most of the processing he did at Westlake was through the studio's Neve VR. Royer supplied numerous mics for the session; Bennett used 121s and 122s on all of the horns, and an SF24 for group vocals.

After three days in Westlake, the group had those basic tracks and "Wholly Holy" rearranged as a New Orleans jazz dirge. "We spent the better part of a day on that one," Marinelli says, "coming up with arrangements on the fly, with music paper flying all over the place. But once we nailed it, they could improvise from there."

The next opportunity for all to convene was when the Dirty Dozen played at South by Southwest. "The one date that was real was the record was going to come out on the [one-year] anniversary of Katrina," Amos says, "and Austin was our last chance to make that date." Amos booked time in Ray Benson's Bismeaux Studio, where they brought in a Pro Tools rig and the same batch of Royers. "They have an old API desk," Bennett says of Bismeaux, "and a huge wall of this esoteric outboard stuff. A lot of it they built themselves, and it's really great stuff, but I used up every channel on that API first and then ran a couple of things through their custom-built tube pre's."

Co-Producer Anthony Marinelli conducts the band in Westlake Studio D.

One of the guest vocal tracks was laid down live with the band in Bismeaux: Ivan Neville on "God Is Love." After five days in Austin, the production team returned to Hollywood for the Pro Tools mix at Music Forever. They had virtual piles of tracks to assemble. "It wasn't just mixing," Marinelli says. "It was creating arrangements, post-recording, as well—mixing and matching pieces, almost like a remix."

Part of the proceeds from the Dirty Dozen Brass Band's jazz/soul/rap remake of *What's Going On?* will be donated to the Tipitina's Foundation (www.tipitinasfoundation.org), which benefits the New Orleans music community.

—Barbara Schultz

At Bismeaux: (L-R, top row) Kevin Harris (tenor sax), Kirk Joseph (sousaphone), engineer Clint Bennett, Revert Andrews (trombone), Terence Higgins (drums), producer Anthony Marinelli, Efrem Towns (trumpet). Seated: producer Shawn Amos (left) and Roger Lewis (baritone sax).

World Radio History

GOING SOLO

NEVILLE IN NASHVILLE
PARAGON SESSIONS

In Paragon Studio A (L-R): Rik Pekkonen, Aaron Neville, Paragon's director of engineering Matt Weeks and Stewart Levine

Nashville has become a haven for New Orleans musicians displaced by Hurricane Katrina. Grammy-winner Aaron Neville relocated to Music City last fall and is recording a solo album at Paragon Studios (Franklin, Tenn.) with producer Stewart Levine and engineer Rik Pekkonen.

NOT JUST KID STUFF
DOROUGH AT RED ROCK

Bob Dorough vocalizing at Red Rock Recording

Veteran jazz singer/pianist (and writer/director of ABC-TV's *Schoolhouse Rock* cartoons) Bob Dorough re-recorded his song "Blue X-Mas" at Red Rock Recording Studio (Pocono Mountains, Pa.). Kent Heckman engineered and mixed the track, which Dorough originally wrote for Miles Davis.

TRACK SHEET

Narada Michael Walden (left) recorded an upcoming self-produced release at Electric Lady Studios (NYC). Stephen George engineered the sessions, which featured guest vocals by Narada's friend Sting (right).

SOUTHEAST

Niko Marzouca mixed "Dance Dance" for **Stephen Marley**'s upcoming album at **Lion's Den Studio** (Miami)...**Willy Porter**'s upcoming album, *Available Light*, was mixed by Grammy-winner **Neil Dorfsman** at **Saint Claire Recording** (Lexington, KY). Producer/engineer **Zach McNees** was also in Saint Claire, tracking and mixing Boston band **Worlds Collide**...**Kylesa** was in **Jam Room** (Columbia, SC) recording and mixing their third full-length CD. **Phillip Cope**, the band's guitarist, produced the effort, to be released on Prosthetic Records, and **Steve Slavich** and **Jay Matheson** engineered.

SOUTHWEST

Engineer **Mike Bolenbach** mixed the New Romantics' upcoming release in **Full Well Recording Studio** (Phoenix, AZ). The project is set to be mastered by **Roger Siebel** at **SAE Mastering** (Phoenix)...**Abigail Williams** were in **SoundVision Recording** (Mesa, AZ) tracking their first full-length CD for Candlelight Records with studio owner/engineer **Michael Beck**... At **SugarHill Recording** (Houston), **Dan Workman** produced blues/folk band **Old Time Hammer**; staffer **Steve Christensen** engineered and mixed... **Nancy Matter** of **Moonlight Mastering** (Austin) is working with TheMusic.com, mastering recordings of **The Who**'s summer concerts...Australian rockers **Wolfmother** recorded a live six-song set (to be released on iTunes) at **Studio at the Palms** (Las Vegas) with recording/mixing engineer **Ed Cherney**... Pop rock band **Lemon Avenue** are tracking at **County Guitars & Recording** (Grandview, TX) with producer/ engineer **Joe Brooklyn**.

NORTHEAST

Engineer **Neil Dorfsman** recorded producer/ percussionist **Mino Cinelu** in **Avatar**'s (NYC) Studio A for an album by **Henri Salvador**; **Anthony Ruotolo** assisted. In Studio C, bass player **Kengo Nakamura** recorded a new album with engineer **Joe Ferla** and assistant **Brian Montgomery**. In the Pro Tools–based Studio E, Montgomery edited a new **Jerry Barnes**–produced recording by **Roberta Flack**...At **StarCity Recording** (Bethlehem, PA), musician/producer **Eric Doney** is tracking *Giants at Work*, a DVD featuring the jazz music of **Phil Woods**. On hand for the sessions were StarCity engineers **Jeff Glixman** and **Carl Cadden-James**...**The Harlem Project** was in **Excello Recording** (Brooklyn, NY) tracking with producer **Aaron Levinson** and engineer **Hugh Pool**...At **Loho Studios** (NYC), **Matthew Sweet** and **Susanna Hoffs** did a session for UGO.com. **Joe Hogan** engineered and **Dan Hewitt** assisted. Also at Loho, **Calla** recorded an upcoming album with engineer **Hewitt** and assistant **Patrick Billard**; and **Ilhan Ersahin** produced **Karina Zeviani**'s new album for Nublu Records. **Gus Oberg** engineered and **Ari Halbert** assisted...**Mary Weiss**, lead singer of the original **Shangri-las**, has a new recording deal with Norton Records and is making an album in **Coyote Recording Studios** (Brooklyn, NY). The album is co-produced by **Billy Miller** and **Greg Cartwright**, with **Michael Caiati** engineering and **Andrew Gearhart** assisting...In his **Bopnique Studio** (Boston), producer/engineer/musician **Anthony Resta** hosted **Perry Farrell**, who was recording tracks for an upcoming solo album.

MIDWEST

Bilingual Knife is mixing and mastering their self-titled CD at their private studio in Romulus, MI.

NORTHWEST

At **Level 14 Studio** (Denver), **Stewart Erlich**'s **Wadirum** tracked their sophomore release with engineer/producer/studio owner **Chris Boggs**... Guitarist **Robb Howell** (a former member of Black Sabbath drummer Bill Ward's BWB band) built a new recording facility in Boise, ID. The 15x12-foot mixing suite is based around a Tascam SX-1, and at press time, Howell was using the studio to score a new film, *Throbbing Springs*, to be released at Sundance this month.

SOUTHERN CALIFORNIA

The **Dixie Chicks**' smash Columbia album, *Taking the Long Way*, was written and recorded over the course of a year in Studio A at **The Village** (West L.A.) with producer **Rick Rubin**. **Jim Scott** and **Chris Testa** engineered, and **Vanessa Parr** and **Jason Wormer** assisted...At **Rolltop Studio** (San Diego), musician/composer **Tim Coffman** and engineer **Micajah Ryan** are mixing an album of Hawaiian music titled *The Rhythm of Paradise*... Wolfmother's six-song set (see Southwest, above) was mastered for iTunes by **Stephen Marsh** at **Threshold Mastering** (West Los Angeles). Also mastered by Marsh at Threshold: a **Los Lobos** concert DVD produced by **Larry Shapiro**. ■

Send news for the Track Sheet to bschultz@mixonline.com.

World Radio History

L.A. GRAPEVINE FROM PAGE 122

Hidalgo lays down his nascent song ideas. After putting the idea onto a CD, he hands it off to Perez, who writes the lion's share of the lyrics. "Then," says Perez, "we'll bring the track to Cesar's studio. If we're gonna re-create it, we track it in the studio with all of us or we'll transfer his 8-track to Pro Tools and dissect it, or add or subtract, however it works. We try to take every song all the way till we're done before we track anything else. Otherwise, you have bits and pieces spread all over the place; it's too distracting. Everything's built from the ground up."

As each batch of tracks was completed, it was over-nighted to the formerly L.A.-based Blake, who now lives in the UK. While scrutinizing the sounds, Blake says, "The songs actually didn't need much more than balancing, so that's all I did. Maybe I added some SansAmp on the bass and drums and some vocal effects, general low end, but not much."

Blake worked "mostly at [Peter Gabriel's] Real World in the Big Room, which is a favorite of mine, on a newly installed SSL K Series that's incredible. Two mixes were done at Sunset Sound Studio 2 [in Hollywood by Robert Carraza]. My room, Mongrel Music Unit One, wasn't operational at that time, but I now have that as an option, as well."

After Blake completed the mixdown of 11 tracks, the album was ready for mastering—or was it? "Usually, records tell you when they're done," says Perez, "and we thought we were done, but we weren't. We had a little tour of Australia for 10 days, enough time to let it digest, and when we came back, David said, 'I think we need one or two more songs.' I *wanted* to say, 'Dave, are you crazy?' But I knew what he meant: It was a cool record, but it needed something to lighten it up a bit. David came up with a couple tracks, and I knew then that we had to do it. We got hold of Steve and went into the studio. We did a track a day, finished around midnight on Friday and Robert mixed them over the weekend while we were gone, so we were cutting it close."

Now that all is said and done, does Berlin buy the *Kiko* comparisons? "We did a series of *Kiko* live shows right in the middle of the recording process, so the aroma was certainly in the air, and one of the things we consciously wanted was to get back to a broader sonic palette. And knowing Tchad was going to mix it didn't hurt that sentiment. But this one, like all of them, definitely had its own character. We didn't set out to make another *Kiko*—it just happened." ■

Send "Grapevine" items to bs7777@aol.com.

NASHVILLE SKYLINE FROM PAGE 123

friends. Life's too short.

"The studio has a really well-maintained API console with VCA-less automation; an Otari MX-90 24-track and an MCI 16 track; a lot of Universal Audio signal processing; and a smart little boutique of other stuff like a Stay Level, Tube-Tech, Telefunken and so on," he continues. "Plus, we usually rent eight channels of vintage Neve pre's from Jeremy at Rack and Roll. We mix through Richard's Apogees to the ubiquitous Masterlink. Good mics, a great second engineer who can also do the 'top-knob' duties [Adam Bednarik]—all for a good rate. A studio doesn't have to be a museum to offer classic equipment at a great rate; you just have to know what you want and need."

"We tried to find the perfect blend of live rock that Field was seeking and the ear candy/harmony arrangement that The Shazam is famous for," Asbrock notes. "There is a lot of space in the arrangements, especially the guitars in 'So Awesome.' We cut 12 basic tracks live in three days. Having the basement to rehearse and record in helped. We kept a lot of scratch vocals and did no Auto-Tuning. Quick decisions had to be made to conserve tracks, ping-ponging harmonies and such. It's amazing how limiting your options helps to make real progress."

On past Shazam albums, Rotenberry notes he handled the majority of the guitars and vocals, but this outing was a real performance-driven group effort. "It's a real band sound," he enthuses. "This time, we did it with more of a two-guitars approach. This is the first record we've done with Jeremy actually in the band, and he gets to wail. Mike Vargo joined, like, four days before we started recording, and he plays and sings great, so we just said, 'Go, go, go!' We love it now more than ever. And we're really only doing it because we feel that it needs to be done."

One development of note: After 25 years of working in Nashville, Field has relocated back to his hometown of Hattiesburg, Miss., and is planning to work more out of the Austin area, possibly forming a label with Texas music industry veteran Mike Crowley. Some projects in the works, besides The Shazam, are young Texas duo the Ded Ringers, Memphis-based guitar player/singer/songwriter John Paul Keith, country music poet Butch Primm, some independent film soundtrack work and recording his own songs. ■

Send news for "Skyline" to mrblurge@aol.com.

NEW YORK METRO FROM PAGE 123

surround]. Why not have all of them?' I think you need an education curve about surround, and I'm trying to be a catalyst if I can. Surround is not really about things flying around the room; it's about effectively using those speakers to captivate an audience."

Look a few miles south of midtown and you'll find Hudson Soundlab (www.hudsonsoundlab.com), a strikingly different style of facility that has also found its way to New York City's SFP sweet spot. Founded in 1999 by Texas-bred composer Robby LeDoux and in its current location since 2004, Hudson Soundlab has developed a following—including clients such as HBO, Euro RSCG and Comedy Central—by blending sharp business management with a laid-back vibe.

"I said if I ever had a company that did music post," LeDoux says, "I would steer away from that corporate feeling and go for a truer essence." That outlook is clearly communicated in the modern angles of Hudson Soundlab, where studio designer Martin Vahtra helped to pack equal parts technical efficiency and space to relax into the Pro Tools HD–equipped control room, live room and lounge of the 700-square-foot facility. "Basically, I want the creative process to feel more intimate, like the way I feel when I sit down and write a song on a piano because you're in the moment and you can concentrate more. The lounge is wired for recording, and we've captured many horn sections in there. Clients love that because they can literally be in the room while the music is being recorded."

To keep his main room (plus a satellite Brooklyn studio) booked, LeDoux places emphasis on attracting a team of complementary artistic talents, including longtime collaborator JZ Barrell and three other composers. "Building a good team and letting them do what they do is the key to a successful business," says LeDoux. "I tend to shy away from big rep firms and instead try to go with a full-time, 100-percent Hudson Soundlab–dedicated person who has a proven track record of helping the people they've worked with."

LeDoux was able to add considerable versatility and income to Hudson Soundlab simply by hiring freelance mixer Lihi Orbach so that he could concentrate on his own strengths. "Mixing is not my chief passion. It used to be that we'd do post to fill in the down time after composing music, but it has evolved that more and more clients are coming to us because we do music, sound design and post in one spot." ■

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—FROM PAGE 20, THE SURROUND GAME

of the mics are on the cameras that work the sidelines, so they're constantly moving, which makes for a nice, large sound field." Surround mics including SoundField and Holophone models are finding their way into many sports mixes, such as the recent World Cup, which was broadcast for the first time from start to finish in HD, and which included a number of SoundField mics among the 18 that were covering the field.

Ron Scalise, the audio project manager for remote operations at ESPN (who also started his career as a music mixer), is one of the pioneers of surround sound for sports, starting with the cable network in the late 1990s, even before the delivery systems were all in place. When it comes to the surround mix, he says, "We're not really interested in re-creating the arena we're in. Overall, if you just present what's there, it's boring. We want to make it bigger than life. It's all about the 'wow' factor. Like the video, when you've got a 100:1 lens on a camera, you can't look into the quarterback's eyes when you're physically at the game, but you can on TV. In car racing, when you're shooting with the inside camera, we make it like you're in the car and get rid of the outside sound. We're looking to make entertainment; make it exciting. We give people who have just gone out and spent 10 grand on their home theater systems something that will make them say, 'Listen to that!'

"Even the prerecorded sound design for graphic panels and switcher wipes are mixed so they have movement from front to rear, as well as from left to right. But we don't want to overdo it—to make them so loud that they will annoy people.

"Clever imaging can be extremely effective," Scalise continues. "The more you can do besides just put the average sounds of the game in the front stereo stage, the better. You can always imply more of what there really is. Enhancing crowd sound and ambiences in the rear channels is important, as well. Establishing a general 'seat in the stadium or arena' environment is important, but from a perspective standpoint, if you have ever tried to follow every camera cut with the mics placed too closely, the sound changing each time the camera angle changed, you'd drive people crazy and they'd turn down the sound.

"At an X-Games ski event, there are people cheering at the bottom of the hill and shaking cowbells, so we'll put them into the rear channels and keep them there. At college football and basketball games, we'll take the team band, mike them in stereo and put them in the rear. We'll put a mic on the peanut vendor and put him in the rear, leaning him left and right. And there are always those nuts at the games who paint 'E S P N' on their chests and take their shirts off in the middle of the game when they see the camera, even when it's 10 degrees and snowing. We spot where they are before the game starts because we know that they're going to be making noise and cheering loudly, so we put a mic near them and open it in anticipation of, say, a field-goal attempt. If it's the opposing team's ball, we place them in the rear. Hopefully, they're not going to cuss; sometimes we put a delay on them just in case."

On the other hand, says Phil, "We're not trying to create something that doesn't exist, like a film. We're trying to capture an event and bring it home as best we can for the viewer. As far as processing goes, there's no artificial ambience; it sounds weird when you do that. We use compression more than anything else, along with some EQ."

Besides the complexity of the mix, one of the things sports mixers have to deal with

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is that they're in a constantly changing work environment. "A few broadcast [series] get to keep the same truck all season, but most of us aren't so lucky," Phil says. "We don't choose our truck, our environment, but we have to make it work, usually in a very short time. On average, you get a day and a quarter to set up: You get to the site and the next day is game day. There are a lot of trucks—maybe 25 or 30 HD trucks are out there now—and they're building more of them all the time. They're very expensive, but it's not cost-effective to build a new truck that's not HD-compatible. Generally, they're built for specific contracts, usually five-year deals with a particular network for a particular sport.

"They're getting better," he adds, "but for the most part, very little thought has gone into the acoustical space or treatment when they're building the truck. And it's noisy; there's air conditioning and computers all making noise. I remember in one truck there was a big computer controlling the intercom system right behind my left ear, and I said, 'Get that out of there; it doesn't need to be here.'

"The only trucks I've seen with treatment are music-specific. Almost everyone's using Genelec monitors, so there's consistency there, and audio consoles are getting more consistent: Calrecs are becoming very popular, but you also see SSL, Euphonix, Yamaha PM-1D and Midas if they're using an analog signal chain. But the layout, the meter bridging, they're all different. So like in any new studio, you put up some music you're familiar with and listen to it."

Unlike mixers for records or film, sports mixers don't have the luxury of doing separate stereo and surround mixes at different times; everything is live. "Some mixers do a totally separate stereo mix off the desk," says Phil, "or they'll take it off the Dolby 563 encoder, which folds the signal into the Pro Logic II format, which can be listened to in either surround or stereo. And some will use a Dolby 570 monitoring tool to check the stereo feed. But since the balances are the same, you're not really doing two separate mixes for HD and SD. For the stereo mix, I'll just use left-front, right-front and center, and not even bother to put the surround channels into it."

Another daunting problem that most music mixers don't have to deal with is, as Phil says, "You can't just concentrate on the production mix. You also have to listen to the director and the producer. There's constant chatter. So I have another pair of speakers off to the side and in front of me for that, just so they don't overpower the mix. Some people like those speakers behind them, but I find it irritating to be constantly pulling yourself forward and back.

"At the same time, I'm the only one paying attention to the mix. The video production people aren't—that's what they hire *me* for. We don't even give them the mix since a lot can go wrong if we did; someone might be standing in front of one of the speakers or someone sitting in front of the right speaker can't hear the announcer coming out of the center speaker, so they turn down the right channel. So I feed them mono, the lowest common denominator. After all, what they really want to hear is the announcer. And if something goes wrong with the phase, they will definitely hear that."

Next month, we'll talk about what happens when the mix leaves the truck—for better and for worse. ■

At the moment, Paul Lehrman is listening to the sound of the Atlantic Ocean in full surround.

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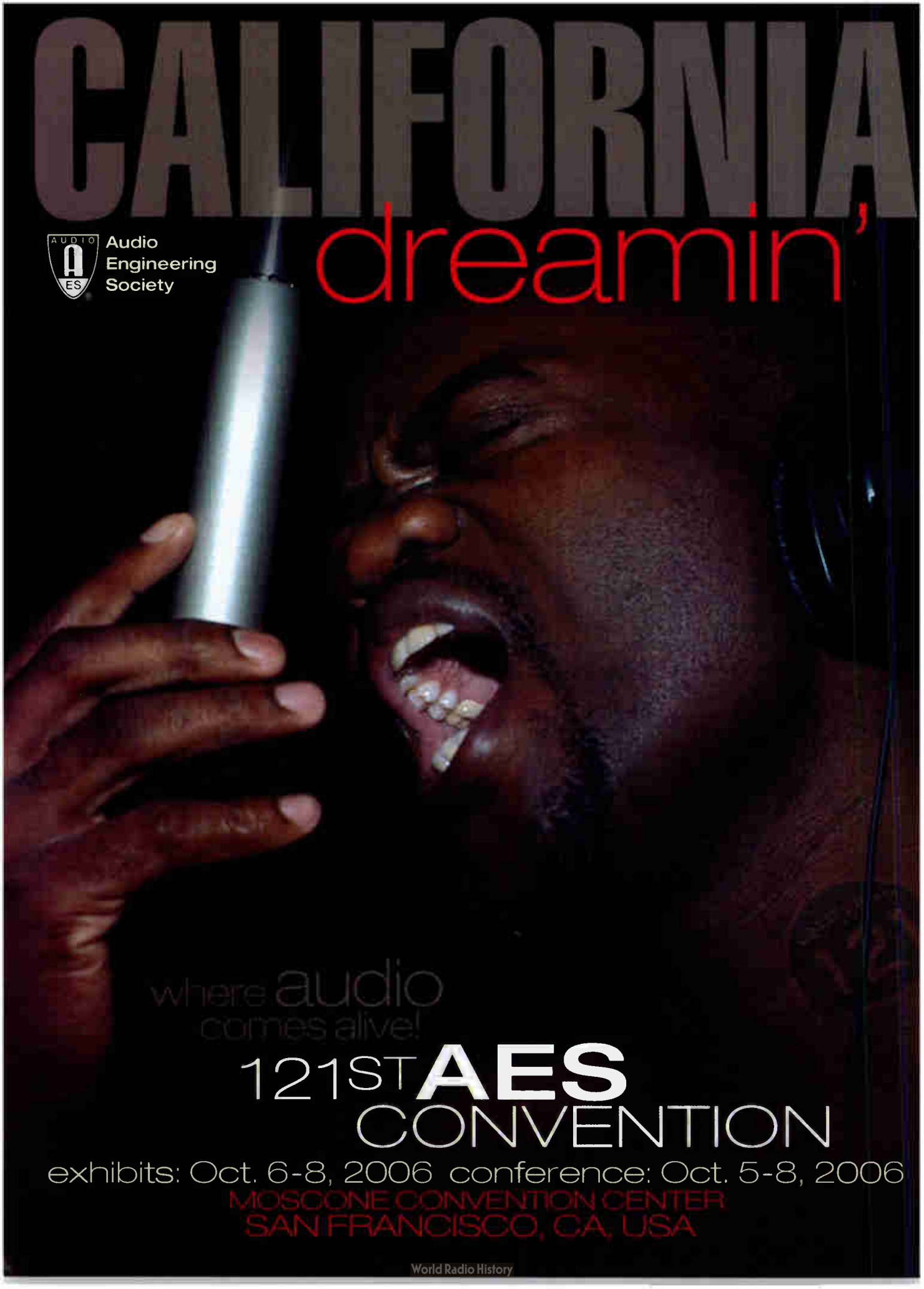

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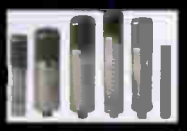

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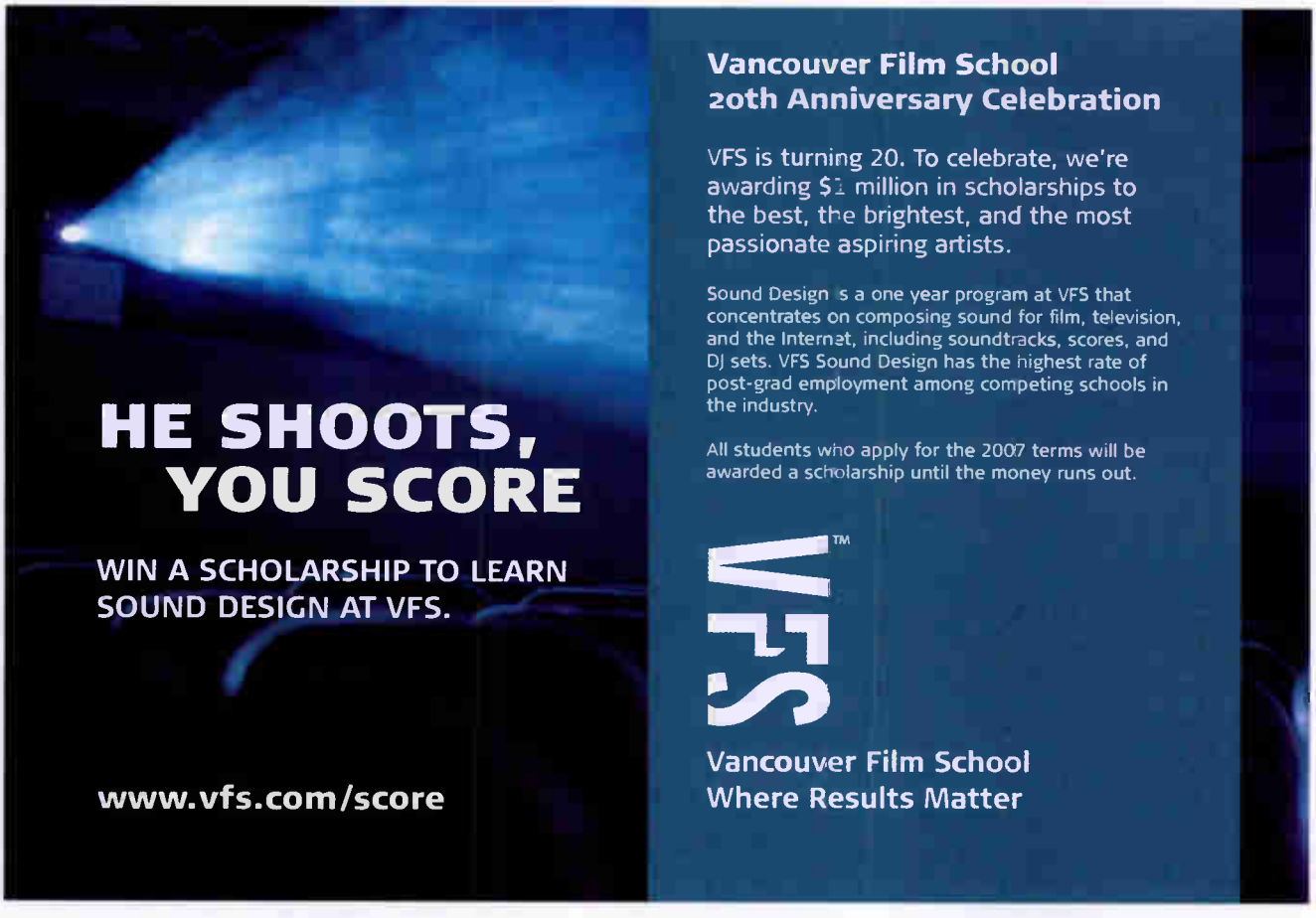

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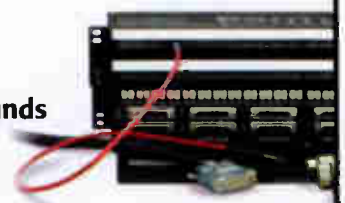

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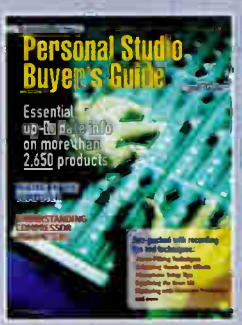

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The Powerful and Portable MOTU Studio

Run Digital Performer 5, the new UltraLite FireWire I/O, MOTU instruments and a wide range of third-party products on Apple's fastest laptop lineup ever

What is an Intel chip doing inside a Mac? A whole lot more than it ever did in a PC. Apple's new Intel MacBooks deliver unprecedented laptop performance. Take the power of the Intel Core Duo processor to go. Choose MacBook in black or white, both with a brilliant, 13.3-inch glossy widescreen display. Nearly one inch thin, 5.2 pounds, 100% perfect for anyone who wants power in an affordable package. Push the envelope of pro performance with the 15- & 17-inch MacBook Pro. Featuring an Intel Core Duo processor, ultimate expansion via FireWire, and the power to scream through MOTU DP5 and your entire suite of MOTU Instruments on the go, MacBook Pro is one inch thin and miles deep. Connect the ultra compact MOTU UltraLite bus-powered 10x14 FireWire audio interface for 8 high-quality analog inputs — including two mic inputs with preamps, 10 analog outputs and a host of advanced features like SMPTE sync and front-panel programming.

Universal plug-in control

As a Universal Sound Platform, Native Instruments KORE operates not only as a plug-in within Digital Performer but also as an instrument host application. It allows you to integrate all your VST- and Audio Units-based software instruments and effects into a single, unified interface. KORE provides greatly increased control, overview and ease of use in all creative situations. Both Native Instrument's own range of instruments and effects as well as third-party products are supported. The seamless integration with KORE's advanced hardware controller gives hands-on control with unprecedented analog feel, finally turning today's software synthesizers and samplers from applications into true instruments.

The MOTU experts at Sweetwater can put together the perfect DP5 rig for you. We'll help you select the right components to build a system that seamlessly integrates into your workflow, and we can even install, configure and test the entire system for you. Why shop anywhere else?

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Synthesis ignited

Combining power, elegance, control, and unbeatable sounds, Rapture is one of the most exciting synthesizers to hit the market in years. Capable of producing rich, hypnotic, and rhythmic basses, leads, and pads, Rapture is perfect for performing and designing the modern synthesized sounds igniting today's pop, dance, and electronic music. What better way to expand the sound possibilities of your Digital Performer studio?

Rapture compliments Digital Performer with pristine wavetable synthesis and a sophisticated palette of hundreds of patches. Its staggering array of modulation features includes brilliant multi-point envelopes, a powerful MIDI control matrix, and 40 step generators to add rhythmic complexity to patches. Discover timbres you've never imagined with this truly unique instrument. Ask Sweetwater today about using Rapture with DP5.

Amazing sounds

Dimension Pro is the critically-acclaimed synthesizer that combines real instruments with advanced synthesis, giving you endless sound possibilities. The immense two DVD sound library that ships with Dimension Pro makes it the ideal go-to instrument for musicians, while its deep editing and sound generation capabilities have a natural appeal to sound designers.

Digital Performer users looking to create rich ambient film-score beds will love the "Dimensions" bank, which features complex, evolving atmospheres. Dimension Pro also offers an abundance of vital, playable sounds that range from pristine realistic acoustic instruments to thumping basses and cutting leads. This wide tonal range can be attributed to both advanced sample mapping and a powerful sound-sculpting engine with analog sound generation that lets you mutate and recompose any sound you might imagine.

Waves native processing

Waves delivers the classic sound of the SSL 4000 Series to your Digital Performer mixes. Developed under license from Solid State Logic, The Waves SSL 4000 Collection includes three meticulously modeled plug-ins based on the legendary SSL 4000 Series: the SSL E-Channel, the SSL G-Master Buss Compressor, and the SSL G-Equalizer. Now featuring Gold Gold Algo presets — personal presets from the legendary Grammy® Award-winning, multi-platinum mixer. Now add the Waves Gold Native bundle, packed with all the first rate plug-ins that put Waves at the top of computer-based professional audio processing. If you want a complete, world-class processing and mastering package for DP5, the Gold Native Bundle is it. You get total control of the highest-resolution tools for a broad range of applications.

The ultimate groove

Spectrasonics Stylus RMX v1.5, the award-winning "groove standard", gets better and better with new features like "Cheos Designer™ Buzz" for stuttering edits, 500 incredible new categorized Multi grooves and 250 slamming new Kits. It's even easier to learn RMX now with the new Reference Guide/Help System and hours of brand new tutorial videos – including one specifically for Digital Performer users! Ask Sweetwater about "Xpanding" RMX with all nine SAGE Xpanders, now shipping!

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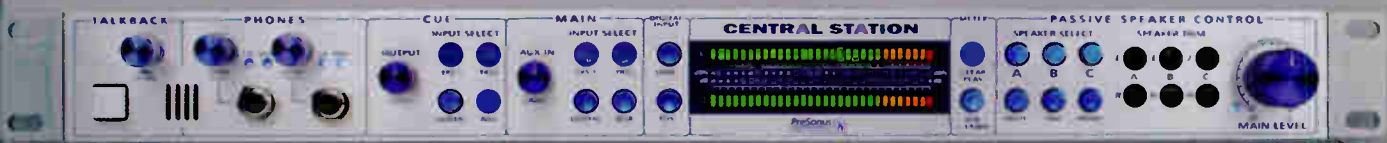
Eight musical preamps

[illegible] Grace Design m801, which delivers eight channels of transparent, musical mic preamplifiers. Features include ribbon mic mode, a fully balanced circuit path and [illegible] XLR outputs. The m801 presents a [illegible] picture of astonishing clarity and detail [illegible] reveals the essential character of the music being recorded. Simply put, this is the [illegible] front-end for any MOTU family.



Control room monitoring

The PreSonus **Central Station**™ is the missing link between your MOTU recording interface, studio monitors, input sources and the artist. Featuring 5 sets of stereo inputs (3 analog and 2 digital with 192kHz D/A conversion), the Central Station allows you to switch between 3 different sets of studio monitor outputs while maintaining a purely passive signal path. The main audio path uses no amplifier stages including op amps, active ICs or chips. This eliminates coloration, noise and distortion, enabling you to hear your mixes more clearly and minimize ear fatigue. In addition, the Central Station features a complete studio communication solution with built-in condenser talkback microphone, MUTE, DIM, two separate headphone outputs plus a cue output to enhance the creative process. A fast-acting 30 segment LED is also supplied for flawless visual metering of levels both in dBu and dBfs mode. Communicate with the artist via talkback. Send a headphone mix to the artist while listening to the main mix in the control room and more. The Central Station brings all of your inputs and outputs together.

16-pad drum controller

[illegible] **Trigger Finger** puts the power to record your own expressive percussion and drum parts into Digital Performer. Its 16 velocity-sensitive pads are perfect for playing DP5's included Model 12 drum module, launching loops and samples via DP5's Nanosampler, or even controlling video projections — and applying pressure to the pads can generate any MIDI controller you wish. Trigger Finger also gives you 8 knobs and 4 faders that are freely assignable to MIDI parameters such as volume, pan, pitch, and effects. Full programmability lets you customize the unit to fit your needs. Settings are easy to store via 16 presets and M-Audio's free Enigma librarian software. A simple USB cable is all it takes to connect and power Trigger Finger with your computer.

The MOTU experts at Sweetwater can put together the perfect DP5 rig for you. We'll help you select the right components to build a system that seamlessly integrates into your workflow, and we can even install, configure and test the entire system for you. Why shop anywhere else?

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Automated mixing & control

Imagine the feeling of touch-sensitive, automated Penny & Giles faders under your hands, and the fine-tuned twist of a V-Pot™ between your fingers. You adjust plug-in settings, automate filter sweeps in real-time, and trim individual track levels. Your hands fly over responsive controls, perfecting your mix — free from the solitary confinement of your mouse. Mackie Control delivers all this in an expandable, compact, desktop-style design forged by the combined talents of Mackie manufacturing and the MOTU Digital Performer engineering team. Mackie Control Universal brings large-console, Studio A prowess to your Digital Performer desktop studio, with a wide range of customized control features that go well beyond mixing. It's like putting your hands on DP itself.

Accurate monitoring

The HR-Series 6.5" Active Studio Monitor are considered some of the most loved and trusted nearfield studio monitors of all time, and with good reason. These award-winning bi-amplified monitors offer a performance that rivals monitors costing two or three times their price. Namely, a stereo field that's wide, deep and incredibly detailed. Low frequencies that are no more or less than what you've recorded. High and mid-range frequencies that are clean and articulated. Plus the sweetest of sweet spots. Whether it's the 6-inch HR-624, 8-inch HR-824 or dual 6-inch 626, there's an HR Series monitor that will tell you the truth, the whole truth, and nothing but the truth.

Purified power

To get the most out of your MOTU studio gear, you need the cleanest power possible. The negative effects of poorly supplied wall outlet AC power on your gear can be dramatic, without your ever knowing how good your gear can really sound with properly supplied power. Furman Sound introduces the all-new Power Factor Pro with its ground-breaking Clear Tone Technology™, which actually lowers the AC line impedance supplied by your wall outlet while storing energy for peak current demands — over 45 amps of instantaneous current reserve. Additionally, Linear Filtering Technology™ (LiFT) dramatically lowers AC line noise to unprecedented levels in the critical audio frequency band. Also included are Furman's unique Series Multi-Stage Protection Plus (SMP+) surge protection and automatic Extreme Voltage Shutdown (EVS), which protect you from damaging voltage spikes or sustained voltage overload. Equipped with the same LiFT and SMP+ features, plus EVS Extreme, the Furman Sound IT-20 II ultra-low noise balanced isolation power conditioner is designed for the most critical, ultra-low noise installations. Delivering an astonishing 80dB of common noise reduction from 20Hz-20kHz, you're assured the lowest possible noise floor for all the gear in your MOTU studio. The IT-20 II's toroid transformer design assures a contained magnetic field for complete isolation from sensitive studio components nearby. The ultimate in purified power.

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World Radio History

BY DENNIS MILLER

Symbolic Sound Kyma System

Make the Most of This Sound Design Workstation

Symbolic Sound's Kyma System has been called "the most powerful sound design workstation on the planet," but getting the most from it can be daunting. Here are some tips to give you a jump start.

MAKE MINE METAL

When you want to add a metallic effect to a sound, inverting its spectrum might not be the first thing that comes to mind. But Kyma's SpectrumModifier can do that job nicely. To try the effect, place a SpectrumModifier as the input to an OscillatorBank (replace spectrum) module, then replace the default analysis file with one of your own. Set the FreqScale of the SpectrumModifier to -1 to invert the spectrum and put an !Offset control into the FreqOffset parameter so you can shift the frequencies into the audible range. (Small offset values work best.) Also, be sure that Hear All is enabled.

To invert a live audio input, simply place the SpectrumModifier module in-line between a LiveSpectralAnalysis and the OscillatorBank and tweak as outlined above. In either case, try using hot values for LoTrack and HiTrack so you can control how much of the spectrum gets flipped. This effect works well on many types of audio, and, for example, can turn plucked strings into metallic gamelan-like sounds.

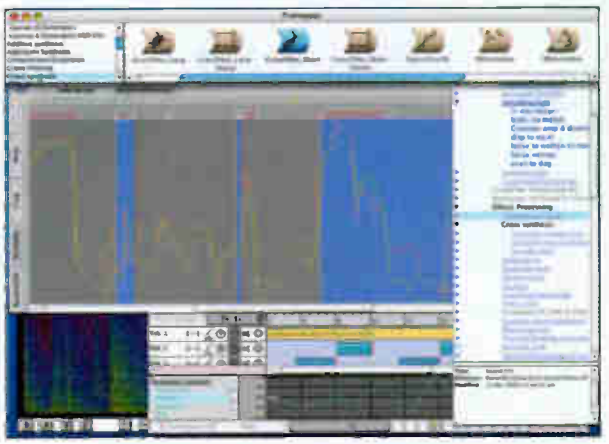
TAKING IT TO THE TAU

Kyma's Tau Editor is so much fun it should be illegal. If you haven't explored the Tau, open a new Tau Editor using the File/New/Tau command, then drag any audio file or Kyma Sound on your system from the Sound Browser directly onto the Tau main screen. Let Tau analyze the file's frequency, amplitude, format structure and bandwidth, then clear all the markers using Select All and Delete so you can freely drag regions of your file around on the screen. Now load and compile the sound and listen to the newly re-synthesized version containing your modifications.

Tau can mix, morph or cross any number of files, and the results have unlimited creative potential. For example, drop a drum loop and a vocal sample of fairly equal length into the Tau editor, click on the Galleries tab and select the sound called Lysergic from the Random folder. Sit back and enjoy the trip.

REPLACEABLE YOU

I like to process a single sample many different ways. Kyma's Replaceable Input feature makes this particularly easy. Go to the Sound Browser and locate the sample on your hard drive that you want to process. Then click on the third icon from the left on the Browser's menu line to make that file the Replaceable Input. At this point, any sound in Kyma's library that has a blue arrow to its right will use your audio in place of its own default input. You can use live input instead of a disk file if you click the second icon from the left.



Kyma's new Tau editor is particularly well-suited for experimentation.

OH, THE WATER

To get a variety of deep, ambient water sounds, use the Filter prototype with its type set to 12th-order Allpass and the rest of the parameters to hot values. In the Frequency field, type the expression:

!Frequency hz * (1 + (!Gate ramp: !RevDur s))

Now feed the filter an impulse by using a FunctionGenerator with its wavetable set to FilteredPulse (Kyma/Waves/Impulse Response). Next, insert a Euverb stereo reverb in front of the filter. Compile the sound and lock the following parameters in the VCS to these values: Scale (1), Q (5 to 7 as desired) and OnDuration (0.5). Then roll the Dice to generate a vast number of random drips, drops and drabs.

ALL CROSSED UP

Kyma offers a vast number of ways to cross-synthesize two different sounds. With RE (Resonator Exciter) synthesis, you can get demonic serial-killer voices by crossing a voice with noise and time stretching with a fader. Or maybe you'd prefer the talking-bell effect that you get by using spectral analysis/re-synthesis to apply the voice's amplitude envelopes to the bell's inharmonic frequencies. With the new CrossFilter, you can create stunning convolution-like effects, like crossing a cello with the sound of ocean waves or a cat meow with a ride cymbal. The possibilities for hybrids are endless.

DOPPLER SHIFT TO PICTURE

If you're using a Wacom tablet to control Kyma, you'll appreciate this little tip. Locate Effects-Doppler shift from the Kyma Sound Library/An Overview and play it in the Sound Browser. Option-click on Pan in the VCS and map it to PenX. Now you can perform the Doppler shift to picture. Get exactly the right speed and the right mood by watching the picture as you sweep your pen across the tablet. Substitute your own sample input by locating it in the Sound Browser and clicking the Replaceable Input button.

To map several parameters to pen control, open the Pen Status View by clicking the Pen icon in the strip at the top of the VCS. Click Auto for a quick automatic mapping with visual feedback.

KEEP IT UP

Be sure to check the company's Tweaky site (www.symbolicsound.com/tweaky) to see what's new. ■

Dennis Miller is a professor of music at Northeastern University in Boston. His compositions can be found at www.dennismiller.neu.edu.

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Presenting the **m801**, the proud successor to the celebrated model 801 microphone preamplifier.

The new m801 delivers unmatched audio performance – with vast headroom and ultra-wide bandwidth that contribute to a markedly open, musical character. The m801 will effortlessly resolve even the lowest level ambient information, resulting in a sonic picture of astonishing clarity and detail, which serves to capture **the essential character of the music being recorded.**

The signal path has been hot-rodded to be fully balanced from start to finish, resulting in a wider dynamic range, while new higher-current output drivers enable even longer cable runs without signal loss. Each channel has a dedicated ribbon microphone switch, which shifts the gain range up 10dB while deactivating 48V phantom power, optimizing input impedance and bypassing the decoupling capacitors. And we've added an additional set of 8 channel balanced outputs for sending signals to a secondary recorder, workstation or console.

While its predecessor now takes its place in pro audio history, the new m801 faithfully furthers the tradition of breathtaking audio performance and perfect reliability in a beautiful, functional 8 channel package.

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- Compact size — powered by FireWire and housed in sturdy 8.5 x 7-inch aluminum alloy, the UltraLite provides rugged portability.
- Digital Precision Trim™ — use digital encoders to boost mic/instrument input gain in precise 1 dB steps with numeric feedback in the LCD.
- Three-way pad switch — apply zero, -18 or -36 dB pad to any XLR input signal, from a dynamic mic to a +4 dB line level input.
- Stand-alone mixing — connect the included DC power supply and mix your band live, without a computer. Save up to 16 mix setups and then recall them on the spot with the front-panel LCD.
- "Mix1" return bus — record the UltraLite's live mixdown back into your audio software for archiving or further workstation editing.
- Mac OS Universal Binary and Windows XP x64 drivers — use the UltraLite with today's latest Intel-based Macs or with a super-fast high-performance 64-bit Windows XP Pro audio workstation.
- Across-the-board compatibility — works with all major audio software for Mac OS X and Windows XP. Includes AudioDesk for Mac OS X.

The CueMix Console software gives you direct access to the UltraLite's 10-input, 8-bus digital mixer. Route any combination of inputs to four separate output pairs. Create and save up to 16 mix setups. You can even set up talk-back and listen-back for studio recording sessions.

UltraLite

Compact bus-powered 10 x 14 FireWire audio I/O

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