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THE CLASS OF 2010



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The tracking room of Red Amp Audio is part of the new gWG Studios complex designed by nonzero|architecture. For more, see "The Class of 2010," page 16. Photo: Ansel Olson. Inset Photo: Steve Jennings.



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Big River

W

hen I walked into the office on Monday morning, May 3, I wasn't expecting the images out of central Tennessee. I follow the news, and I knew there were torrential rains. But Opryland under 12 feet of water, with 1,500 guests moved to a nearby school? Residents swept away from the roofs of their cars? Then *Mix* technical editor Kevin Becka sent me an image of Soundcheck Nashville, sent to him by Lynn Fuston. Whoa.

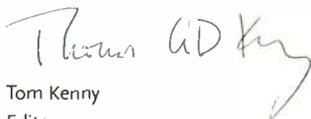
Water three-quarters of the way up the semis in the parking lot. The Cumberland River indistinguishable from Cowan Street. And all reports said the water was still rising, with best estimates of cresting still a day away. Inside, I knew, were offices for Meyer Sound, Shure, Digital Console Rentals, Fender and Tour Supply Inc. Lockers in the 50,000 square feet held guitars and amps and backline and much of what makes Nashville touring life run, along with a ton of studio gear. Reports came in about Vince Gill, Keith Urban, Brad Paisley, Ben Folds and others losing their rigs and their collections and only guessing at what else.

We heard about Michael Wagener's floors and walls, though *PSN* editor Frank Wells tells me Michael got his gear to higher ground. Carl Tatz sent in pictures of mastering house Yes Master and its floating couch and half-submerged producers desk in the low part of Berry Hill. And Robbie Clyne sent a Twitter pic of Dierks Bentley in boots, mopping up his floor. Music Row was spared, as was most of Berry Hill, but there are countless tough stories, from Bellevue to Franklin to Hendersonville and all points in between.

In my office is a blowup of my favorite *Mix* cover in my 22 years here. It's the May 2008 issue featuring many of Nashville's finest, all together on one afternoon at the McBrides' Blackbird Studio. A rare assemblage of incredible talent. Not pictured are the hundreds of engineers, producers, songwriters, assistants, interns, studio managers, label heads, club owners, artist reps, marketing and PR professionals, and tour crew that make Music City the most close-knit and, arguably, vital music production community in the country.

That cover also marked the launch of *Mix* Nashville, an annual event near and dear to our hearts here at *Mix*. We hold it at Soundcheck Nashville and time it each year to coincide with the Audio Masters Golf Tournament, a benefit put on by the local AES chapter to support the Nashville Engineer Relief Fund. We will be postponing *Mix* Nashville this year until September. We wanted to be there in May to support the Nashville audio community, but after weeks of due diligence, it just didn't prove feasible. But we will be back, working again with Ben Jumper and his team at Soundcheck.

In the meantime, the larger pro audio community has reached out. Marty Druckman of Network Pro Marketing, one of our sponsors, told me the day after news broke that SPL, Tone Hunter, Brauner and others in his line authorized deep discounts to Nashville residents. Sweetwater sent in \$10k to the relief effort and was negotiating discounts. GC Pro, another of our sponsors, set up a recovery plan for full packages and assistance, including emergency leasing, to private and commercial studios. The Recording Academy was in early with MusiCares relief efforts. There are tons of individual stories of assistance, from amp repair and guitar restoration, to hard drive recovery and plain old hammer-wielding. This is the music industry, the recording industry. Once the telethons are over, we get down to business and help each other out. You can bet on Nashville.



Tom Kenny
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BY DAVID SCHWARTZ, PENNY RIKER AND BILL LASKI

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CURRENT

compiled by Sarah Benzuly

NAB 2010



With more than 1,000 exhibitors, there was plenty to see at NAB (April 12-15, 2010). Choosing our Top 10 product debuts wasn't easy, but here are our *Mix* Certified Hits of NAB 2010

Euphonix's MC Control Version 2 DAW work-surface has a new 800x480-pixel LED touchscreen, four touch-sensitive faders and eight new rotary encoders for parameter control. **Fairlight's** EVO console uses Crystal Core processing and Xynergi self-labeling key technology to offer high-end power with cutting-edge affordability. **Focal's** new 5.1 system combines its affordable, new CMS 40 active monitors and CMS SUB. **Optocore's** SANE Cat-5 network system features a 1Gbit/s data rate

and supports 512 audio channels, ultra-low latency and complete signal integration on one fiber. **Prism Sound's** SADIE 6 has a new GUI design, new features and can run as a software-only version with any I/O. **RME's** mini Babyface desktop USB I/O has 10 in/12 outs, 192kHz conversion, two mic pre's, hi-Z input, ADAT or S/PDIF I/O, MIDI I/O and an FPGA-powered PC/Mac mixer with effects and M/S decoding. **Sound Device's** CL-9 Linear Fader Controller adds 100mm linear faders and rotary pots for fast gain, pan and EQ control of its 788T digital recorder. **SSL's** 16-fader version of its C10 HD digital broadcast console offers 5.1 Upmix and dialog auto-mix options, and a

\$51.7 million

Royalties from digital transmissions—including Internet radio, satellite radio and cable TV music channels—on their way to recording artists and copyright holders. The amount represents a 135-percent increase over first-quarter payments last year, and surpasses the previous record distribution by nearly \$10 million.

—Courtesy SoundExchange

DAW Control allowing for post mixing during studio dark periods. **TAC System's** NML RevCon-RR reverb-reduction plug-in lets users de-reverberate a signal with incredible results. **TC Electronic's** 6000 MKII is a retooled version of its hardware reverb/multi-effects unit, now with network and Wi-Fi control, and onboard summing.

NAB returns to Las Vegas April 10-15, 2011. To check out more new products from NAB, go to mixonline.com/nab_2010.

Get Your DAW Here

Leon Herbers' (who has worked for Steinberg and M17) DAW Plus (dawplus.com) offers full compatibility testing of software and hardware used in native DAWs. Hosts, plug-ins, DSP cards, and audio and MIDI interfaces are tested for compatibility with each new update, upgrade or change in configuration. "Throughout the years, in the various positions I occupied, one main issue has never been solved: compatibility and knowledge about [DAWs]," Herbers said. "Many studios suffer issues on a regular basis, especially when upgrading a host or operating system. We are a single source of information for many brands, advising on whether the update can be applied safely or not. This minimizes headaches and possible down time."

The company offers three levels of assistance. Personal QA is a one-time test of system specs, based on what the studio intends to use. A full report

with suggestions, issues and possible workarounds is provided. Up-Time builds on Personal QA for a full year of service, with system and components automatically tested. The final tier is an UpTime subscription: The company provides complete workstations built by XI-Machines, in which DAW Plus installs, tests and configures the software and hardware.



Left: damaged speaker. Right: fixed speaker courtesy Parts Express.

SPEAKER REPAIR ON THE GO

A distributor of speakers, Parts Express (parts-express.com) now offers on-site speaker repair and re-coning services at its warehouse (Springboro, Ohio), where the company has thousands of stocked repair parts on hand. Using the company's "Speaker Repair Lookup Wizard," users search for their speaker's manufacturer and model number to receive an instant repair estimate. Simply follow the instructions to submit a repair order, print the confirmation and shipping label, package the speaker and ship it to Parts Express. The company will take care of the rest and provide the customer with pictures of the speaker, before and after the repair.



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'Producing' a Cure

Though he suffers from ALS, bassist/engineer/producer Ned Mann was able to create his new jazz double-album, *Finding My Way Home* (www.helpnedfightals.org), doing all mixing and post duties on his computer using SmartNav, a system that gives

musical community has been truly amazing, with everyone from musicians to studios generously donating their time, talents and creativity. This project has been a true blessing for me, keeping me positive, focused and surrounded by great music. It shows that as long as one has hope, anything is possible."

Mann's brother David helped to coordinate recording sessions in New York City and then sent the digital music files to Mann for

mixing and finishing at his home base in San Diego.

Finding My Way Home CDs are available from CDBaby, and as downloads from CDBaby, iTunes, AmazonMP3 and Rhapsody. All profits from *Home* will be donated to the ALS Association.

him full control of his mouse via head movement.

"The gift of music reappearing in my life inspired me to help others," Mann said. "I produced these all-star sessions to raise funds and awareness for ALS research. The support from the



onthemove

Who: David Dubow, Firehouse Recording Studio managing director

Main Responsibilities: around-the-clock operations of the facility.

Previous Lives:

- 2007-2008, Paramount Pictures Stage M managing director
- 1991-2007, Signet Studios managing director
- 1981-1991, Studio 55 staff engineer/studio manager

The most bizarre experience I've ever had while managing a studio was...working at L.A. Sound Gallery.

If I could do any other profession, it would be...an up-scale night club/restaurant owner.

Currently in my iPod: Jimi Hendrix, The Beatles, Black Eyed Peas, Miles Davis, Sinatra/Basie, Stevie Wonder, The Eagles, Bob Marley, Prince.

When I'm not in the office, you can find me...at home hanging with my son, at the sushi bar, golf course, jammin' in Dave's Tiki Hut.



Industry News

Roland (L.A.) executive management changes: **Dennis Houlihan**, chairman of Roland Corp.; **Chris Bristol**, president/CEO; **Paul Youngblood**, VP of Boss and guitar products; and **Brian Alli**, VP of sales...**Kio Novina** is **615 Music's** (Nashville) director of licensing...New operations manager at **Northern Sound & Light** (Pittsburgh) is **Amy Parks**...New to **iZotope** (Boston) is **Alex Westner**, business development manager...**Derrick Pierce** joins **Renkus-Heinz's** (Foothill Ranch, CA) engineering staff...New sales manager for Germany and Austria at **L-Acoustics** (Marcoussis, France) is **Thomas Adt**...**DiGiCo** (Surrey, England) bolsters its UK sales team with **James Lawford**...**Ryco**'s (Stroud, UK) new sales and marketing manager is **Stefano Pucello**...New distribution deals: **NEXO** (Buena Park, CA) taps **Eakins Bernstein & Associates** (Kansas, Missouri, Iowa, Nebraska and Southern Illinois) and **Pros Inc.** (Washington, Oregon, Idaho, Montana and Alaska); **RØDE** (Silverwater, Australia) will distribute **Vicoustic's** (Portugal) products in Australia and the U.S.; **dBTechnologies** (Schlieren, Italy) names **MGM Audio AG** in Switzerland; and **EAW** (Whitinsville, MA) gear will be rep'd in Germany by **TRIOUS Vertrieb GmbH & Co.**



Studio Unknown Update

You've got a recording studio to operate, a graphic arts team to manage and a music store to run—all under the same roof! The question is: How can you set up your space to maintain efficiency and organization? This month, you'll see how studio owners who offer diversified services have designed their spaces for success and find out the lessons they've learned along the way.

Mix Master Directory Spotlight

This month's featured listing from the new online-only Mix Master Directory (directory.mixonline.com/mmd)

Crystal Clear Studios

For 30 years, Crystal Clear Studios in Dallas has offered professional recording and mastering services. The large tracking studio houses an SSL 4040 G+ console. In the mastering studio, the main processing is handled by a Neve Masterpiece. crystalclearstudios.com.

ARE YOU LISTED? MAKE SURE AT DIRECTORY [.MIXONLINE.COM/MMD](http://MIXONLINE.COM/MMD).



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LIQUID Saffire 56

Our flagship interface combines Liquid technology with Saffire PRO firewire interfacing to deliver a host of authentic pre-amp flavours, seamless software integration, a vast i/o count with excellent routing flexibility and future-proof, rock-solid driver stability.

- + Two Liquid Pre-amps, each allowing you to choose from ten classic emulations
- + Total I/O count of 28 Inputs and 28 Outputs, including 8 Focusrite pre-amps
- + Professional 24 bit / 192kHz digital conversion, with JET PLL Jitter elimination



Saffire Mix Control - powerful and intuitive software control that features throughout the PRO range.



Saffire PRO 40

The Focusrite Saffire PRO 40 has eight Focusrite mic-pres, eight line inputs, and a host of digital i/o. There are also two discrete headphone buses, a dedicated stereo output and a pair of unique 'loopback' inputs.

- + Eight Focusrite mic-pres, based on a 25-year pre-amp legacy
- + Professional 24 bit / 96kHz digital conversion, with JET PLL Jitter elimination
- + Zero-latency intuitive DSP Mixer/Router with quick one-click set-ups



Saffire PRO 24

Two Focusrite mic-pres, based on an unparalleled pre-amp legacy
With an ADAT input, Saffire PRO 24 provides a vast i/o count for the money
Xcite+ bundle features 1 gig of loops, Ableton Live 7 Lite, and more.



Saffire PRO 24 DSP

VRM - simulate different monitors and rooms, just using your headphones
Two Focusrite mic-pres, delivering extremely low noise and distortion.
Onboard DSP-powered, latency-free EQ, Compression and Reverb



Saffire 6 USB

Two Focusrite mic-pres capture every subtle nuance of your sound
Features four phono outputs and flexible monitoring for laptop DJs
The best sounding, best performing interface in its class



For further information: (310) 322 5500
www.focusrite.com/Saffire

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MY OBSESSION WITH STRANGE DRUMS

■ What the heck? Were those drums sat on by an elephant? Someone must have left that kick drum out in the rain, causing it to warp into a weird melted shape—like the cake in that old “MacArthur Park” song.

Long ago, while visiting Pro Drum Shop on Vine Street in Hollywood, a magnificent and unusual old set of drums caught my eye. The drums were so cool looking I didn't even care what they sounded like. I had to know more about them. I had to have my own Trixon kit. Not just any Trixon kit, but the largest, most elaborate kit the company made.

So my search began. I learned that Bill Haley & The Comets exclusively used Trixon drums in the 1950s as they witnessed the birth of rock 'n' roll. Buddy Rich, Louie Bellson, Gene Krupa and Keith Moon played Trixons through the '50s and '60s. Ringo Starr played a Trixon kit with The Beatles during their Hamburg gigs before he got his legendary Ludwig endorsement. These German-made drums not only came in the wild melted Speedfire shape that was so intriguing to me, but also came in strange conical shapes and were made from curious, innovative materials long before other drum makers used them. Trixon also made more traditional cylindrical-style wood drums that were imported into the States until the '70s.

Back East, I found a Trixon enthusiast who had a large Speedfire kit for sale that needed a complete restoration. We made a deal, I paid him in full and waited four freakin' years for my kit to arrive. To add to my frustration, when it finally showed up it was incomplete. However, during those four long years, I never stopped looking for the elusive Trixons. It was an obsession. And one day I found a treasure trove of Trixon kits and parts



My Trixon Speedfire kit took years to restore.

in—of all places—Tucson, Ariz.

In a darkened back room on the third floor of an ancient music shop called The Chicago Store (in downtown Tucson), I hit paydirt. I found stacks of conical and regular Trixons and two beautiful but disheveled Speedfire kits. You can imagine how my heart jumped out of my chest as the flashlight landed on those Speedfire sets, tucked away on a high shelf, untouched for at least a dozen years. I brought down the most complete kit but left the other behind for some other lucky person to find. Parts from that Chicago Store discovery were essential in completing my glorious Trixon Speedfire kit.



The treasure left behind at The Chicago Store

Bizarre and Unconventional

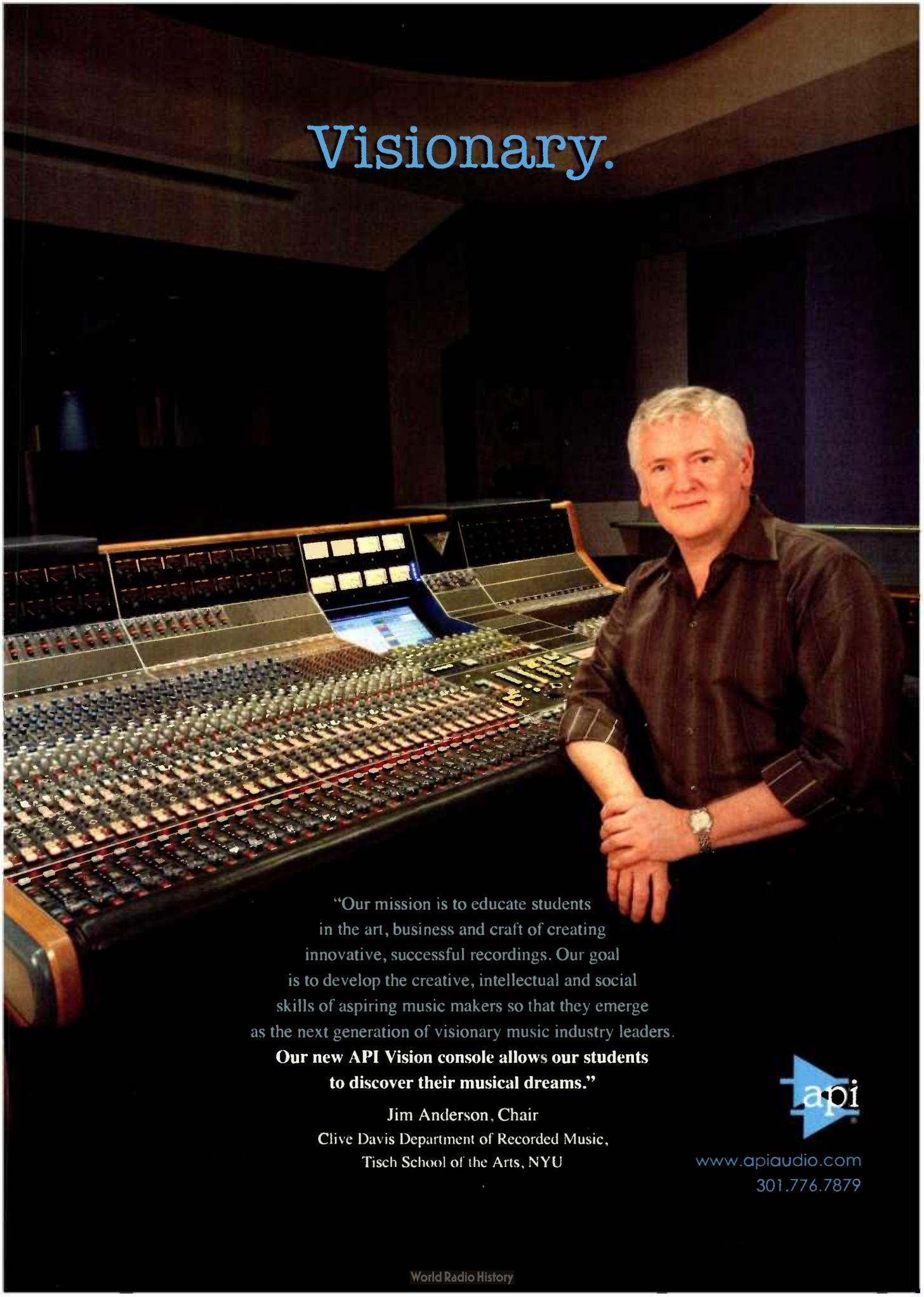
Reminiscent of a Salvador Dali sculpture, the drums are bizarre and unconventional works of art, yet their unusual shapes serve a purpose. The egg-shaped kick drum on the Speedfire model has a partition down the center of it (behind the drum head). The kick is played with two pedals, and each partitioned chamber has a different tone. The two kick drum tones can be played individually or with two feet, making the Speedfire way ahead of its time—the first double-kick drum design I know of.

My Speedfire also has a *jetsons*-style array of toms connected to the

Bill Haley and drummer Dave Holly from the Comets goofing off for the 1964 Trixon catalog



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GEAR STORIES

top of the kick drum. The toms are mounted opposite from a typical right-handed kit, with the smaller sizes running from right to left. This was done for a specific reason: Drummers who use their right foot as the dominant foot will want the larger, deeper chamber of the egg-shaped kick to be on the right side, making it necessary to mount the toms backward to accommodate the lopsided shape of the kick!

At the original factory in Hamburg, Germany, in the '50s and '60s, Karl-Heinz Weimer of Trixon made several unusual drum designs, including the early Telstar conical drums that used sound compression to create tone and power; the Jet Series in 1968 pioneered the use of Fiberglass shells; and Trixon's most recognizable Speedfire design. And for a brief period in the '60s, Trixon also imported drums into the States under the Vox name brand.

Later, Trixon was absorbed into Sonor Drums. The partners in the original Trixon company attempted to revive the brand in the late '90s but an unfortunate factory fire destroyed the original molds for the signature shapes that made Trixon drums so special. There is hope that a new Trixon company, recently organized in 2007, will pick up the banner of innovation where Weimer left off. The new Trixon maker is currently in production, building traditional-style drum kits, beautiful cocktail sets and marching band drums.

Okay, so after all of this, what does it sound like? I brought my kit down to a session at The Village Recorder in West L.A., where legend-



A smiling Jim Keltner will try anything, at least once!

ary drummer Jim Keltner (Steely Dan, John Lennon, Eric Clapton) was cutting tracks; it was a delight to have him play the Speedfire on a song. The Trixon's array of concert toms are built like bongos and their custom calfskin heads gave them a ping that's very different than modern toms. Using a pair of Neumann U87s on the overheads to record the kit and direct-miking the front of the kick with a Neumann FET U47, the drums

OH, Jim!

sang with a delicious warm and resonant vintage character.

If you're interested in learning more about Trixon drums, there are excellent reference books written by Ingo Winterberg available at www.trixondrums.de. Also, Pro Drum Shop in Hollywood does a top-notch job of making custom calfskin heads, so don't be afraid to purchase an original Trixon drum kit—they are a work of art and historic innovation! III

Sylvia Massy is the unconventional producer and engineer of artists including Tool, System of a Down, Johnny Cash, Red Hot Chili Peppers, Tom Petty and Prince. She is a member of the NARAS P&E Wing Steering Committee and Advisory Boards, and is a resident producer at RadioStar Studios in Weed, Calif.

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THE CLASS OF 2010

A COLLECTION OF SOME OF THIS YEAR'S HOTTEST NEW STUDIOS

Mix received photos of more than 40 great, new studio designs this year, but we've only got room to print a dozen here. Find our gallery of the entire "Class," and plenty of ideas for your own studio design, at www.mixonline.com.



On the Cover 9WG Studios

RICHMOND, VA.

Red Amp Audio, pictured at left, is the new studio of musician/engineer Jody Boyd, who provides music composition, recording, audio post and mixing services within the new 9WG Studios (www.9wgstudios.com) complex designed by Peter Grueneisen's nonzero|architecture and studio:bauton.

Boyd previously operated a separate studio, as did the other players in 9WC: Melanie Cox of production company Spang TV, and filmmakers/video editors Matt West and Chris Allen Williams of Mad Box Post. They all work together frequently and agreed that throwing in together would create a company greater than the sum of its parts. They located a two-story building that had enough ground-floor space for all three businesses, plus, part of the space was two stories high where a previous tenant with a photography studio had broken through the ceiling.

"We were able to plan around that being the tracking room," says Grueneisen. "After we knew that, the rest fell into place."

Grueneisen balanced the acoustics of the 25x15-foot tracking room (pictured on the cover) with angled walls, wood treatments with cotton accents, and the unique-looking custom cotton panels that are attached with strips of wood.

"The room is pretty live on one end and more absorbent on the other," Grueneisen says. "Jody is a composer and he's a hard-core musician who plays a lot of instruments himself, so acoustics were really important."

Red Amp, which is managed by 9WG co-owner Marna Bales, has two control rooms. Boyd works in the 21x16-foot 'A,' which is centered around an Avid ICON D-Control and Quedstedt surround monitoring. The Pro Tools-based 'B' studio is operated by engineer/sound designer Andrew Uvarov. All of the studios are built as rooms within rooms to isolate them from the other tenants upstairs. Some of Red Amp's national clients include Wal-mart, Genworth Financial and Capital One. Boyd also serves regional clients like the Virginia Lottery, and produces and records songwriters and bands.

"What we have now is a complete production facility under one roof, which we call 9WG Studios, even though we can and do each work independently," Boyd explains. "We were already working together a lot. It was just a matter of finding the right space and the right time to do this. When we found this building, it felt like a gift fell from the sky."



PHOTOS ANSEL OLSON

PHOTO: WES LACHOT



Clear Track Productions

CLEARWATER, FLA

Wes Lachot Design (Chapel Hill, N.C.; www.weslachot.com) created this reflection-free control room for owner Mike Johnson, incorporating a concept developed by RPG Diffusor Systems. Broadband and custom-tuned bass traps help create smooth, extended low-frequency response; rear-wall treatments are RPG Diffracts. Not pictured is a 23x25-foot tracking room, where treatments include a "diffsorber" array built by Brett Acoustics from RPG parts. Featured equipment at Clear Track, which opened this past January, includes an SSL 8056 G+ console, Dynaudio M3A mains, Pro Tools HD3 and a Yamaha C6 conservatory grand piano.

PHOTO: TERRY ALLEN



Studio 1093

ATHENS, GA

Russ Berger Design Group (Addison, Texas; www.rbdg.com) created this personal studio for producer/musician Jim Hawkins. The rooms were completed in March of this year and benefit from loads of natural northern light because a large area above a steel I-beam was opened up to support a glass block array. Acoustically, multiple-density glass-fiber core materials of varying thickness were covered with fabric for broadband absorption in the studio area. Berger says that hard diffuse upper areas form a loosely coupled space that gives the sonic impression of a larger room; the same acoustical technique was used in the glass-enclosed booth. The studio centers around Pro Tools HD, Avid D-Command console and Precision Kinetics active ribbon monitors.

PHOTO: JAY KAUFMAN



The Bridge

GLENDALE, CALIF

Just opened last month, The Bridge is a ground-up 6,000-square-foot film and TV scoring facility with room for up to 75 musicians in a 36x48x22-foot live room. The 800-square-foot control room offers a Neve VSP 96-input console, Pro Tools HD7 and HD3, ATC LCR monitors and a QSC 8-speaker surround array. Designed by Jay Kaufman & Associates (Sherman Oaks, Calif.; www.kaufmanandassociates.net), the facility features what Kaufman calls a "refinement of classic acoustical elements" and has a 0.9-second RT60.

PHOTO: DAVID COCCIN



Interscope/Universal Music

SANTA MONICA, CALIF

This studio owned by Interscope/UMG was designed by Vincent van Haaff of Waterland Design (Hollywood; waterland.com). An existing World War II-era industrial park building was retrofitted to meet current earthquake safety requirements, including installing all-new acoustically isolated foundations and a new steel structure that is hidden in the acoustical shells of the facility. The finished project, which went online in May 2009, includes an 1,800-square-foot recording studio, an adjacent private showcase stage/club, kitchen, lounge and rehearsal space. Control room equipment includes an SSL 4000 G+ Legacy, Pro Tools and Augspurger mains monitoring.

THE CLASS OF 2010

PHOTO: OSHWEEKEN PHOTO CODE



Fenix Recording Studios

VARNHEM, SWEDEN

If you've longed to record in Sweden, this gorgeous residential facility is one of the largest in Scandinavia. The control room is centered around a 72-input SSL Duality board, and is set up for stereo and 5.1 monitoring via ATC 300s and 150s. A large tracking room features flexible elements that can be moved/adjusted to alter the acoustics. The studio also offers a wide selection of analog and digital equipment, including Studer A827 and Ampex ATR-102 half-inch and quarter-inch recorders, all connected to Pro Tools via Endless Analog's CLASP. Designed by Ingemar Olsson of Audio Data Lab (Stockholm, Sweden; www.audiolab.se), Fenix went online in December 2009.



PHOTOS: MARCO RESENDES



Jukasa Studios

OHSWEKEN, ONTARIO, CANADA

Situated on the First Nations (Native American) Reserve, this facility comprises more than 2,300 square feet of audio production rooms—two control rooms, live room and three iso booths—as well as a lounge space, offices and residential facilities. The main control room includes an SSL 8072 G/G+, Pro Tools HD3 Accel, Audio Hardware K-12 surround monitors and a wide selection of outboard gear. This room features a diffusive ceiling and floating-room design. The live room has flexible acoustics with an inverted podium style and stepped ceiling array; each unit can act as either a diffusive or absorptive module. Jukasa opened in April 2009 with design/build by Marco Resendes (architecture/acoustics) and Chris Tedesco (builder/equipment consultation and installation) of Rectech Rooms (Vaughan, Ontario; www.rectechrooms.com).

PHOTO: GEORGE ROOS



OK Records

NYACK, N.Y.

Francis Manzella (Mahopac, N.Y.; www.fmdesign.com) designed a new studio for engineer/producer Greg Talenfeld (Beck, Pavement, Jon Spencer Blues Explosion), whose business had outgrown his previous studio, Waterworks (New York City). The facility, which opened in February 2010, is built into a 1912 brick warehouse and is designed to accommodate live band recording. A floating-room design incorporating visual elements of the original building was implemented to isolate the studio from a nearby firehouse. Acoustic finishes include brick, exposed wood beams and concrete, which Manzella says "create a unique blend of rugged industrial and modern high-tech." Talenfeld's equipment includes a custom Trident 24 console, Otari MTR90, Pro Tools HD Accel, vintage instruments and Genelec 1032 monitors.



Pira Studios

CORDOBA, ARGENTINA

Two offices of the John Storyk Design Group (Highland, N.Y. and Buenos Aires, Argentina; www.wsdg.com) collaborated on a redesign of Pira Studio, which has been a favorite studio among top Argentinian folk/traditional musicians for 20 years. Pictured here is Control Room A, the first room to be redesigned as part of a two-phase process. Completed in October 2009, this project was led by Storyk and Sergio Molho, who heads up WSDG's Argentina branch. Featured equipment includes Tannoy System 12 DMT II monitors, Euphonix MC Mix and MC Control, and Pro Tools Command 8.



Naughty Dog

SANTA MONICA, CALIF

Chris Pelonis (Santa Barbara, Calif.; www.pelonissound.com) designed a ground-up seven-studio complex for Naughty Dog, a subsidiary of Sony Computer Entertainment and videogame publisher of such monster titles as *Uncharted*. Pictured is a multipurpose media room, where mixing and QC evaluations take place, and titles are presented to creatives, executives and press. The studio is fitted with Pelonis' Signature PS110 7.2 surround monitoring; mix and editing equipment is brought in and tailored to suit specific needs. On the ceiling is RPG's Harmonix Difusor. RPG's Modal Edge bass traps are employed on the rear wall; low-frequency response is flat to below 15 Hz.



Red Decibel East

NASHVILLE

Multi-Platinum producer/songwriter/engineer Andy Dodd, who with his West Coast partner Adam Watts has worked with Jesse McCartney, Kelly Clarkson, Jonas Brothers and more, opened his new Red Decibel East studio in April 2010. Carl Tatz (Nashville, www.carltatzdesign.com) designed this personal facility featuring Tatz's Phantom-Focus System 4 near-field monitoring, Pro Tools HD6, Avid D-Command 24, and additional monitors from Dynaudio (BM5As) and Yamaha (HSM50). The control room acoustics use CTD Acoustic Lens side-wall treatment, and the rear wall houses a CTD Black Steel primary axial mode absorber. The tracking room has a proprietary soffited acoustic expansion ceiling implementing Auralex Space Couplers. ■



Image Resources Film & Video

WOODLAND HILLS, CALIF

After 10 years of operating in Encino, Calif., Image Resources relocated to a new audio/video post facility designed by Carl Yanchar. Included are a 40x25-foot film dub stage, an ADR and Foley stage, four video edit bays, a machine room, kitchen, offices and maintenance shop. For the ADR/Foley stage and control room, the slab was excavated and an isolation slab poured, eliminating vibration from nearby Topanga Canyon Boulevard. These rooms also have a high baffle-filled ceiling bass trap structure, corner traps and diffusion surfaces, and bamboo flooring. The mix stage has a scalloped wall and ceiling design. Equipped for feature film and TV post, Image Resources includes JBL LSR32 (ADR/Foley, control room) and 3631 ScreenArray (mix stage) monitoring, Avid Pro-Control console driving Pro Tools HD3 Accel (mix stage) and more.



Coleman Audio QS8 features three input sources.

Studio Technologies Model 69A Remote



Shadow Hills Equinox

Violet Audio ADP61



JBL MSC1 includes Room Mode Correction.



SPL 2Control is a desktop unit.



Grace Design's m904b is for use with the m904RCU remote control.

Dangerous Music Monitor ST has talkback and cue mixing.



Monitor Controllers

By George Petersen

THE MISSING LINK IN THE DAW STUDIO

Not so long ago, the product category for monitor controllers didn't exist. Back when most studios had physical mixing desks, consoles provided control room volume pots; switches for selecting multiple listening sources; speaker muting, mono and dim; and outputs for a second/third set of monitors—all essential elements of the production listening process.

Now the game has changed with some working in a hybrid production environment, in which a DAW is paired with an analog or digital console, and others working with just a computer, interface and speakers. In the former situation, these basic chores are easily accommodated with many DAW controllers and mixing worksurfaces that include master section functionality. But for those who work in a near-virtual setup, from a laptop or desktop scenario, monitor controllers can simplify their lives.

In investigating more than 60 current monitor controller offerings on the market, which are listed in the chart on the following pages, we discovered units to fit nearly every need. These range from systems featuring elaborate control room facilities and multichannel stem busing/routing to the minimalist straight-wire approach of passive-level controllers, such as those offered by A-Designs, Coleman Audio, Genelec, NHT, SM Pro Audio and TC Electronic.

Systems designed for surround production may be packaged as simple volume-only boxes or they can be rather elaborate, with stem routing, extensive LFE/bass-management processing, dialnorm support, inserts for connecting external Dolby and/or DTS encoders, or onboard encoding circuitry. In many applications, fold-down mixing is a desirable option, offering the ability to hear your 7.1/6.1/5.1 creations in LCRS or stereo with a single button-push, providing a quick reference check that gives you a real-world reflection of what may happen to your mixes as they play back in various formats in the consumer chain.

Going well beyond the scope of a basic control system, several products—including the JBL MSC1 and KRK's Ergo—have incorporated acoustical/room analysis and correction circuits into their monitor controllers. And some monitor systems, such as Dynaudio Acoustics' AIR Series, offer optional proprietary remotes that provide fingertip level/solo/mute tweaking, so your first call in researching a controller might just be with the manufacturer of your existing speakers. But whatever your requirements, with a little effort you're sure to find the right system for your studio. III

Mix executive editor George Petersen also runs a small record label at www.jenpet.com.

STUDIO MONITOR CONTROLLERS

Manufacturer	Model	Channels	Inputs	Outputs	Mute	Dim	Mono	Bass Mgmt	Style	Retail	Notes
A-Designs; www.adesignaudio.com	ATTY	stereo	analog XLR	analog XLR	yes	no	no	no	desktop	\$125	General-purpose passive line-level gain control
	ATTY2'D	5.1	analog XLR	analog XLR	yes	no	no	no	1U rack	\$585	Individual and master muting; independent controls for front/rears/center/sub
Adgil Designs; www.adgil.com	The Director	up to 7.1	analog XLR	analog XLR	yes	yes	yes	no	rack w/ remote	P.O.A.	Matrix is expandable for up to 80 source inputs; three speaker sets (multi/stereo/stereo)
Antelope Audio; www.antelopeaudio.com	Zodiac	stereo	USB, S/PDIF	analog XLR, RCA	no	no	no	no	desktop	TBA	96kHz D/A with front panel volume control; onboard headphone amp
	Zodiac+	stereo	USB, S/PDIF, AES; analog TRS, RCA	XLR, TRS; AES, S/PDIF	yes	no	yes	no	desktop	\$2,795	Three-input source switching; 192kHz DAC; analog and de-jittered digital outputs
	Zodiac Gold	stereo	USB, S/PDIF, AES; analog TRS, RCA	XLR, TRS; AES, S/PDIF	yes	no	yes	no	desktop	\$3,995	Same as Zodiac+ model, but adds 384kHz DAC, stepped attenuator and wireless remote control
API Audio; www.apiaudio.com	Model 7800	stereo	analog D25	analog D25	yes	yes	yes	no	1U rack	\$2,995	Console master module in a rack, with 2-track inputs, large/small speaker controls, talkback
Audient; www.audient.com	ASP 510	5.1	analog D25	analog D25	yes	yes	yes	yes	rack w/ remote	\$4,075	Six source switching with five formats: mono to 5.1; encoder/decoder inserts; talkback routing; reference level presets; pink-noise generator
	Centro	stereo	analog XLR, RCA; AES, S/PDIF	analog XLR; AES	yes	yes	yes	no	rack w/ remote	\$2,250	Up to 12 stereo sources—six analog, six digital (up to 192 kHz), plus talkback and cue mixing
Behringer; www.behringer.com	Minimon MON800	stereo	analog TRS, RCA	analog TRS, RCA	yes	yes	yes	no	desktop	\$75	Four input sources; controls for three sets of speakers; talkback circuit; headphone amp
Blue Sky; www.abluesky.com	BMC Mk III	5.1	analog XLR	analog XLR	yes	yes	yes	yes	rack w/ remote	\$1,195	Input soloing; ±3dB film surround offset; calibrated level preset; LFE muting switch
Coleman Audio; www.colemanaudio.com	SR7.1	up to 7.1	analog D25	analog D25	yes	no	yes	no	1U rack	\$1,550	Fold-down switching from surround to stereo/mono; unit can double as a passive summing box
	SR5.1 Mk II	5.1	analog XLR, TRS	analog XLR, TRS	yes	no	yes	no	1U rack	\$1,125	Fold-down switching to stereo or mono; stepped attenuator
	M3PH MKII	stereo	analog XLR	analog XLR	yes	no	yes	no	1U rack	\$1,025	Four balanced stereo inputs; headphone amp; stepped attenuator; talkback; stereo cue I/O
	TB4 MKII	stereo	analog XLR	analog XLR	yes	no	no	yes	1U rack	\$1,190	Similar to M3PH model but adds input/routing for its talkback mic and stereo cue I/Os
	CMC4	stereo	analog XLR	analog XLR	yes	no	no	no	1U rack	\$700	Four stereo inputs; subwoofer balance control; fixed level out for meters or cue system
	QS8	stereo	analog XLR	analog XLR	no	no	no	no	1U rack	\$1,475	Three input sources; main/alt speakers select; talkback; summing with four stereo stems
	MS2P	stereo	analog XLR	analog XLR	yes	no	no	no	2U rack	\$1,000	Seven stereo inputs; stepped attenuator; VU meters
Crane Song; www.cranesong.com	Avocet	stereo	AES, S/PDIF; analog XLR	analog XLR	yes	yes	no	no	rack w/ remote	\$2,800	Onboard D/A; select from three digital or three analog sources; headphone monitoring; talkback
	Avocet Surround	5.1	AES, S/PDIF; analog XLR	analog XLR	yes	yes	no	no	rack w/ remote	\$6,400	Surround version; onboard D/A; select from three digital or three analog sources; talkback circuit
DACS; www.dacs-audio.com	HeadMaster	stereo	analog XLR, RCA; AES, S/PDIF	TRS	no	no	no	no	1U rack	\$1,668	Four inputs; two sets of TRS monitor outputs; onboard Crookwood D/A conversion; headphone amp; fixed-level XLR outs for meters or recorders
	EightCH	up to 7.1	analog TRS	analog TRS	no	no	no	no	1U rack	\$1,098	Single input/output unit with volume control via THAT 2181A VCAs; ±6dB trims on each input
Dangerous Music; www.dangerousmusic.com	D-Box	stereo	AES; analog XLR, D25	analog XLR	no	no	yes	no	1U rack	\$1,679	Three source (analog/digital) monitor switching; main/alt speaker outs; talkback; stereo summing from 8-channel D25 analog input
	Dangerous Monitor	stereo	AES; analog XLR	analog XLR	yes	yes	yes	no	2U rack	\$4,319	Three analog input pairs; four digital input pairs; onboard D/A converter; stepped attenuator, analog and digital meter feeds
	Dangerous Monitor ST	stereo	analog XLR, D25	analog XLR, D25	yes	yes	yes	yes	rack w/ remote	\$2,279	Four input sources; three speaker outs; 40W headphone amp; talkback and cue mixing; options include A.S.S. source switching (\$239) and a \$1,139 D/A module
	Dangerous Monitor SR	5.1	analog D25	analog D25	yes	yes	yes	yes	1U rack	\$1,679	Surround add-on option for ST owners—adds full 5.1 functionality and additional I/Os
Genelec; www.genelec.com	9000A	stereo	analog stereo miniplug	analog stereo miniplug	no	no	no	no	desktop	\$99	Passive stereo unit for laptops or soundcards with 1/8-inch stereo output jacks
Grace Design; www.gracedesign.com	m904	stereo	AES, S/PDIF, ADAT; analog XLR, RCA	AES, S/PDIF; analog XLR	yes	yes	yes	no	2U rack; remote opt.	\$2,495	Optional remote duplicates all controls on mainframe unit; onboard 192kHz DAC; word clock sync; headphone amp; cue routing; talkback
Grace Design	m904b	stereo	AES, S/PDIF, ADAT; analog XLR, RCA	AES, S/PDIF; analog XLR	yes	yes	yes	no	rack w/ remote	\$2,995	Same as m904, but for use with m904RCU remote control; rack unit has blank panel
Grace Design	m906	5.1	analog D25, RCA, XLR; AES, S/PDIF, ADAT	analog D25, XLR	yes	yes	yes	no	rack w/ remote	\$5,995	192kHz DAC; word clock sync; headphone amp; cue routing; talkback; controls three monitors—two 5.1 or up to three stereo
JBL; www.jblpro.com	MSC1	stereo	analog TRS, RCA	analog TRS	yes	no	no	yes	desktop	\$375	Includes Room Mode Correction with measurement mic; three source/two sets of speakers; Control Center Software for tunes monitor EQ, alignment delay, bass-management
Klein+Hummel; www.klein-hummel.com	Pro M 1012	up to 7.1	analog XLR	analog XLR	yes	yes	yes	yes	rack w/ remote	\$8,038	10-in/12-out routing matrix; stores multiple I/O combinations; configurable downmixing; includes wireless remote; desktop remote optional
KRK; www.krksys.com	Ergo	stereo	S/PDIF; analog TRS	analog TRS	no	no	no	no	desktop	\$799	Two speaker sets; headphone amp; includes calibrated mic for room correction; software requires Mac/PC FireWire connection for analysis/correction procedure

STUDIO MONITOR CONTROLLERS

Manufacturer	Model	Channels	Inputs	Outputs	Mute	Dim	Mono	Bass Mgmt	Style	Retail	Notes
Mackie; www.mackie.com	Big Knob	stereo	analog TRS, RIAA, RCA	analog TRS	yes	yes	yes	no	desktop	\$389	Four source inputs (including phono preamp); three speaker pair switching; cue send output; talkback mic; headphone amp
Martinsound; www.martinsound.com	MonitorMAX	stereo	analog D25, RCA	analog D25	yes	yes	yes	no	rack w/ remote	\$1,995	Two monitor paths with selection of up to 10 stereo sources, talkback, cue sends and user-defined configurations; many available options
	MultiMAX EXR	up to 7.1	analog D25	analog D25	yes	yes	yes	yes	rack w/ remote	\$3,195	16 speaker outs with trims; built-in noise generator; insertable LFE filter; talkback, cue sends; user-defined configurations; many available options
	MultiMAX EX	up to 7.1	analog D25	analog D25	yes	yes	yes	yes	1U rack	\$2,995	Same as MultiMAX EXR, but with controls on front panel of rack
Neyrinck; www.neyrinck.com	V-Mon	up to 7.1	Pro Tools hardware	Pro Tools hardware	yes	yes	yes	no	software; remote opt.	\$1,495	TDM plug-in for Win/Mac Pro Tools HD; adds talkback routing, up to 10 5.1 stem mixing, downmixing, speaker calibration, monitor control; optional remote is \$1,795
NHT; www.nhthifi.com	PVC-PC	stereo	analog 1/8", RCA	analog 1/8", RCA	no	no	no	no	desktop	\$150	Passive Volume Control
	PVC-Pro	stereo	analog XLR	analog XLR	no	no	no	no	desktop	\$170	Pro version of PVC with XLR I/Os
PreSonus; www.presonus.com	Central Station	stereo	S/PDIF; analog TRS, RCA	analog TRS	yes	yes	yes	no	1U rack; remote opt.	\$699	Five inputs/three outputs; active and passive speaker controls; includes talkback, headphone amp, cue mix and 192kHz D/A; optional remote is \$199
	Monitor Station	stereo	analog TRS, RCA	analog TRS	yes	yes	yes	no	desktop	\$369	Three source inputs and RIAA input; controls three sets of speakers; talkback and cue circuits; four headphone outs with individual gain
Samson; www.samson-tech.com	C-Control	stereo	analog TRS, RCA	analog TRS, RCA	yes	yes	yes	no	desktop	\$159	Four input sources; three speaker outputs; talkback circuit; headphone amp
Shadow Hills Audio; www.shadowhillsindustries.com	The Equinox	stereo	analog D25, XLR	analog XLR	no	yes	yes	no	2U rack	\$4,795	Four input sources; three speaker sets; talkback; summing; two Shadow Hills GAMA mic pre's
SM Pro Audio; www.smpaudio.com	MPATCH 5.1	5.1	analog D25, RCA, TRS	analog D25, XLR, TRS	yes	yes	yes	no	desktop	TBA	Two stereo and one 5.1 input; individual channel mutes and sum-to-mono
	MPATCH 2.1	stereo	analog XLR, TRS, 1/8"	analog XLR	yes	yes	yes	yes	desktop	\$249	Stereo controller with subwoofer output integration; two balanced and two aux inputs
	Nano Patch+	stereo	analog XLR, TRS, 1/8"	analog TRS, 1/8"	yes	no	no	no	desktop	\$69	Stereo in/out controller; available in black or silver
	MPATCH 2	stereo	analog XLR, TRS, 1/8"	analog XLR	yes	no	yes	no	desktop	\$199	Stereo controller; two switchable input sources; headphone amplifier
Sonifex; www.sonifex.com	RM-MC1L	stereo	analog XLR	analog XLR	yes	yes	no	no	1U rack	\$985	Controls single set of speakers; user adjustable Dim control; switches for remote control of tally lights for broadcast work
	RM-MC4L	stereo	analog XLR	analog XLR	yes	yes	no	no	1U rack	\$1,066	Same as RM-MC4L but adds switches for four stereo sources
	RM-MC5L	5.1	analog XLR	analog XLR	yes	yes	no	no	1U rack	\$1,370	Surround version of RM-MC1L controls single set of speakers from single source
SPL; www.spl-usa.com	2Control	stereo	analog XLR	analog XLR, TRS	no	yes	yes	no	desktop	\$699	Two stereo inputs; three speaker sets; mono output for subwoofer; two headphone amps
	MTC 2381	stereo	analog TRS, RCA	analog XLR, TRS	no	yes	yes	no	desktop	\$1,069	Six source inputs; three speaker pairs; talkback; headphone amp; three cue mix sends
SPL	SMC 2489	5.1	analog D25, RCA	analog TRS	yes	yes	yes	no	desktop	\$979	Two surround and two stereo sources; single set of surround and stereo speakers; D25 slave output routes directly to recorder
	Volume2	stereo	analog XLR	Analog XLR	yes	no	no	no	desktop	\$489	Minimalist design with single set of stereo I/Os
	Volume8	up to 7.1	analog D25	analog D25	yes	no	no	no	desktop	\$649	Single input/output design handles LCRS, 5.1, 6.1 or 7.1 surround format
Studio Technologies; www.studio-tech.com	StudioComm 78/79	up to 7.1	analog D25	analog D25	yes	yes	yes	yes	rack w/ remote	\$2,799	Routes two 7.1 sources to 7.1 monitors; downmix monitoring to 5.1/LCRS/ stereo/mono; software-configurable parameters for customization
	StudioComm 76D/77	5.1	AES	AES on D25	yes	yes	yes	optional	rack w/ remote	\$3,800	Digital I/O unit routes two 5.1 and three stereo sources; configurable input-to-output delay syncs audio to video; 5.1 to stereo downmix
	StudioComm 76DB/77B	5.1	AES	AES on D25	yes	yes	yes	optional	rack w/ remote	\$4,900	All digital I/O; two 5.1 and three stereo inputs with downmix; Dolby E dialnorm support
	StudioComm 76/77	5.1	AES	analog D25	yes	yes	yes	optional	rack w/ remote	\$3,200	Digital in/analog out with two 5.1 and three stereo sources; downmix to stereo or mono
	StudioComm 76B/77B	5.1	AES	analog D25	yes	yes	yes	optional	rack w/ remote	\$4,200	Digital in/analog out with two 5.1 and three stereo sources; downmix to stereo/mono; Dolby E dialnorm support
	StudioComm 68A/69A	5.1	analog D25	analog D25	yes	yes	yes	optional	rack w/ remote	\$1,799	Two 5.1 inputs and two stereo sources to 5.1 or stereo; downmix to stereo or mono
	StudioComm 74/75	5.1	analog D25	analog D25	yes	yes	yes	optional	rack w/ remote	\$2,299	Two 5.1 inputs and two stereo sources to two sets of 5.1 or stereo; downmix to stereo or mono; talkback output
	StudioComm 55/56	stereo	analog TRS	analog TRS	yes	yes	yes	optional	rack w/ remote	\$1,299	Routes four stereo sources to stereo; dub (copy) output and stereo feed to meters; talkback
TC Electronic; www.tcelectronic.com	BMC-2	stereo	S/PDIF, ADAT, AES3	analog XLR; S/PDIF, AES3	yes	yes	yes	no	desktop	\$349	Three digital source inputs; headphone amp; uses same jitter reduction as TC System 6000
	Level Pilot	stereo	analog XLR	analog XLR	no	no	no	no	desktop	\$95	Basic stereo level with XLR in/outs
Violet Audio; www.violetaudio.com	ADP61	up to 6.1	analog D25, RCA, XLR; AES, S/PDIF, AC3 optical	analog XLR	yes	yes	yes	yes	rack w/ remote	\$1,499	Onboard Dolby Digital and DTS decoding; seven analog audio inputs; eight video inputs; tone controls; pink-noise generator; headphone out
Violet Audio	MV71	up to 7.1	analog XLR, RCA	analog XLR, RCA	yes	yes	yes	yes	rack w/ remote	\$1,999	Total of 24 inputs/12 outputs; all-analog pathway; wired and wireless remotes included



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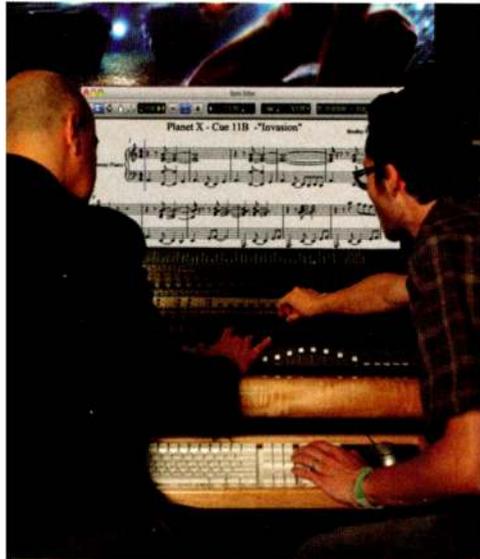
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music



Damian Marley (left) and Nas in Henson Recording Studios (L.A.)

By Blair Jackson

Damian Marley and Nas

REGGAE AND HIP-HOP MEET ON 'DISTANT RELATIVES'

If you are surprised that Damian Marley—youngest son of reggae legend Bob Marley—would collaborate on an entire album with New York rap royalty Nas, then you probably haven't been keeping up with the ever-shifting musical adventures of the many Marley siblings. While *all* of the Marley children who became musicians honor their late father's legacy—incorporating his songs into their performances and frequently working together on various “family” projects and tours that inevitably draw on Bob Marley's strong influence—they have also worked hard

to carve out individual musical identities; none more so than Damian (aka, “Jr. Gong”), who was just two years old when his father died of cancer in 1981. On his groundbreaking and very successful 2005 album, *Welcome to Jamrock*, Damian Marley brilliantly fused hip-hop, dancehall, R&B and reggae in fascinating ways. That project was awarded two Grammys: Best Reggae Album (his second in that category) and Best Urban/Alternative Performance for the title song. That album also marked the first time Marley and Nas worked together (on the song “Road to

Zion”), and that laid the groundwork for their eclectic new album as a duo, *Distant Relatives*.

And this truly is a collaboration: Both were involved in the writing of all 14 songs on the album, and each's imprint is very strong throughout. That said, Marley, who produced all but two tracks that were helmed by his older brother Stephen Marley, had a greater hand in shaping the music on the album, and the core band—drummer Courtney Diedrick, bassist Shiah Core and keyboardist Phillip “Winter” James—is his. A number of high-pro-

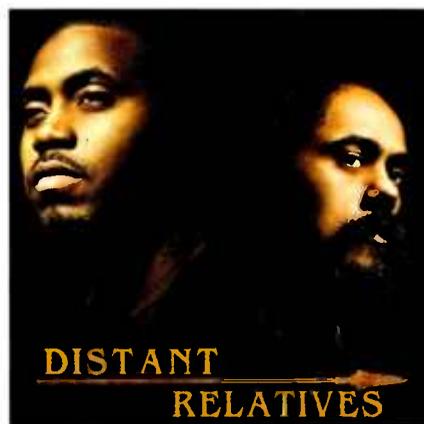
file guests also appear, including Stephen Marley, Somali rapper K'Naan, the ubiquitous Lil' Wayne and veteran reggae singer (and occasional hip-hop collaborator) Junior Reid. Snippets of reggae pioneer Dennis Brown, who died in 1999, also appear prominently on a modern reworking of his classic tune "The Promised Land."

There's a strong social consciousness flowing through the raps on this album—Nas brings "street" with him wherever he goes, and Damian Marley, like all Marleys, is a committed advocate of the poor and the oppressed—but there is also a unifying concept to the project, Marley notes: "There's an African theme throughout the album, whether it be lyrically or musically," he says by phone from L.A., where the album was being mastered. "Some of the songs use samples from African music, and the riddims of some of the beats are reminiscent of African music, which was something new for Nas to rhyme over."

Indeed, the first track Marley and Nas worked on (along with K'Naan) at Henson Studios in Hollywood was a tune called "Africa Must Wake Up." At that point, Marley and Nas believed they were just working on an EP, but

then over the course of the next year-plus, it developed into a full-blown album that was recorded at Henson and several studios in Miami (where Marley lives), including Hit Factory/Criteria, Circle House and the Marleys' Lion's Den studio. Tim Harkins (Korn, Spinal Tap) did the bulk of the engineering in L.A. and Hit Factory, while Marc Lee (Akon, The Game, Damian and Stephen Marley) handled most of the other Miami sessions. It was mixed at Circle House by longtime Marley family associate James "Bon-zai" Caniso (Nas, Madonna, Mary J. Blige).

"When we started in [Henson Studio] D," Harkins recalls, "I had them set up with the drums, and the bass was just a DI and then Winter, who's the keyboard player, had a piano in the iso booth, and then a Rhodes, a clav and a Wurlitzer, and they'd loosely structure out these songs and go out there and do these jams for three or four hours. Winter would throw out these ideas, and if something would catch on like a chorus, they'd work on that idea for a while. We also had a percussionist, Leon [Mobley]. Then we'd go back and listen to the ideas and Damian would pick out which ones he thought might bear fruit. But he'd be in a booth, freestyle singing; he'd come up with a lot of the



choruses right there on the spot. I would make a CD for Damian at the end of the night so he could listen to them overnight. There were so many ideas.

"Nas would usually come in later on in the second half of the day," Harkins continues, "or there would be times he'd come in early and write to what was done the night before—he'd sort of sit there and go over ideas alone and with Damian."

"Sometimes it might start with a hook and that would inspire somebody to do a verse or whatever the case may be," Marley says. "There



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are some songs where he would do his verse first and his verse inspired my verses, or vice versa. But we did it together. It was all very natural, very organic. Musically, we went toward whatever anyone was gravitating toward. What Nas was loving, what I was loving—that's where we went."

"If there was a [musical] idea everyone liked," says Harkins, "they would work it out more—doing tempo adjustments or whatever—and then go back and record it in a more finished structure."

There were also songs, like kickoff track "As We Enter," "that started with a sample of an Ethiopian musician and that is the majority of the beat on there," Marley says. "Then I put drum machine drums on top of the sample, our bass player came in and put a line over the beat, then the keyboardist did the same and we built it that way." There are songs that feature samples, loops, drum machine and live drums, and even one—"Dispear"—where Marley wanted the live drums to *sound* like a drum machine. In that case, Harkins says, "We did a lot of experimenting by cutting out the room mics for the drums and isolating and gating them to get it to sound like a drum machine. It was pretty cool because it made it like a nice engine that really propels the song. We went crazy on that song. There are horn overdubs, all sorts of things."

The overdubbing process went on for many months, in L.A. and Miami, as the tracks grew to accommodate more musical ideas and experimentation. In fact, by the time the finished Pro Tools sessions were ready to be mixed by "Bon-zai" Caruso on the SSL G Plus series at Circle House (after some initial work at Hit Factory), a couple of songs had accumulated more than 100 tracks—the most was around 140, for "The Strong Will Continue." And how many did he end up with after he sorted through the mass of tracks? "Oh, about 138," Caruso says with a laugh. "No, it was probably in the 120s. Sometimes I'll consolidate things down or bounce down. On that session, I was probably using 70 to 80 faders. It was like a four-day mix."

"It was insane," Harkins comments of the plethora of tracks on several tunes. "There were a lot of vocals and a lot of tripling of things. They would get in there and get into these grooves and they'd ask me to keep adding tracks; we'd do this and we'd do that—'Let's try it.' For some of the horn things, Damian brought in two players and it ended up being 12 tracks of just horns, and then there's all kinds of stuff on top of that and lots of percussion, too."

Keep in mind, too, that along with scads of natural instruments there's also a healthy dose

of hip-hop electronics, effects and atmospherics. Caruso notes, "It definitely has both the heaviness and the impact of the hip-hop realm and the feel and the timing of the reggae vibe, which comes down mostly to choices I make with delays—triplets and dotted delays as opposed to straight quarter notes and eighth-note delays. And all the great filtering effects that we use, too. I like the old analog delays. I use a lot of the old PCM 42s. But I'm also a huge fan of Echo Farm—I almost can't do a mix without Echo Farm, which has one of the best analog-sounding filter-y delays. Sound Toys is another one I use a lot. Then there's the old AMS

delay and DMX, so it's a blend of the old school and the new."

"We tried to approach things track by track in a really organic way," Marley says. "Whatever felt good and whatever sounded good. We didn't sit there, and say, 'Well, this is a hip-hop sound and this is a reggae sound.' Old-school reggae—orthodox reggae—is a lot of live stuff, but with dancehall, and all that's going on now it's very much synthesized and programmed and all that stuff, so we were dealing with these different textures of sounds and different approaches in terms of recording." III

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Dierks Bentley

BLUEGRASS ON THE EDGE

By Barbara Schultz

Country singer/songwriter Dierks Bentley's fifth album comes as a wonderful surprise. Whereas his previous records offer an appealing, modern take on classic country (like Waylon or Merle, only shinier), *Up on the Ridge* digs deeper. This time, Bentley and a stellar cast of bluegrass musicians and guest vocalists have really bent their roots, adding drums, vocal effects and an aggressive approach to old-time music.

Tracking for *Up on the Ridge* traveled a path from Nashville to New York and back. The earliest sessions took place in fall of '09 in Blackbird Studio D, where Bentley and producer/musician Jon Randall Stewart gathered some of Music City's finest musicians: Bryan Sutton, guitar; Sam Bush, mandolin; Rob Ickes, fiddle/harmony vocals; Stewart, guitars/harmony vocals; Glen Worf, bass; and John Gardner, drums.

At Blackbird, Stewart and engineer Gary Paczosa captured songs such as Kris Kristofferson's "Bottle to the Bottom" (to which Kristofferson would later add his own vocal) and Buddy and Julie Miller's "Love Grows Wild."

"Jon Randall Stewart has made records as a producer; he's an artist, he's been in Emmylou [Harris] band, and he's been on all sides of country and bluegrass," Paczosa says. "He's a great musician, so especially when it comes to harmony vocals he has great ideas and is always ready to experiment. On that session, we probably had six guys on the floor, so most everything on those tracks was cut live. On all three of these session dates, I kept everybody closer together without much isolation. I tried to get more interaction be-

tween the musicians and more room sound."

Paczosa recorded everything to Pro Tools. He says that because he'd worked with Bentley before on a Stringbusters release, he went in with a sense of how best to capture Bentley's vocals: a BLUE Bottle mic with the B6 capsule into a Mastering Lab preamp using a GML EQ. "Most of the keeper vocals came after the band sessions, but we used probably 30 percent of what he sang live. We made sure to always have a great signal path on him."

Paczosa also made it his practice to put up a stereo pair of room mics—usually ribbons, whatever he felt suited the song—a good stereo pair and what he calls a "character mic" on each instrument: "There was always something that was funky. That was part of how we were able to get things to sound edgier later in the mix: by compressing and really tweaking whatever garbage mic I had up. Some of these were microphones from my kids' toys—karaoke stuff, whatever."

The project took a month-long break before moving on to Brooklyn Recording, where Bentley recorded with contemporary bluegrass band the Punch Brothers. "That session was cut with everybody live in one room, except I isolated the bass," Paczosa says. "I had them lined up in the same configuration they use onstage, with Chris Thile [mandolin/vocals] in the middle. We definitely wanted to catch them live. There's drawbacks to that with leakage because they stand so close together, but the energy we got was worth it."

One of the most surprising song choices on the album was made with the Punch Brothers: U2's "Pride." "[Dierks] always wanted Del Mc-

Coury on 'Pride.' That was actually the first song he thought about for this record. Dierks had just always heard this as a great bluegrass song, but knew that it had to be Del up high."

Three days of tracking in Brooklyn were followed by another month's gap to accommodate Bentley's touring schedule and other projects. Then another set of songs were cut in Nashville at Sound Emporium, where multi-instrumentalist Tim O'Brien and fiddle player Stuart Duncan joined the "band." This final group of recordings included the title track, "Up on the Ridge," which features backing vocals by Alison Krauss.

"On that song, the character mic was a Copperphone, which is a really radio-sounding mic, very nasally; it's a real effect. That mic sounds great with the Vintech X73 and compressed with the Sta-Level Retro compressor."

Paczosa says that by the time the project got to Sound Emporium, the full idea of how this album would be different from straight-ahead bluegrass was well-developed. "You always try to make these things happen on the floor," he says. "You don't want to lean on the mix, but some of those tracks did get more aggressive with more overdubs, like 'Up on the Ridge,' especially with that slight mandolin part that completely changed the tone of that track. Everything had to get meaner. A couple of the tracks were a little sweeter when we started out, and the drummer played with brushes, but by the time we loaded on more overdubs and vocals, the tracks took on a more aggressive tone, so at that point you might be wishing you recorded with sticks."

Paczosa did overdub some kick drum parts, as well as additional strings. Also added were the guest vocal parts by Kristofferson and Krauss, plus others by Miranda Lambert and Jamey Johnson ("Bad Angel"), Vince Gill ("Fiddlin' Around") and Sonya Isaacs ("Down in the Mine").

Paczosa mixed the album in his personal studio, Minutiae (Nashville), where he dumped all of the Pro Tools tracks into Nuendo. "I've also got the Yamaha DM2000," he says. "I would say I mix half in the box and half outside the box. I definitely try to get some analog flavor; my two mix inserts are the Manley Vari-Mu [compressor/limiter] and then I've got a custom NTI EQ that's just the air band. I try not to compress too much; I'm just looking for some analog smear. Plus, I master with Doug Sax, and his chain is just a beautiful signal path.

"I would say that the sound of the album follows the tone and the character of Dierks' voice. Since he's the centerpiece of each song, and he sounds gritty and gravelly for a lot of these songs, you have to shape your other instruments around that." III

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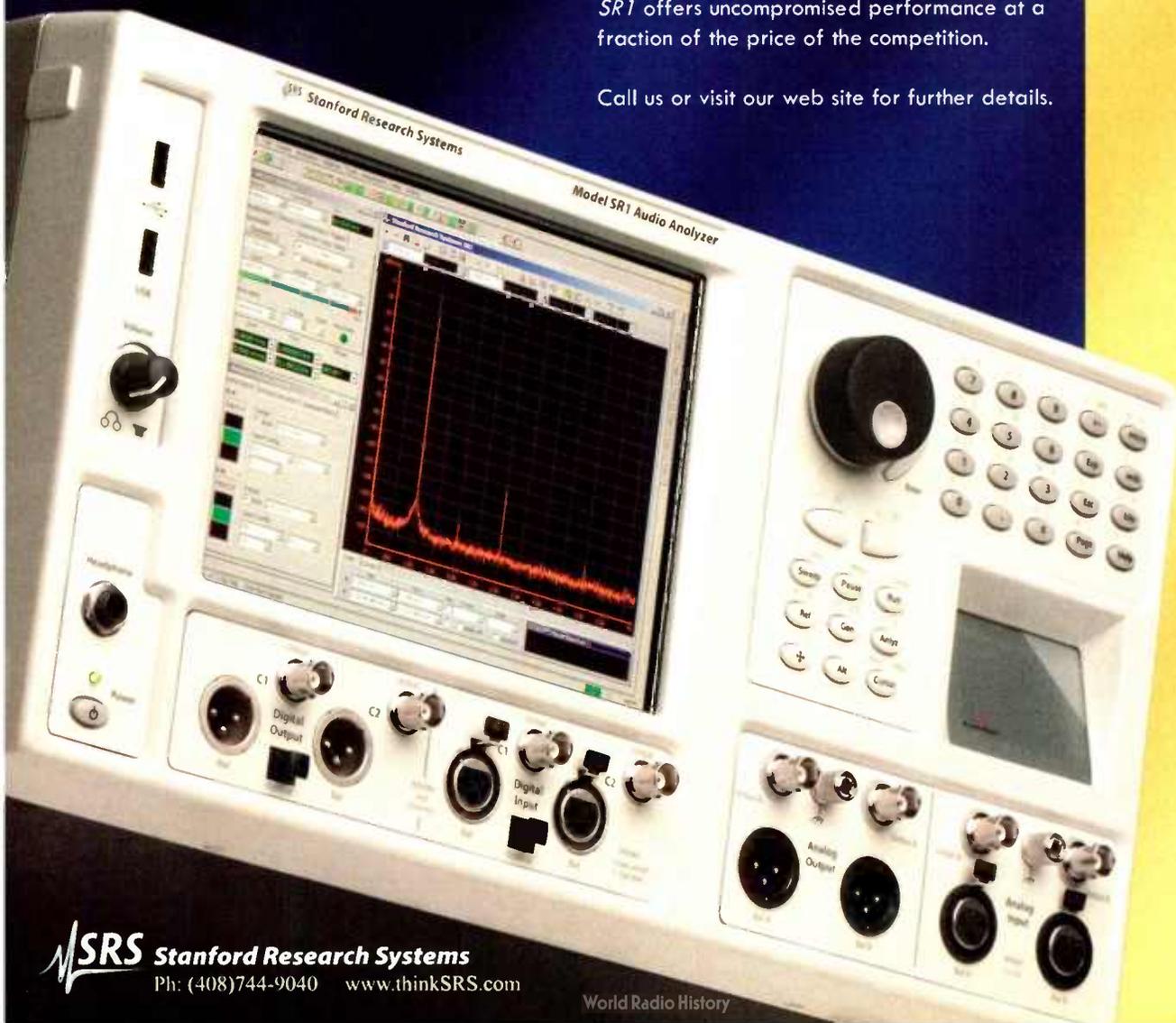
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SESSIONS

Trombone Shorty—Jazz Meets Funk on 'Backatown'

Troy "Trombone Shorty" Andrews opens his album *Backatown* with the original instrumental "Hurricane Season": It's a wild ride as lines blur between up-tempo jazz, funk, R&B. This record has all the full joy of a big jazz-band recording, but with funk and hip-hop beats, and electric guitars. It's also the first solo release from Trombone Shorty, and the first solo production credit for Ben Ellman, whose main gig is playing sax and harmonica in jazz/funk/fusion band Galactic. He and his bandmates have a project studio, Number C, and that's where *Backatown* was recorded.

"We had a spot before [Hurricane] Katrina that lost its roof and the building had to be torn down," Ellman says. "We found this spot after that, and it was already built out as a studio. It had a drop ceiling, a separate control room, a nice big recording room and a few smaller iso rooms, as well as other spaces like staircases and bathrooms that sound good if you put a mic in them."

Ellman says he and Andrews first brought Andrews' touring band into the studio and recorded a few dozen songs: "The drums were in the main room, and we have a couple of iso rooms where I keep the amps—the bass is direct and the guitar amp is isolated—and Troy was up in the control room [which overlooks the tracking room], doing either a scratch trumpet take or a vocal take. Then we picked the best songs we wanted to work on."

Ellman and Andrews then began experimenting with arrangements, de-

veloping all of the tracks, part by part, and re-recording individual bandmembers to Pro Tools LE to build the final tracks.

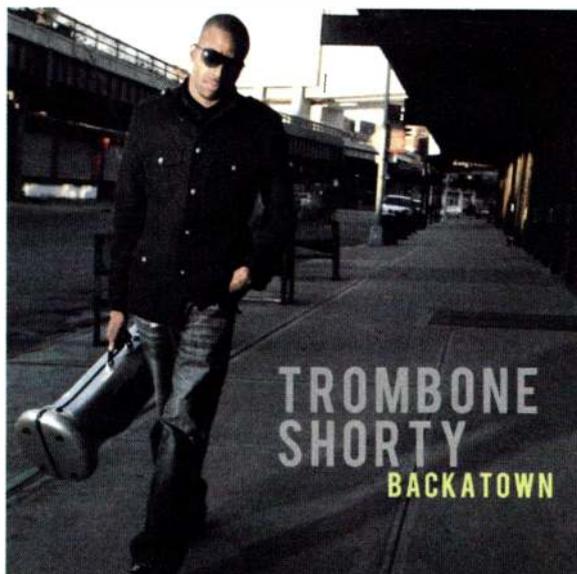
"The process I like to use—and I do the same with Galactic—is to build [tracks] and layer them in Pro Tools, and that became a lot of the writing process," Ellman says. "Then we would, for example, have his drummer replay stuff so it would have a more organic feel, and his guitar player, of course. Some things we didn't necessarily want a super-organic feel, and other things we definitely did."

The centerpiece of the album is Andrews and the horn section. Ellman explains his horn-miking technique: "If it's just Troy, we have an [AKG] C12 mic that I would put on him in the middle of our room. When his horn section would come in, I would set up sort of a 'T' with our gobos, and have them all in the same room playing together. In those cases, a close mic [on each player] and some [Schoeps condensers] overhead is what I'm usually going for so we have closeness and we have some room sound

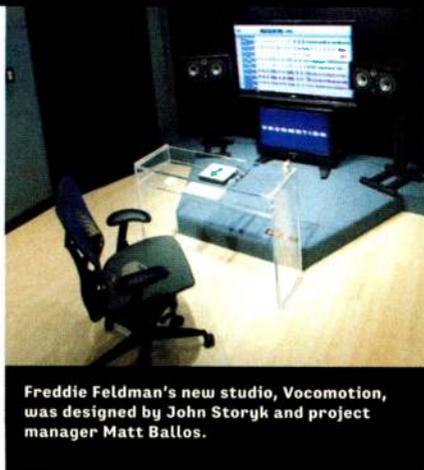
that we could dial in if we need more of that."

The album was mixed by the engineer known simply as Count, whose San Francisco-based studio is called Studio Chocula. Ellman, who still considers himself more a musician than a technical producer, says, "It was a very beautiful and comforting safety net that I had a really great mixer behind me."

—Barbara Schultz



studio profile **Vocomotion**



Freddie Feldman's new studio, Vocomotion, was designed by John Storyk and project manager Matt Ballos.

While other engineer/studio owners live by the mantra "diversify or die," Freddie Feldman has confined his career to a very specialized niche: a cappella recording. Feldman has been singing in a cappella groups since high school. While he was at Northwestern University pursuing a double-degree in vocal music and computer engineering, he sang in collegiate cappella groups including Five O'Clock Shadow and Purple Haze. When he learned how to use a roommate's Pro Tools rig, his artistic and technical interests melded together.

Feldman operated two other studios for a total of 10 years before opening his new facility, Vocomotion (Skokie, Ill.), which went online in April

2009 and was designed by the Walters-Storyk Design Group. Feldman says his is the first all-a cappella studio that WSDG has designed, but as an experienced owner/operator, Feldman knew just what he wanted.

"I told them when we started, I'm building this a cappella studio. It's basically like a voice-over studio. I needed a small booth, but I wanted the booth to be big enough for more than one person. When you're tracking a cappella, the modern style of doing it is overdubs—one person at a time. You want control over every single voice, but occasionally you want to do a small group of people hand-clapping or group shouts. So we built an 8x8 booth

Brubeck Works on New Projects At Unity Gain

Pianist, composer and jazz icon Dave Brubeck worked on his two most recent album projects at Unity Gain Recording Studio (Fort Myers, Fla.) with producer Russell Gloyd and chief engineer Antho-

corded the Bechstein using eight mics, "implementing variations of Blumlein and spaced-pair techniques," he says, and using a Soundtracs console's preamps with a Manley SLAM! mic pre/limiter. "I recorded it direct to disk [using] no EQ. I believe the room contributed to my success. I used a Mac Pro 8-core 2.93 [GHz] running Digital Performer Version 7.1." In mixing the eight mic sources, Iannucci "found a blend that worked consistently for a majority of the songs. For mastering, I used the Waves Mercury Pack."

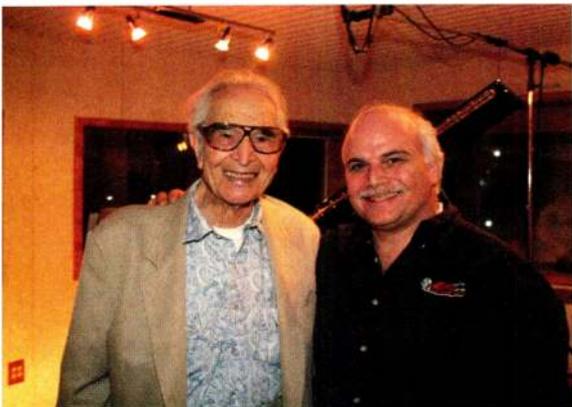
As for Brubeck, Iannucci says, "He is absolutely the most amazing piano player I ever recorded. I asked him how long he's been playing; he said, 'Since I was 4 [years old],' and then realized out loud, 'That's 85 years I've been playing!'"

Learn more about Iannucci's piano-recording techniques for the Brubeck sessions at mixonline.com.

—Matt Gallagher

ny Iannucci. In January, New York-based jazz vocalist Hilary Kole recorded two songs with Brubeck in Studio A for Kole's new album, *You Are There*. Brubeck and Gloyd then returned to Studio A in early March to work on a solo piano project, recording more than 30 songs for a potential new release.

For both projects, Brubeck played a C. Bechstein grand piano. Iannucci re-



Dave Brubeck (left) with Unity Gain Recording Studio chief engineer Anthony Iannucci

Kuk Harrell Thrives in L.A.'s Boom Boom Room

Atlanta-based songwriter and vocal producer Thaddis "Kuk" Harrell—who shared in two 2010 Grammy Awards with his partners Christopher "Tricky" Stewart and Terius "The Dream" Nash for their work on Beyoncé Knowles' hit single "Single Ladies (Put a Ring on It)"—has recently felt at home in Los Angeles working in the Boom Boom Room. "Katy Perry, Justin Bieber and Jennifer Lopez are the three most recent projects I've worked on over the course of 60 days," Harrell says. "The Boom Boom Room gives me the ability to just lock down and be in my own environment rather than move from room to room in Los Angeles. The vocal booth has a nice, tight, closed-in sound. It's small and comfortable for the artist, but not too small."

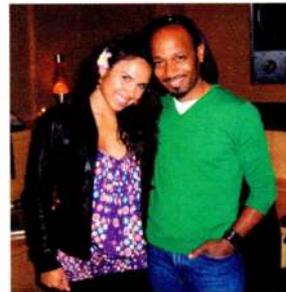
Harrell says that he makes extensive use of the studio's Telefunken Ela M 251 microphone and Tube-Tech compressor, adding, "I

bring my own rack and my own gear: my Power Mac, which has Pro Tools HD3, and Apogee interfaces with [an Apogee] Big Ben clock."

Above all, Harrell appreciates the studio's artist-friendly atmosphere. "The facility as a whole has a very comfortable at-home feeling—not a corporate vibe. The public rooms are really beautiful and calm, very Zen, and it's very private. Once we are inside, there is a fence around the whole place and you are in your own world. It's a very creative space."

—Matt Gallagher

Send "Sessions" news to bschultz@mixonline.com



Songwriter/vocal producer Kuk Harrell (right) with singer Kristinia DeBarge in the Boom Boom Room, Harrell's home base on the West Coast

by Barbara Schultz

where I can fit four people. In the control room, I said to think of it kind of like a mastering studio. I wanted as little between myself and the monitors as possible. I don't have a console. It's all Pro Tools-based, and I do have a large rack of gear that sits behind me."

Feldman's studio is modest in size at just 425 square feet. It's all about selectivity, not quantity, in the rooms and in terms of equipment: "I need much less gear than a typical studio that's open for bands to come in," he says. "I don't need a huge mic locker and a board with all these pre's to track drums because I'm not tracking a drum kit. And because the number of channels I need is low, I can

take the same amount of money and focus on one channel or a couple of channels. So, for example, on my lead vocal channel, I've got a Retro Sta-Level tube compressor. I can run that when I'm tracking every channel because I'm tracking one at a time."

Other gear includes Focal Twin6 Be main monitors, a Crane Song Avocet monitor controller, Great River preamps and that specialized mic collection: Lawson L251s, Neumann TLM 103, Sontronics Sigma, and Thumper, a throat mic that Feldman developed for beat-boxing and vocal percussion.

Find a full equipment list and a truly surprising audio clip at mixonline.com. Remember: It's really just voices, no instruments. III



CLASSIC TRACKS



From left: Engineer Jack Rouben is seen here with Stevie Wonder, Ronnie Wilson (standing) and Charlie Wilson of the Gap Band, circa 1981

Gloria Gaynor

"I WILL SURVIVE"

By Blair Jackson

One of the most enduring songs to come out of the late-'70s disco scene, "I Will Survive" actually began its life as a B-side for a song that never became a hit.

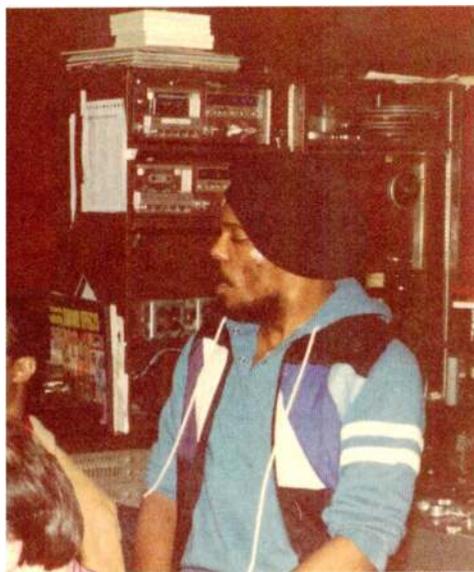
Gloria Fowles was a New Jersey girl raised on such records as Nat King Cole, Ella Fitzgerald, Frank Sinatra, Marvin Gaye and Stevie Wonder; she emulated their techniques as she tried to forge her own singing style. By her mid-teens, she'd put out a single called "She'll Be Sorry" on a label run by singer Johnny Nash, who also gave her a stage name: Gloria Gaynor. By the early '70s, she'd been "discovered" anew—first by Clive Davis of Columbia (for whom she recorded one single, "Honey Bee," before he exited the company) and then by Mike Curb, who signed her to his MGM label right as disco music was

first becoming popular. Her 1975 album, *Never Can Say Goodbye*, was among the first to offer a club-style string of tunes connected by a pulsating disco beat. Side One featured a re-working of "Honey Bee" and new disco takes on Motown favorites "Never Can Say Goodbye" and "Reach Out, I'll Be There," mixed masterfully into a nonstop 19-minute groove by Tom Moulton, and produced by Meco Monardo, Tony Bongiovi and Howard Wheeler. They also worked on a couple of subsequent Gaynor albums for Polydor, but those were only moderate successes.

Which brings us to 1978, and a recording studio known as Mom & Pop's Company Store in Studio City, Calif. (adjacent to Hollywood), owned by songwriter/producer/musician Freddie Perren. The musically gifted D.C. native had

moved to the L.A. area in the late '60s and become part of the Motown Records writing and production group known as The Corporation (Perren, Berry Gordy, Deke Richards, Fonze Mizell), who churned out hit after hit for the Jackson 5 and others through the early '70s. Perren's string of successes (sans The Corporation) continued with hits from The Miracles, The Sylvers, Peaches & Herb and a pair of tunes (by Tavares and Yvonne Elliman) on the multi-Platinum soundtrack for *Saturday Night Fever*. "He was what you would call a classic old-school producer, in that he was classically trained and he really knew music," comments Jack Rouben, who engineered for Perren at Mom and Pop's for a while in the late '70s and was part of several hits cut there.

Rouben, who grew up in the San Francisco



Ragin on guitar; Paulinho da Costa on percussion; and Freddie himself or John Barnes on keyboards.”

Some time in the middle of 1978, Rouben says, “We were in the midst of the Peaches & Herb contract and Freddie got a call from Polydor Records requesting that he do a cover of this song called ‘Substitute,’ which was an international hit with a [South African] group called Clout. They wanted to beat that song to the American marketplace, and they wanted Gloria Gaynor to record it and Freddie to produce it. Freddie agreed to do it, but being a shrewd businessman, he realized, ‘Well, if they’re going to put that much effort into this song, I want to get something more than just my producer’s fee,’ so he negotiated to write the B-side. He was shrewd that way.

“So we stopped everything on the Peaches & Herb record and we were given a schedule in which we were supposed to cut this record in less than a week. We were going to start on a Wednesday and be in mastering on Monday of the following week! Freddie and his lyricist partner, Dino Fakaris, started to write ‘I Will Survive.’ The music was written first; I think Freddie came up with the basic structure. There were no lyrics at the time. In fact, the lyrics weren’t finished until Gloria came in.”

On that Wednesday, Perren and most of the players mentioned above got together at Mom & Pop’s and cut multiple live basics on the two songs. Asked about miking for the all-important disco kick drum and hi-hat, Rouben says, “In those days, for the kick I used either a Sennheiser 421, which is the mic George [Masenburg] used, or an AKG D-112. The hi-hat was a [Neumann] KM84.” Guitar, bass and keys were all direct.

“The following day we did strings and horns,” he continues. “The arranger was Dave Blumberg, who arguably did one of the greatest string arrangements of that era with ‘I Will Survive.’ The typical string session at the time was 10 to 12 violins, four violas, four cellos,” with one mic for every couple of instruments, all submixed to two tracks.

On Friday, Gaynor came in to lay down vocals on both songs. For “I Will Survive,” Rouben recalls, “They went over the song in the control room and Gloria was there reading the lyrics to herself, and then she went out into the studio, and I told her, ‘Run the song down from beginning to end and get acquainted with it, and once you feel confident, we’ll start recording.’ Well, I started recording from the minute she stepped out of the room and went into the first take.”

Rouben used an AKG 414 to cut Gaynor’s

Bay Area, had been a drummer but went over to the tech side of music after studying electrical engineering at UC Berkeley. After college he moved to L.A. and quickly landed a job as an assistant at Sunset Sound, where he met George Massenburg, who was working there with Earth, Wind & Fire. Eventually, Massenburg pried Rouben away from Sunset to become his personal assistant, “and we did three projects—Earth, Wind and Fire’s *All ‘N All*, for which he won his first Grammy; The Emotions; and Deniece Williams,” Rouben recalls. “George was a great teacher and a wonderful guy to work with.” But when Massenburg decided to build The Complex in West L.A., Rouben was out of a job.

“I started going to some of the private producer-owned studios in L.A. and I knocked on the door of Freddie Perren’s place, Mom & Pop’s,” he says. “I went there for a first-engineering gig, not an assistant, and he was impressed by the fact that I’d worked with Earth, Wind & Fire because at the time they were the top R&B band. So he gave me a shot, and the first thing we started working on was Peaches & Herb, who hadn’t had a hit in over 10 years.”

Mom & Pop’s consisted of a fairly large main studio with iso booth, a mid-sized Westlake-style control room and a much smaller demo room. “[Perren] had really good equipment,” Rouben says, “including a Harrison 32—the same board *Thriller* was recorded and mixed on—a 3M 24-track, plenty of good mics and some nice outboard gear. There were two [echo] chambers and offices upstairs. And he had his group of A-team musicians: James Gadson, who was one of the premier R&B drummers; Scotty Edwards and Eddie Watkins were bass players; Melvin ‘Wah-Wah’



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vocal. "I remember George had used it on the [EWF] *All 'N All* album—that was the main vocal mic. [Mom & Pop's] didn't have a great array of limiters, so I found this LA-4A compressor/limiter and I also used one of the chambers. There were two—a short chamber or a long chamber—and for this song I remember picking the long chamber. So she ran it down a second time and was getting more familiar with, then ran it down two more times. So I had four tracks of her singing it from beginning to end.

"Then they got into recording the real vocal. Now, Freddie was perhaps the best vocal producer I ever worked with, but he was very demanding. Pitch, timing and performance all had to be right. If any one of those wasn't, he'd do it again. So the vocals took awhile. Gloria was already complaining when she came in of back pain [from an earlier surgery] and it got worse as the day went on.

"By the time the evening was done, they had completed two verses and two choruses of the song that Freddie was happy with. We were supposed to come back the next day to continue, but Saturday morning we get a call—Gloria's not coming in: 'I can't do this; my back is hurting too much. Go with what you have.' Well, this was an 8-minute track and we had three or four minutes of the song still to do. Fortunately, I had kept all those earlier tracks where she was just running the song down. So we listened to those tracks and we ended up picking the very last one she did. There was a whole performance there and we ended up using the back half that we needed to fill the rest of the song. So what you hear on the single are the produced vocals, but on the extended version on the [*Love Tracks* album], it's the whole 8-minute version and the last four minutes is her live vocal. It's not perfect, but it's got a great feel to it."

Rouben mixed the two songs on Sunday, and on Monday the song was mastered as planned. Both Rouben and Perren felt that "I Will Survive" was actually the stronger of the two songs, and in the end it was the New York clubs—specifically Studio 54 and a number of smaller gay discos—that voted with their turntables: "I Will Survive" became a dance-floor smash and eventually a huge radio hit that topped the *Billboard* singles charts for three weeks in March 1979. A few weeks later, Peaches & Herb's "Reunited" also hit the top spot for Perren and Rouben. That, in turn, led to Rouben working with the Gap Band, with whom he also enjoyed Platinum success.

Gaynor has had other hits through the years, but "I Will Survive" remains her calling card and one of the most covered songs of that era. III

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From left: supervising music editor Del Spiva, supervising dialog editor Margit Pfeiffer, co-supervising sound editors Mark Stoekinger and Wylie Stateman, dialog/music re-recording mixer Paul Massey, effects re-recording mixer David Giammarco, sound effects designer Ann Scibelli, re-recording Dan Sharp and music editor Joe Bonn



By Mel Lambert

Robin Hood

MIXING RIDLEY SCOTT'S LATEST WITH MASSEY, GIAMMARCO

"It's going to need a lot of work," acknowledges dialog/music re-recording mixer Paul Massey, as he turns from the screen in the Cary Grant Theater on Sony Pictures' Culver City lot to face other members of the sound and picture crew. Massey has just rolled a faders-up mix of the re-conformed Reel 8 for *Robin Hood*, directed by Ridley Scott, and there are several dialog elements that sound at odds with some new tracks that have been synched to picture following a re-sequencing of the film's final battle scene. There are also places where the music ends or transitions too early, and sound effects require sweetening.

In the world of high-action motion pictures, such last-minute changes are not uncommon, but can be a major time challenge for any re-recording and sound editorial crew. "We saw a lot of changes in the structure of the film as it evolved," confirms Massey, who worked on *Robin Hood* with effects re-recording mixer Dave Giammarco.

Following the run-through for the re-edited Reel 8, changes were discussed in minute detail with picture editor Pietro Scalia. The director is absent from the previewing session due to off-site meetings at his production company Scott Free. He returned to the dub stage

later that same afternoon with additional notes and comments on the evolving soundtrack.

"Ridley likes a rich mix," stresses Massey, who also worked previously with the director on *A Good Year* and *Hannibal*. "The first time we play through each reel during our faders-up pass, we consider the flow of scene and story structure. Should music lead the sequence? Should effects take this moment? Intriguing story lines demand the audience's attention to dialog, yet music and effects create an excitement that should not be underestimated.

"Ridley is highly experienced in

story and scene structure," he continues. "We'll work through the reel and present him with a mix for comments. He gives us a constant flow of creative ideas. It's up to us to pick the gems from his ideas and implement them. If the overall shape of a sequence is working, he'll be happy and leave the fine details for us to sort out." Wylie Stateman and Mark Stoeckinger served as co-supervising sound editors, working with supervising dialog editor Margit Pfeiffer, sound effects designer Ann Scibelli and music editor Del Spiva.

"Premixes play an important part in the re-recording process," Massey says. "We all know a mix can go straight into a final without premixes if the circumstances dictate, but a refined mix requires premixing. It's a valuable process that allows raw tracks to be prepared with EQ, compression, panning, noise reduction, etc. Then when a final mix begins, we can concentrate on what is truly important: story! The print-master session can then serve as a third pass, allowing an overall 'mastering' of the final soundtrack."

"With so many [effects] tracks," Giammarco adds, "pre-dubbing provides the opportunity to become familiar with all the sound elements—blending, treating, balancing and spatializing them as they get organized into manageable mix-downs. It also presents the opportunity to understand where each sound needs to be positioned in the composite surround mix and consider where they might need to be augmented to blend with the music and dialog."

Massey began his dialog pre-dubs several weeks prior to finaling at his Signal Sound facility in Ojai, Calif. "I have a 128-input/64-bus Harrison Trion console that is automation-compatible with the [320-channel] Harrison MPC3D digital console I use at the Cary Grant Theater," he explains. Massey's premix room also features three 64-channel Pro Tools HD rigs—two for playback and one for record—a Christie projector, and JBL and BMS main monitors, plus Meyer subwoofers, powered by Parasound and Crown amps via a Lake crossover. "The dialog on *Robin Hood* had a lot of difficult and noisy locations, so I made use of the Trion's new 6-band de-noiser and other tools within the console's automated Toys package.

"I premixed the dialog to 40 tracks: eight for original production [including PFX and X-Tracks]; eight for group crowd recorded in an exterior setting; and 24 for group ADR. The group was premixed into separate categories: walla, English call-outs and international call-outs. There were a lot of French-speaking actors, and it was important to keep them separate for the foreign-language releases. Actors' schedules caused the majority of the principle ADR to arrive at the

final mix as raw tracks, which was challenging but not that unusual."

Giammarco recalls, "I spent 18 days [on the Cary Grant Stage] premixing the effects tracks while receiving updates and picture changes. The way [we] approached the pre-dubbing was, when it worked in the temp dub, we could use it and embellish as needed. We moved forward, ensuring that the effects supported the dramatic action and helped to create a realistic 'world' onscreen. In the final mix, when doing my FX pass, I prefer to work my effects against the pass Paul [Massey] has completed with the music and dialog tracks. This gives us a good starting point to begin working together and mix with all our collaborators."

Marc Streitenfeld composed the orchestral score for *Robin Hood*, which was recorded at London's Abbey Road Studios. Together with cues tracked at the composer's Venice, Calif., facility, the score was premixed at CSS Lantana West. The music arrived at the Cary Grant Stage as a 24-bit/48kHz Pro Tools session and included a total of 14 5.1 premixes of separate instruments.

"We recorded the final mix to six multi-channel stems," says Massey. These comprised a 5-channel/LCR dialog stem, a 5.1-channel music stem, a 5.1-channel sound effects stem, a 5-channel background FX stem, a 5-channel Foley stem and a 5.1-channel effects sweetener stem—all recorded to a 96-track Pro Tools recorder.

Massey and Giammarco describe mixing *Robin Hood* as one of their most challenging projects. "We were faced with a lot of new elements as they arrived on the stage following picture changes and new visual effects shots," Massey says. "It's what we are used to and it's becoming more the norm than the exception, but it doesn't make the process any easier!"

"We knew going in that *Robin Hood* would be a big effects film," Giammarco adds, "with scenes requiring a multitude of sound effects ranging from atmospheric backgrounds to practical hard effects to stylized sound design. We always tried to move the story forward and keep audience interest heightened. There were inevitable changes and new visual effect shots regularly updated: More arrows would be added in a shot during a battle sequence and the flight paths altered. We addressed this in pre-dubbing and throughout the final with sound effects sweeteners."

"We need to be specific in what we choose to highlight for the audience," Massey concludes. "Quite often, less is definitely more!" ■

Mel Lambert heads up Media@Marketing (www.mediaandmarketing.com), a full-service consulting service for pro audio firms and facilities.

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PHOTOS STEVE JENNINGS

Public Image Ltd. is, from left: Scott Firth, John "Johnny Rotten" Lydon, Bruce Firth and Lu Edmonds



By Sarah Benzuly

Public Image Ltd.

THUNDER INSIDE 'FOUR ENCLOSED WALLS'

Punk is back. After 18 years out of the public eye, Public Image Limited (PiL), fronted by former Sex Pistol John "Johnny Rotten" Lydon, took the stage at San Francisco's Regency Center Grand Ballroom, just a few days after the tour opened at Club Nokia in L.A. and a performance at Coachella. Fans from the band's early days intermingled with a younger generation hungry to see just what all the fuss was about. And neither faction was disappointed, as PiL (which includes previous PiL members guitarist Lu Edmonds and drummer Bruce Firth, and newcomer bassist Scott Firth) ripped through classics such as "Disap-

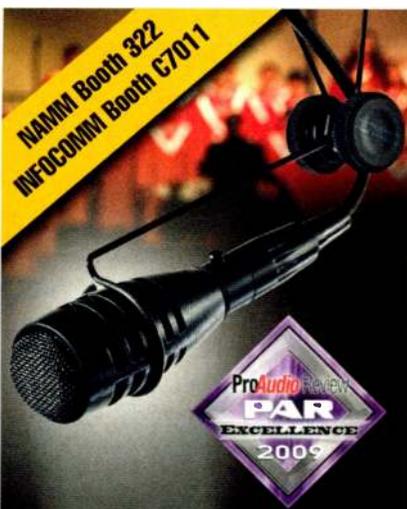
pointed," "Warrior" and "Rise."

Front-of-house engineer Walter Jaquiss and monitor engineer Kevin Charnley are no strangers to Lydon's sound: They mixed the Sex Pistols reunion tour in 2008 and were asked back for this run of shows, which hits club-sized venues. Jaquiss is relying on house-provided racks and stacks (with the rest of the gear provided by Boston-based Scorpio Sound). "As it's different rigs every day, I'm obviously reliant on the local sound companies for their support and venue knowledge," Jaquiss says. "Having said that, most systems at this level of touring are pretty well-installed and cov-

er the rooms pretty well. My preferences are either V-DOSC, Adamson or d&b J Series. The only request we have is that the sound company brings in enough subs to supplement what's already there. [To tune the system], I play a couple of songs that I know from an iPod and listen back to the band from Pro Tools. And I listen to the main vocal mix."

And that vocal mix is key to the show's overall sound—the audience came to hear Lydon, after all. Ensuring that Lydon is heard loud and clear over the lows, Jaquiss and Lord chose a Shure U2/4D Radio Beta 58A. "He's used to it. he's used to how it sounds, and it suits

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his voice," Jaquiss says of the mic. "Also, it's very loud onstage, which this mic helps with."

The tour is carrying four d&b M2s for Lydon ("It's loud!" Charnley says) on two mixes, as well as in-house side-fills. "I am dealing with excessive stage volume, but I don't have to rectify it because I'm causing it!" Charnley enthuses. "It was a problem in the UK [tour dates] for the other guys in the band. They found the level of John's wedges intrusive, to say the least. But now that they're all on ears, that really isn't a problem anymore."

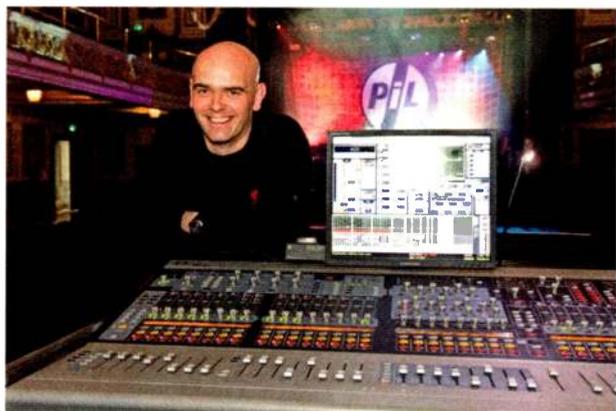
"Between these two mixes," Charnley continues, "John has pretty much everything. It's important to keep John happy with the thunderous volume he loves while trying to avoid feedback—more likely in the smaller venues, where I really have to ride that fader. In the larger places, it's not too bad; those M2s really sing if they've got the space. John is old-school and he really likes to feel the power of the music. It's pounding within his zone, but in a good, musical way, and the other guys are protected from any unwanted SPLs by their IEMs."

Jaquiss is mixing on an Avid D-Show Profile due to its small and compact frame, a necessity when working in these mid-sized venues. "Budget and space are always an issue, especially at this level of touring," he says. Another space-saving feature of the board is the onboard plug-ins; nary an outboard piece of gear is to be found on this tour. Jaquiss is using all effects, comps and gates from the board, a mix of standard plug-ins supplied in VENUE Pack 2 and a few from Waves and Massey. "The show is on a memory stick and my plug-ins are on an iLok," Jaquiss adds. "With that, we can fly in and rent the system locally if need be. It also helps that the control surface is so small. In Chicago, we've managed to set it up in the mix booth without having to take the house console out."

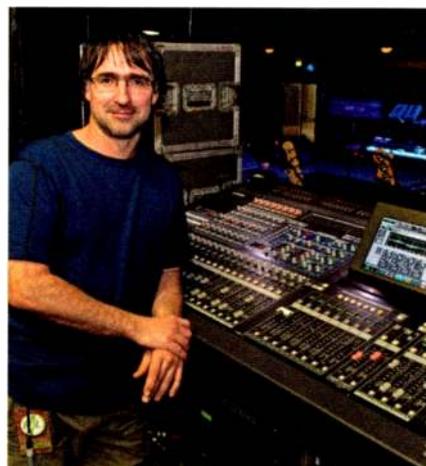
To make his mix clean yet powerful, he starts with the sources onstage, "getting the amps and pedals right, choosing the right mics and DIs and then making sure you can hear everything in its place," Jaquiss explains.

Bruce Firth's kit is miked with Shure Beta 91A (kick) and Beta 98s (toms); Audix D6 (kick); Audio-Technica AE3000 (snare); Neumann KM105 (snare) and KM184 (hi-hat); and Sterling Audio ST51s (overheads).

A Yamaha PM5D sits at monitor world, and Charnley uses the hall reverb for Lydon as the vo-



Front-of-house engineer Walter Jaquiss at the D-Show Profile



Monitor engineer Kevin Charnley mixes on a Yamaha PM5D, employing mostly onboard effects.

calist likes a lot of reverb in his wedges. "I use a shorter one for the other guys' backing vocals and a room reverb for the drum—all being employed in the ear mixes," he explains. "I also split John's channel: one for his wedge use and one for a compressed channel for the other guys' ear mixes. I'm not using any outboard effects, but I am using an outboard [Klark Teknik DN370] analog graphic EQ over John's two wedge mixes to give me a little more musical control."

"The other guys have full band mixes in their individual stereo IEMs," Charnley continues. "Lu sometimes has a wedge mix [using in-house wedges], just for extra punch from the kick drum. Bruce has a couple of d&b 7s for subs that we carry. Scott was the only one with IEM experience [before this tour], so it feels good to convert some more IEM virgins to the cause."

"This is mainly a set-and-forget operation. I might get one or two slight tweak requests from the band in a two-hour show. If John's not happy, believe me, he tells me and the whole auditorium! The fact that he doesn't soundcheck makes for an exciting show." III

Sarah Benzuly is Mix's managing editor.

DTX drums

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World Radio History

SOUNDCHECK

Rat Sound Warms Up With Midas

Preparing for this year's summer touring season (including five stages at Coachella and several booked arena tours), Rat Sound

category. "Knowing our client requirements, we tested several consoles," Rat says. "There are two different angles I look at in evaluating a board: personally as an engineer and, of course, the company as a sound vendor. I found that the Midas PRO6 has features and usability that I have not been able to find in other digital consoles.

"Like every successful rental company, we are a mixture of demand-based and the pursuit of quality," Rat continues. "Finding the balance between those two is crucial. We were looking for a premium console that was also in demand, and several of our up-level clients have requested the PRO6. So we knew that Midas digital was in our future; the only question was whether we would sub-hire or purchase the console."

To answer that question, Rat Sound brought the PRO6 in for a demo. As a longtime user of Midas analog consoles, Rat knew what he was looking for. "This is where it goes back to my personal angle. Does the console fulfill the qualities I'm looking for as an engineer? Yes, the PRO6 has the features and the usability I need. It's the first digital board I've found that meets the requirements for me to actually carry it and be happy."



Dave Rat at the company's new Midas PRO6

(Oxnard, Calif.; www.ratsound.com) added some new equipment to its already stocked arsenal. "We're seeing demand we haven't seen in several years," notes company president Dave Rat. "This will definitely be our strongest year ever."

One equipment area that needed to be bolstered was in the digital mixing console

road-worthy gear

McCauley Sound M421 Subwoofer

Part of the Touring Class line from McCauley Sound, the M421 low-distortion high-impact subwoofer features four 21-inch (6-inch voice coil) neodymium drivers in an isobaric configuration, continuous system power handling of more than 12,000W, and a 143dB peak output. The 73x23x44-inch, 486-pound, 12-ply birch plywood enclosure has a wear-resistant ProCoat finish and integrated casters, handles and locking skids. Fly points are optional.

www.mccauleysound.com

Shure Beta 27 Condenser Mic

Designed specifically for instrumental miking, the supercardioid pattern of the side-address Beta 27 condenser mic from Shure offers high gain-before-feedback and minimizes bleed from off-axis sounds. The low-mass, 1-inch gold-layered Mylar diaphragm provides a flat, neutral response; a -15dB pad handles high SPL sources, and a three-position bass roll-off filter reduces stage rumble and other unwanted LF. Street pricing is \$399.

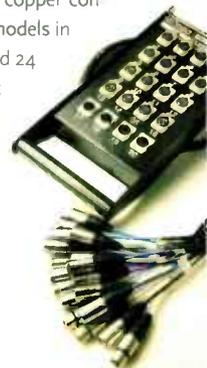
www.shure.com



Hosa SNX Series Stage Snakes

The SNX Series Pro-Conex stage boxes from Hosa are designed to provide years of reliable, clean, transparent audio feeds and feature a tough, rolled steel chassis, Neutrik XLR connectors and 24 AWG, oxygen-free copper conductors. Available now are 14 models in configurations with 8, 12, 16 and 24 sends, and 25/50/100/150-foot lengths—all with four returns and a wire mesh strain relief hanger supporting the cable fan. MSRP is \$340 to \$1,340.

www.hosatech.com



fix it

The Killers Monitor Engineer Harm Schopman

One of our IEM units lost signal strength just before the band went on in Cape Town, but I was able to quickly determine that it wasn't the cable or the antenna. This left the transmitter unit as the source of the problem, but we weren't able to make the system work before the show. Instead, we quickly ran out a hardwire pack to one of the techs and worked around it. The [Kaltman Creations] Invisible Waves RF analyzer

had given us the measurement tools to determine what the problem was. In Mexico I had a problem with one of our antenna cables. After measuring the output, we found it low compared to our normal level. My first attempted solution was to re-seat the antenna cable but this led to no improvement. When we replaced the cable, we suddenly had full strength. Quantifiable, quick and a far cry from the "try and listen" method that was used previously, the Invisible Waves once more identified our problem. This was a massive and confidence-inspiring improvement!



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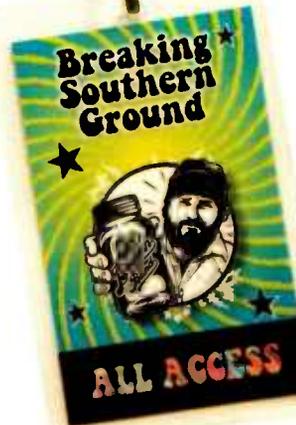
Wave hello to even more plug-ins with the
Mini-YGDAI SoundGrid I/O Card from WAVES.

ALL ACCESS

Photos and text by Steve Jennings



Zac Brown Band



The Best New Artist Grammy winners for 2010, Zac Brown Band, are out on their Breaking Southern Ground tour and sharing the love onstage with three up-and-coming Atlanta-based artists who

have been signed by Brown to his Southern Ground Records label: Sonia Leigh, Levi Lowrey and Nic Cowan. Each stop features various combinations of the musicians integrated throughout: The Zac

Brown Band will make appearances during each artist's set and invite them to join the full band later in the night. *Mix* caught up with the good times at Sacramento, Calif.'s, Arco Arena.



From left: Eric Roderick, Pro Tools tech Frank Sadler and Special Event Services' P.A. tech Preston Soper

Front-of-house engineer/production manager Eric Roderick mans an Avid/Digidesign VENUE Profile board with an FOH rack loaded with a Pro Tools HD 96-channel recording interface and two Stage Racks with 96 analog inputs/16 analog outputs. "Frank Sadler is our Pro Tools tech who does our stage patch and makes sure that Pro Tools is tracking every night," Roderick says. "We multitrack and archive every show.

"For plug-ins, I use Digidesign/Bomb Factory

Fairchild 660 on vocals and some acoustics, Bomb Factory BF-3A leveling amp on the left/right bus, Digidesign's Smack! comp on some acoustics, Reverb and Reverb 'verbs," he adds. He also puts into play Line 6 Echo Farm delay, DigiRack EQ 3 and Joemeek VCS.

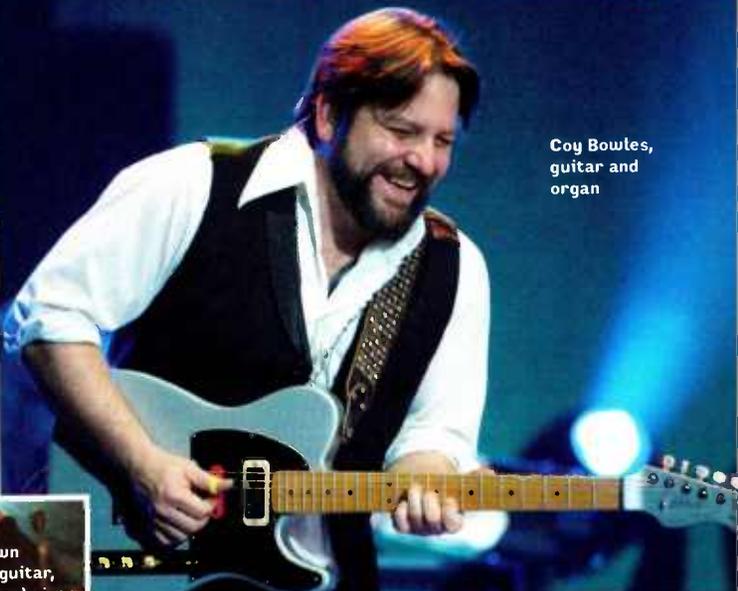
Audio and lighting are provided by Special Event Services (SES), with P.A. tech Preston Soper on hand to tune the L-Acoustics system. The main P.A. comprises 12 V-DOSC per side coupled with three dV-DOSC per side. Subs are 12 SB-218 double 18-inch subwoofers; near-fills are four EAW UB-82e speaker enclosures; out-fills are four over four L-Acoustic ARCs per side; amplification is Lab.Gruppen IP 6400 amplifiers; and drive is XTA DP488 processing.



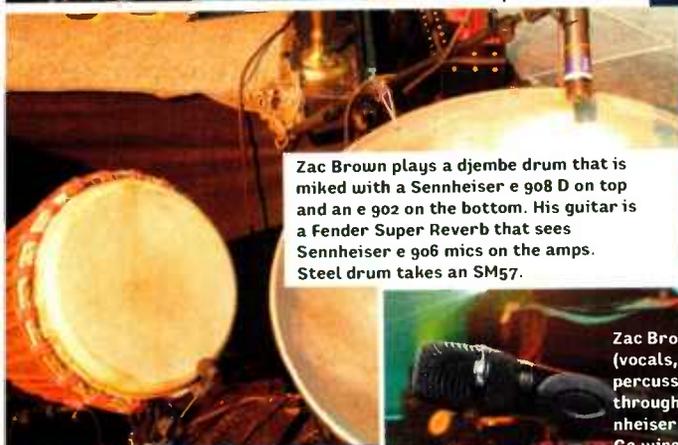
Monitor engineer Jake Bartol is also mixing on a VENUE Profile with a FOH Rack used as a monitor rack and two Stage Racks loaded with 96 analog inputs/16 outputs. Plug-ins comprise Fairchild 660 comp on vocals, and D-Verb on vocals and some instruments. "Not a lot," Bartol explains, "I keep it simple."



From left: Clay Cook, guitar/vocals/organ/man-dolin/pedal steel; and John Hopkins, bass/vocals



Coy Bowles, guitar and organ



Zac Brown plays a djembe drum that is miked with a Sennheiser e 908 D on top and an e 902 on the bottom. His guitar is a Fender Super Reverb that sees Sennheiser e 906 mics on the amps. Steel drum takes an SM57.



Zac Brown (vocals, guitar, percussion) sings through a Sennheiser SKM935 G2 wireless mic.



Jimmy De Martini's fiddles take Fishman V200 pickups.



According to drum tech Kevin Leahy (inset), Chris Fryar's kit is miked with Sennheiser e 908 Ds on all the toms, Shure Beta 52 on the kick, SM57s for the snare top and bottom, Sennheiser VP 88 for overheads and Sennheiser e 614 for the hi-hat and the ride.



Guitar tech Mike Mason's primary focus is on Brown, who alone plays roughly 10 guitars for a typical show. "Clay and Coy manage their own instruments mostly," Mason says. "They're very hands-on individuals who enjoy the process. Barry Waldrep was brought in to work as the sole guitar tech. During the pre-tour rehearsals, we began to realize that he would not be able to maintain the position of guitar tech, as well as contribute to the

show as a support band player. Barry is an amazing instrumentalist whose passion is music. I volunteered to help him during the show so he could play, which later led to me having a much larger role in the guitar tech world. We also have Matt Mangano, who is our bass tech and plays bass for our support bands. He is a phenomenal player and, like Barry, has helped educate me in the way of tech'ing."



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- Ron Saint Germain



Mercury M72s Dual Channel Studio Microphone Amplifier

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NEW!

Retro 2A3 Dual Channel Tube Program EQ

The Retro 2A3 provides mixing artisans, mastering engineers and project studio owners with a very useful palette of colors and textures. "I'm already using it and yes, it's sweet as cherry pie." - Michael Brauer

RETRO



EXCLUSIVE

Barefoot Sound MicroMain35 3-Way Active Monitor w/ Integral Subs

Following in the footsteps of the MicroMain27, the new MicroMain35 brings revolutionary Barefoot three-way technology into an even more compact enclosure.



EXCLUSIVE

NEW! Inward Connections StepEQ

With controls reminiscent of the classic Pultec EQP-1A, this fully discrete stepped EQ is perfect for any source demanding smooth top end and big powerful bottom end response. For 500-series.



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D.W. FEARN



**Purple Audio LILPEQR
2 Band Program EQ**

The LILPEQR is Purple Audio's take on the classic program EQ. It offers high and low frequency shelving bands, each with three carefully selected corner frequencies to choose from, and a switchable fader knob for overall level control.

RIPPE



Apogee Symphony System

"Most simply put, the Symphony System rocks and is rock solid! I now have the sonic quality Apogee is known for mixed with seamless integration on my Mac Pro/Logic rig. Life in the studio is good!"

- Vincent di Pasquale



Wunder CM7 FET

The U47 FET is legendary for obtaining larger-than-life kick and bass tracks as well as thick and full vocals. For the first time, Wunder has re-issued this classic design to compliment their CM7 and CM7 GT series.

Wunder audio

EXCLUSIVE



Prism MEA-2 Mastering Equalizer

The MEA-2 is a stereo or 2-channel, four-band precision analog equalizer with stepped Q/shelf, frequency and cut/boost controls on each band. It is designed for recording and mastering applications where ultimate sonic performance, musicality and precision are required.



Rupert Neve Designs 5088

The 5088 is a fully discrete analogue mixer designed by the master himself. Demo console available in New York City and Los Angeles for personal demonstrations.



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NEW PRODUCTS



Vintage Valve Vibe

Fink Analog Audio CS2-FA Tube Channel Strip

Fink Analog Audio (www.finkanalogaudio.com) is shipping its CS2-FA Tube Channel Strip (\$3,999). The unit's Class-A design combines vintage Bill Putnam-style tube preamps; three-band EQP-1A Pultec-style passive equalizers with semi-parametric mids; and two-tube implementations of the 1176 limiter, which retains the original character and discrete transistor control of the FET attenuator. Features include mic/line and hi-Z direct inputs, transformer I/Os, bandwidth that's ± 1 dB out to 50 kHz, a soft knee setting and a stereo link switch.



Kick Me

Primacoustic KickStand™ Bass Drum Microphone Stand

Taking a page from its Recoil Stabilizer, the KickStand (\$90) from Primacoustic (www.radialeng.com) is a microphone boom-stand isolator that decouples a kick drum mic from the floor. The design features a thick, high-density foam isolation pad under a laser-cut steel platform shaped to eliminate standing waves while offering sufficient height to allow easy mic placement. The isolation eliminates resonances, while the added mass stabilizes the mic capsule for greater clarity and improved transient response.



Reflection Correction

Equator Audio Research AARC Software

Now included with every Q15 reference monitor, Equator's (www.equatoraudio.com) Automated Room Response Calibration software is designed to tame unwanted sonic conditions and aid in achieving a more accurate listening result. Using a Mac/PC host computer, the software gathers sonic information via a test mic at the listening position and then sends compensation data back to each speaker's internal CPU, so each speaker delivers the appropriate audio. Multiple filters can compensate for each speaker's boundary condition, location, existing room nodes and other EQ issues, as well as time-based, secondary-reflection comb filter phase problems.

Sonically Serious

Rupert Neve Designs Portico 5017 Mobile DI/Pre/Comp

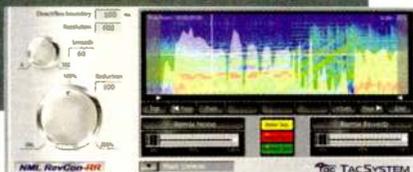
Housed in a rugged, portable chassis, the Rupert Neve-designed Portico 5017 preamp/compressor/DI (www.rupertneve.com, \$1,195) features 2-channel operation, as well as Vari-phase, Silk and DI/mic blending capabilities. Based around a new LDR (light dependent resistor) design, the 5017's optocoupler compressor has been simplified to a single threshold control with auto makeup gain. The blend control is used for mixing direct and amplified signals to achieve the desired tonal blend between the two sources, and Vari-phase is used to minimize or attenuate phase cancellation between the two signals.



Reverb Reducer

TAC System NML RevCon-RR

This novel plug-in (www.tacsystem.com, \$1,280) eliminates nearly all reverb from speech and music sources by first separating noise, removing ambience, then mixing in the noise again to keep the sonic image more stable. Features include a spectrogram and audio envelope display, envelope control to treat the de-reverberated sound, and frequency dependent reduction. It supports AudioSuite for Pro Tools 7 or later and AU/VST formats.



King of the Desktop

RME Babyface Portable Interface

Sporting an incredible amount of features in a small package, the bus-powered RME Babyface (www.rme-audio.de, \$750) features 192kHz AD/DA converters, two phantom-powered preamps, 10 inputs, 12 outputs and onboard processing. The Babyface has an RME optimized USB 2 high-speed bus (Mac/PC) that uses RME's SteadyClock to ensure reference-quality conversion. The optical I/O is usable as ADAT with SMUX support or S/PDIF. The headphone output is driven from an extra D/A converter available on the unit or breakout cable. Other features include a DI input, TotalMix DSP mixing software and FPGA-based three-band parametric equalizer, reverb and echo.

Testing, 1-2-3

Audix TM1 Measurement Microphone

Designed to capture acoustic measurements for room analysis software, RTAs and other sound control devices, the Audix TM1 (www.audixusa.com, \$299/MSRP) has a uniform Omnidirectional pattern and a flat 20 to 20k Hz frequency response. This 6mm capsule condenser mic features a nickel-plated brass body, shock absorbent "O" rings and snap-to-fit mic clip. Options include an acoustic foam screw-on windscreen and shock-mount adapter.



Shrinking the Sub

Blue Sky EXO 2 2.1 Monitor System

Evolving from Blue Sky's (www.abluesky.com) EXO stereo monitoring system, the \$499 EXO2 package comprises a powered 110-watt subwoofer, two 35W satellites and a controller. Like the original, the EXO2 combines true full-range monitoring with the convenience of a desktop remote control hub. However, so that the subwoofer can more easily integrate into smaller spaces, the EXO sub has been greatly reduced in size (10x9x11 inches). Each 3-pound (7.2x4.8x5-inch) satellite features a 3-inch cast-frame woofer, neodymium motor structure and a 1-inch fabric-dome neodymium tweeter.

Price-Busting Tester

Audio Precision APx515 Audio Analyzer

AP (www.ap.com) has released its latest and most affordable audio analyzer: the APx515 (\$6,200). The unit features two-in/two-out operation at up to 192 kHz, an intuitive GUI with one-click measurements, control via a footswitch or barcode scanner and the ability to create custom reports using MS Word and the APx UI. The APx515 promises tests within three seconds and offers three options including SW-HST, which adds high-speed multi-tone and continuous sweep measurements; SW-AML, which adds IMD, MOL, dynamic range and FFTs; and SW-ACR, which adds acoustic response measurements. III



Endless Analog CLASP Signal Processor

The Sonic Palette of Tape Directly Into Your DAW

Five years in the making, CLASP (Closed Loop Analog Signal Processor) represents an exponential leap forward in hybrid analog/digital technology. It offers an easy, cost-effective way to integrate analog tape into digital production workflow by literally turning any tape machine into a DAW plug-in processor. CLASP drastically cuts rewind time and tape cost because the tape is only used for momentary throughput. This lets you use the same reel for an entire project and run the reel front to back before rewinding. CLASP even pulls some new analog tricks out of its hat, offering the ability to jump between tape speeds on the fly to audition and then print, even mixing speeds in the same project—something that's impossible in an all-analog production.

For this review, CLASP was integrated into an existing studio comprising an SSL 4056 E/G console, a Studer 827 2-inch analog machine and Pro Tools HD2 Accel running on a Mac Pro with 6 GB of RAM, Mac OS 10.5.8 and Pro Tools Version 7.4.2cs4. Conversion was through Apogee Rosetta 800s clocked by an Apogee Big Ben.

Getting a Grasp of CLASP

CLASP is a well-built, two-rackspace box with a large countdown LCD and five backlit function switches for tape rewind (RTZ), sync mode (SYNC), tape speed auditioning (MON), post-stop recording (POST) and machine speed alignment (IPS). The countdown display indicates the remaining time on the reel and can be set to beep as the reel end approaches.

The back of the unit carries enough D-



CLASP's simple front panel provides access to essential system functions and a large countdown display.

sub connectors for 24 tracks (12 D-sub), a 15-pin machine control port, XLR sync in/outs and MIDI in/outs. There is no minimum requirement for tape tracks; CLASP will operate using analog machines capable of anything from mono up to 24 tracks and can be daisy-chained for up to 72 tracks. Add an optional optical sensor, and an older machine (without a 15-pin transport control port) can also be used.

The key to understanding CLASP (see the signal flow diagram on the "Mixed Media" page at mixonline.com) stems from its signal flow and how the system time-corrects audio. Analog signals from your mic preamps, console or your DAW are recorded through CLASP to tape, then immediately routed off the playback head into your workstation because the deck runs in repro. Due to the head gap delay between record and playback, CLASP cleverly uses plug-ins to time-correct and re-time stamp the audio. The system is sample-accurate: It doesn't need SMPTE timecode for sync, so all 24 analog tracks are simultaneously available for recording.

It's important to understand how CLASP accomplishes access to the Pro Tools software. CLASP uses a USB-MIDI interface and HUI protocol for machine control and track arming. For Pro Tools delay compensation to work with the CLASP hardware, it requires 24 mono master faders in the Pro Tools session, each carrying a CLASP plug-in. I used Apogee converters, which—among others—don't correctly communicate with Pro Tools Delay Compensation. To fix this timing mismatch, an offset number for the Rosetta's delay was added into the CLASP Bridge plug-in. (For more on working with Pro Tools delay compensation and third-party converters, go to mixonline.com.) These workarounds are unnecessary for users with Cubase, Nuendo or Logic systems, as CLASP can easily gain access to MIDI Machine Control.

Up and Running

Initial setup was simple. CLASP integrated via the patchbay using TT-to-D-Sub harnesses, plug-ins were loaded into the system and a CLASP-specific session template was created. The 24 master

PRODUCT SUMMARY

COMPANY: Endless Analog

PRODUCT: CLASP
(Closed Loop Analog Signal Processor)

WEBSITE: www.endlessanalog.com

PRICE: \$7,950

SYSTEM REQUIREMENTS: Supported DAW and tape machine (see Website)

PROS: Genuine analog sonic color at minimal tape cost. Zero-latency monitoring.

CONS: Pricey for now.

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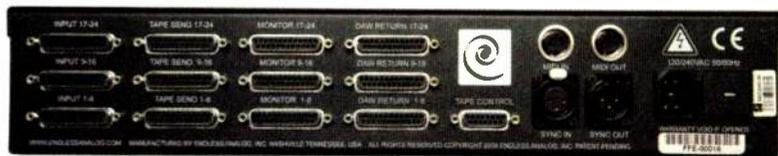
The new SLATE DIGITAL "Virtual Console Collection" adds the sound and personality of six of the world's most legendary analog consoles to your DAW.

The Virtual Console Collection consists of two plugins, Virtual Channel which is applied to the first insert of all mixer channels, and Virtual Mixbus, which is applied to the master fader insert.

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Try them now with a 14 day demo at

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D-sub connectors give you the ability to record up to 24 tracks through CLASP.

faders used for time correction were hidden via the Show/Hide list, making the session look like any other. Whether the session was from scratch or pre-existing, importing the needed CLASP session components was easy.

Apart from the 24 other plug-ins used in Pro Tools, the CLASP Bridge plug-in is a single instance that can sit on any channel. It offers access to rewind, arming and other essential functions for system operation. I ran a quick one-time setup operation, in which the hardware figures out the difference in time between the record and playback heads and stores it at different speeds. (The system holds setups for up to three machines.)

Hybrid Heaven

I spent the first day with CLASP in a session recording a six-piece band. Drums were in an iso booth while the rest of the players were taken direct or miked in the large main room. Cue mixes were built from the CLASP outputs, which offer the same listening experience as hearing input on the analog machine: zero latency, before the converters. Levels were set, and the session ran from Pro Tools with CLASP running in the background. After the initial tracks were cut at 30 ips, new Pro Tools playlists were created on all tracks and another pass was run at 15 ips. The difference was remarkable. The bottom end on the kick, low toms and bass was thicker, with more saturation at the top end and, of course, more tape noise. After some discussion, the 30 ips pass was kept and the bass and vocal were auditioned and re-cut at 75 ips. This particular singer's voice benefitted from the lower tape speed, and the bass took on a richness and symbiosis with the kick that was not apparent at the higher speed. Because of the mix of the speeds, the noise wasn't as intrusive as it was when the entire track was cut

at the lower speed.

Another session involved re-cutting drums on an existing track. The CLASP-specific plug-ins and master faders used in the previous session were imported into this day's session, and I was up and running in no time. Levels were set and I put CLASP into Demo mode to audition tape speeds. As I was listening straight off the uncorrected repro feed from the machine, it necessitated killing the cue feed to the drummer. While the drummer was playing, I could drop out of Record on the analog machine, change tape speeds, engage Record and hear the difference. I can't say enough about this feature. It lets you audition the "effect" and change levels to tape accordingly. It's much like changing the settings on an EQ or compressor on the fly.

Once out of repro-only mode, I could sync to the track and re-cut the drums. The drums were first cut at 30 ips, then I created new playlists for the second pass and cut at 15 ips. Just for fun, I then dropped down to 75 and did the same. CLASP's front panel buttons make this a simple operation: Choose the desired speed on CLASP, change the machine's speed and you're off.

Once the drums were cut, we started experimenting with the rest of the track—which had been cut directly to Pro Tools a year before. I created an ADT (automatic double tracking) effect on the vocal using the interface. This is similar to how it was done in the 1960s: using a secondary tape machine set at a different speed. I didn't need a second machine because I re-recorded the vocal to a new track through CLASP at a slower speed. The difference in the head gap created a great double. I tried a few different speeds until I nailed it and moved on.

Another great trick? I took some inter-

esting guitars that unfortunately had a nasty digital edge to them and tamed them down by re-recording them through CLASP. This corrected the edginess, giving the tracks a roundness that was easier to tuck into the mix. This particular technique was an "a ha!" moment for me, seeing the possibility of tweaking the sonics of tracks not previously recorded to analog tape.

Wow and Wonder

The only problem with CLASP is that it's harder to describe than to use. At first, it's tough to grasp the concept, but once CLASP is in your session, the wow and wonder of your first encounter with pro audio is revived. During sessions with live musicians, I was easily jumping between tape speeds, auditioning and changing levels to tape based on what I heard, then printing that directly to Pro Tools. It was easy to re-record original digital tracks back through CLASP for color, create ADT, run tests at different tape speeds—all while having a blast. The system quickly reminds you about the beauty of tape's effect on transients, low frequencies, cymbals, vocals, guitars and more, especially at slower speeds. The workflow was sonically and functionally inspiring because CLASP puts the tape machine behind the curtain, letting the session run just as it would with the DAW alone.

Like other early releases of new technology, CLASP is costly. However, the payoff for home and commercial studios with tape machines in mothballs, or those looking to put their own unique creative stamp on their work, is worth it. And the timing is perfect: The used audio gear market is rife with tape machine bargains from 2-tracks on up. Plus, the arguments that good tape is no longer available or too costly no longer hold water. I bought 10 reels of RMG1 900 2-inch and the formulation is as good or better than any BASF, Ampex or Quantegy tape I've used. There was a time when this wasn't true, but the market has reset itself and there's plenty of good tape out there from ATR and RMGI. In all my years of writing product reviews, I've gotten excited about great products from time to time, but this is something more: It's a concept whose time has come. If you get a chance, try CLASP for yourself and rediscover your love of sound. III

Kevin Becka is the technical editor of Mix.

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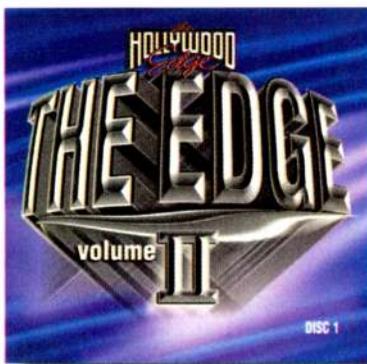
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Smart AV Tango DAW Interface

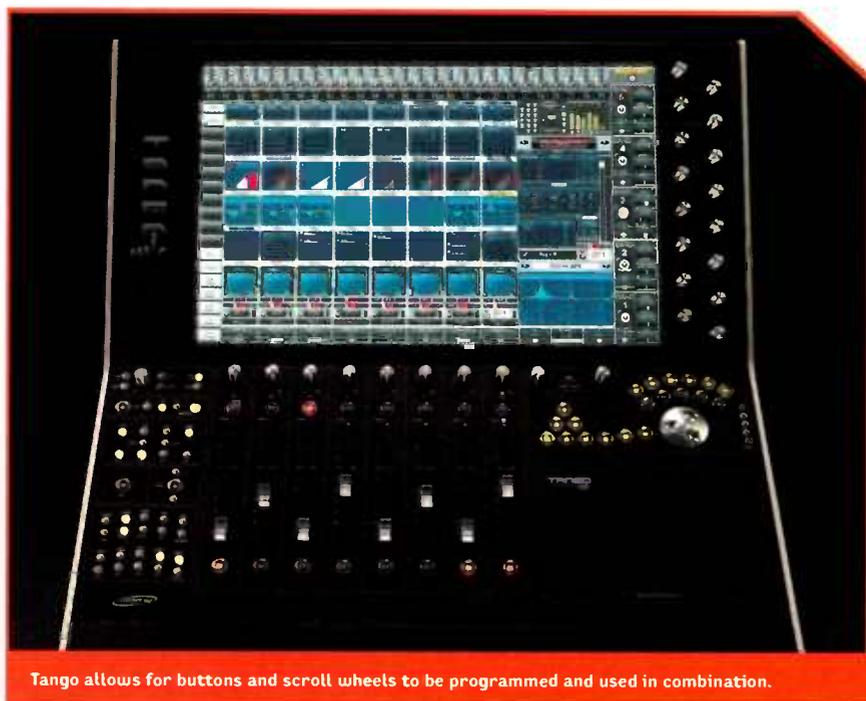
Touchscreen, Easy Allocation Bring Fresh Approach to Software Control

Smart AV, the designers of the original Smart Console, have created a new workspace that aims to provide ergonomic control over your favorite DAW. The Tango's small footprint fits into editing suites, overdub rooms, smaller mixing suites and home studios. Tango features motorized faders, a giant 22-inch touchscreen, and dozens of buttons and touch-sensitive rotary encoders that make for a comfortable user experience. Currently, there are presets for popular apps like Pro Tools, Logic and Cubase with extended support for Nuendo and Pyramix.

Command and Control

The most distinctive feature of the original Smart Console was the large curved meterbridge called the ARC. This concept is replicated in Tango's MonARC, a virtual meterbridge on the top part of the touchscreen interface. This is a clever, ergonomic way to allocate software tracks to the physical resources afforded by the control surface. You can assign any track to any fader by holding the touch-sensitive Inject button for that fader and then touching the desired track's meter in the MonARC. Alternatively, you can choose Chair mode, which was designed to re-create the experience of sitting before a large-format console and rolling a chair from one bucket of I/Os to the next. Dragging a finger across the MonARC loads all available faders with the consecutive mixer channels surrounding the finger's position. MonARC can be resized to reveal 27, 54 or 108 channels.

At any point in time, the desk presents eight active channel strips, each of which has a touch-sensitive motorized fader and endless



Tango allows for buttons and scroll wheels to be programmed and used in combination.

rotary encoder, solo and mute. A Hold button will lock a track assignment to a channel strip, even while operating in Chair mode on the other faders. The touchscreen also has slick-looking graphics resembling a DAW's mixer window. An input section controls the input trim on software like Nuendo, which offers input trim on each I/O strip of the Mix window. DAWs with dedicated dynamics in the mixer channel strips really shine here as Tango instantly activates these components with a press on the touchscreen.

The large, easy-to-read graphic representations of dynamics and EQ in the corner of the touchscreen mirror the smaller versions on the channel strip. DAW-specific dynamic plug-ins and any other inserted plug-ins are controllable by 16 rotary encoders—enough to control all parameters on one page for most plug-ins, although you can bank through multiple pages for more complicated plug-ins. Each encoder offers a reasonably comfortable resolution. The last control touched is also automati-

cally mapped to the Active Encoders, a pair located in a more centralized position on the desk. One of these has a finer resolution than the ordinary encoders; the other, a motorized control, is not endless. It ranges from the lowest control value (far left) to the highest (far right), allowing quicker changes of extreme values. This proved very useful.

The channel strip also shows graphic send values and, again, these values can be changed by tapping the section, revealing larger graphics and twisting the encoders, which have mapped themselves. The output section has a pan control that blossoms into a fine-looking surround panner when surround is available. The last control value touched in any of these sections automatically maps itself to each of the individual rotary encoders for each channel strip where that control might be applicable. This way, each channel's rotary encoder can be a panner, but as it isn't fixed in Pan status, it becomes a more versatile control. If you adjust a headphone send on one channel, you can easily adjust that same send

PRODUCT SUMMARY

COMPANY: Smart AV
PRODUCT: Tango
WEBSITE: www.smartav.net
PRICE: \$9,425; Expansion Bay \$7,735

PROS: Slick, intelligent operation. Large, alluring touchscreen.

CONS: Setup is not bulletproof. No analog summing, monitoring or preamps.

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on other channels.

Monitoring

Although Tango has a monitor section similar to what you might find on competing products, Smart AV has taken a different approach to monitor connections. With the Tango, your interface outputs are connected directly to speakers and the routing is handled through the connected DAW. Choosing a speaker set will adjust the output routing. Adjusting the control room volume on the desk simply raises or lowers the monitor fader. The provisions for each DAW vary greatly. There are definitely advantages and disadvantages to this approach. The overall effect should be cleaner than running through additional analog circuits. Conversely, the execution is clever, though not necessarily simple. In most software, outputs are named with codes that will dictate how they will show up on the unit. Setting this up in each session I opened with Tango involved importing a pre-set output configuration from a template.

Touch Me

In addition to the role that the touchscreen plays in controlling the software mixer, full access to additional software functionality is granted through the Edit Panel. This section is completely customizable and lets you build panels of buttons to perform various functions. Each panel is a grid of rectangular buttons, eight high and eight wide. With DAWs such as Nuendo and Logic, all you have to do is pick an available soft-key, choose the function from a well-organized list, name the button and you're set.

Each of the soft-keys can be programmed to work with the hardware scroll wheel. The same is true for any of the physical buttons on the desk. So, for example, it's possible to set a button-plus-scroll-wheel combo to zoom in or out. In addition to pre-programmed transport buttons, a handful of open-ended hardware buttons are available in the Transport section. This is also the case in the automation-enable section. With all of these conveniently accessible, customizable controls, if you are comfortable with the Tango, you could conceivably

operate a DAW without any need for an actual QWERTY keyboard. In the short amount of time I've spent with the Tango, I see the potential for this to be a realistic option. A mouse, however, remains necessary for some tasks, so a mouse pad is provided on the controller surface.

Learning to Tango

Using Tango's Version 2.4 Netsmart software, the networked relationship of the unit to the software is automatically established. However, occasional hiccups occurred when switching between DAWs or when the host machine went to sleep and stopped sending messages to Tango.

While testing Tango across a number of platforms, the benefits experienced were largely DAW-specific. Smart AV must work within the limitations imposed by the control surface protocols associated with each app. For example, with Pro Tools, a plug-in already inserted on a channel can be accessed and manipulated, but only eight parameters

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can be controlled and no plug-ins can be instantiated from Tango itself. With Logic, only the stock EQ and dynamics plug-ins can be instantiated, but all plug-ins can be controlled to the fullest extent of their parameters. Similar limitations arose when dealing with sends. Again, these are not faults of Tango, but merely a shortcoming of these DAWs' control surface languages. With Nuendo or Pyramix, full insert assign and control functionality are available. Sends work just as they are supposed to and integration is much slicker than with other DAWs.

I spent the most time working with Logic and found that Tango seemed to work particularly well with that platform. Once I created Edit Panel buttons for some of my standard operations and programmed some of the transport buttons for additional zoom functions, it was really easy to get lost in a mix. I can't imagine a solution for mapping tracks to faders that's more intuitive than the MonARC. Popping in EQs and compressors and tweaking settings was simple and natural. Using the automation-enable buttons and sweeping my finger across the MonARC, multiple tracks could change to write status instantly. The faders wrote smooth, accurate volume rides, even with multiple faders moving in a Write status. This is not always the case when it comes to hardware controllers.

Navigating through tracks, making edits and creating fades became simple with a combination of soft-keys and the scroll wheel. Once I got comfortable mapping these controls in Logic where you just pull the command from a list, I ventured back to Pro Tools. Here, programming is a breeze if you know your keyboard shortcuts. This led to some convenient sound effects editing. Creating sync points, trimming regions and drawing fades could all be easily performed with the proper keyboard combinations. Navigating through a movie clip using the scroll wheel was very convenient. And when it came time to snap a region to the insertion cursor, having the mouse right on hand was perfect.

Should You Dance?

Tango is well thought out. Anything that could make the use of each DAW more convenient was considered and implemented to the fullest extent available through existing machine

control protocols. And it seems Smart AV is making an ongoing effort to improve the support for each specific piece of software. The company is working with DAW developers to improve their control surface protocols. In addition, Smart AV listens to user feedback and suggestions. At present, Tango is impressive-looking and enjoyable to use. There are some glitches in operation, however. Also, some users might be turned off by the high price tag

for a control surface with no analog circuits. There are no mic pre's, no analog monitoring section, no summing amps—it's only a software controller. That said, Tango is one of the more practical software controllers I've come across, particularly when paired with the right piece of software. III

Brandon Hickey is an independent engineer and film audio consultant.

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The latest microphone from CAD Audio is the E100S, a supercardioid condenser model engineered and built in the U.S. Intended as a general-purpose instrument and vocal mic, the E100S employs a 1-inch, nickel-plated capsule and CAD Audio's differential Quadra-FET™ circuitry for low noise and high sensitivity. Although the E100S appears to be similar to previous models from CAD Audio, the mic's capsule and electronics are completely new. The E100S requires 48-volt phantom power and ships in a padded wooden storage box.

On the front of the E100S are switches for a 10dB pad and an 80Hz highpass filter (6 dB/octave slope). The shock-mount appears to be permanently attached and includes an extra set of elastic bands. I received two E100S microphones for review and found that the two were sonically very closely matched.

Let's Hear It

I used the E100S for a variety of vocals and instruments, obtaining excellent results on most sources. Acoustic guitar recordings had a high-frequency sheen that worked well in the context of a mix, and a gently finger-picked track revealed no background hiss—a testament to the E100S' low self-noise. Proximity effect is subtle; moving the mic toward the sound hole slightly augmented the low-frequency response without overemphasizing it, as other microphones sometimes do. The shock-mount—working with what appears to be a rubber suspension holding the capsule within the mic housing—effectively isolated the capsule from vibrations created when players tapped their feet.

Combined with an Avalon AD 2022 pre-amp and a Universal Audio 1176 limiter,

the E100S delivered a male rock vocal that floated perfectly above a dense mix, with a nice body in the low-midrange frequencies and high-frequency detail that required no equalization. (The E100S' frequency response features a presence peak of about 4 dB at 7 kHz.) Stacked background vocals did not exhibit the exaggerated frequency response bump that's sometimes apparent when multiple tracks are layered using the same microphone. Popping "p's" were a bit of a problem due to the open grille, so I'd suggest using an external screen when recording vocals. On a few occasions, the presence peak proved unflattering. For instance, when used on a particular vocalist who's difficult to record due to the fact that he produces quite a bit of sibilance, his voice sounded overly bright through the E100S.

My criticisms of the E100S are minor. The XLR jack is located on the rear, very close to the mic's body, and I had a tough time unplugging the mic cable. Every time I pulled the connector out, it banged against the mic—which is a shame because the nicely textured finish will inevitably be scratched. Due to the mic's size and the somewhat limited maneuverability of the pivoted stand mount, placement was a bit of challenge in tight spaces.

Using the E100S's as drum overheads wouldn't be my first choice, but moving them five feet in front of the kit (three-and-a-half feet high) allowed them to blossom as room mics, with great balance between drums and cymbals, and a fat whump from the kick drum. The E100S accurately captured maracas and tambourines without making them sound like someone was crunching a bag of

potato chips (which in my experience is sometimes the case with condenser mics). Close-miked toms are absolutely killer with the E100S, with a perfect mix of snap from the stick and head, round tone from the shell and that slight pitch bend that I love to get out of toms: "doooooom."

Is It €-ssential?

CAD Audio has done an excellent job with the E100S. It works with a wide variety of instruments or vocals with very good results, and its low self-noise makes it valuable when recording quiet instruments. It looks like it's built to withstand some pretty serious abuse (though I did not put it to that sort of test), and it will handle as much SPL as you can throw at it. Though it falls into a crowded price range, the E100S can hold its own against the competition. It's definitely worth an audition. III

Steve La Cerra is a live and studio engineer based in New York.



The CAD E100S features a 10dB pad, 80Hz highpass filter and integral shock-mount.

PRODUCT SUMMARY

COMPANY: CAD Audio
PRODUCT: E100S
WEBSITE: www.cadaudio.com
PRICE: \$599

PROS: Excellent all-around performance. Quiet.

CONS: A bit difficult to position. Can be too bright for some sources.

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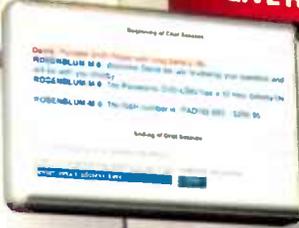
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Communications in the Workplace

A long time ago, in a galaxy far, far away, I was told point blank that I wasn't a "Team Player." Those were challenging times, when at best nearly everyone I knew was sleep shy and, at worst, was recovering from some sort of chemical excess. In a "boy's club" business, even being of the male persuasion was no guarantee of fitting in. I wrote it off at the time, although the accusation haunted me for a while, but not out of guilt. Instinct and intuition have guided me well through life, even when interpersonal communications (and understanding) were weak.

No matter how brilliant an idea or a creative work may be, it will never get the assistance or exposure that is needed to bring it to market without a continual string of communication and convincing, supporting evidence. Whether we're talking about highly complex endeavors such as a space mission, brain surgery or global energy development, or the relatively simple task of getting many ears to hear your most recent project, communication between individuals is key at every step along the way. Just look at the list of credits for a feature film, a videogame or a touring concert production.

This type of interaction isn't easy for everyone; for many of us, balancing social skills with technical and/or artistic expertise does not necessarily come naturally. I have worked hard to overcome my inner geek's social shortcomings (writing a monthly column for *Mix* has helped me organize my thoughts so that the right words come when needed), but as with all things that matter, you have to keep on working at it.

During two recent "therapy sessions"—aka, exercises with co-workers at school—we explored how group decisions are made. Toward this end, we took an online survey that classified us into four

personality groups and examined the results. Naturally, I reflected on the ghosts of the past, but lest you think I'd cashed in my independent streak for a trip to Stepford, know that I am never happy about taking surveys, political or otherwise. That said, the scientist in me was very curious once the results were revealed. Understanding how personalities interact can go a long way toward explaining how some great things are accomplished and yet others are never realized.

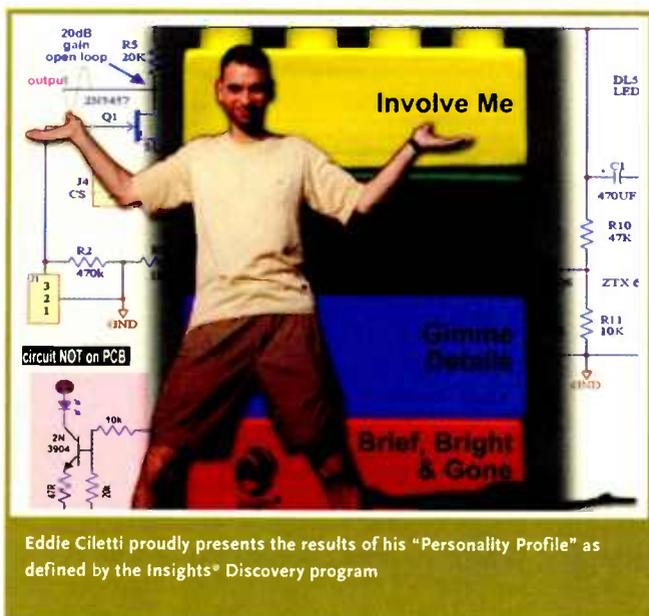
Skule for Teachers

For the first communications exercise, we were each asked to organize a list of unhealthy activities in order of most to least deadly. Mine was initially the most accurate (a pleasant surprise), until "collaboration" and "group think" reduced overall accuracy. As defined by Irving Janis in 1972 (and borrowed from Wikipedia in 2010), group think is: "a mode of thinking that people engage in when they are deeply involved in a cohesive in-group, when the members' strivings for unanimity override their motivation to realistically appraise alternative courses of action." Translation: We might avoid imposing our vision on others in order not to seem controlling. We might also accept someone else's view to seem open to their opinion and, again, not appear controlling.

The second exercise occurred after we'd taken an online survey, where we were defined by four color-groups, each of which reflects a certain personality type. This is the closest I've come to seeing a shrink.

I'm yellow (35 percent), green (35 percent), blue (15 percent) and red (15 percent)—via Insights® Discovery program—where key personality traits are weighted by intensity. The population percentages are from Michael Puskas' blog. You can compare descriptions on the image with those that follow. These two "systems" agree that yellow makes for good teacher/counselors (let's be friends) and that reds are focused, goal-oriented and intense (can you hear me now?). Green and blue traits are reversed. Greens are accountants and engineers (gimme the facts and figures). Blues are chatty and disorganized (let's have fun). Of course, it's more complicated than that. The really interesting between-the-lines stuff provides insights into how each type should approach the other to get the most positive response and incur the least wrath.

What did I learn about myself, you might ask? Although life experiences—and my own survival—have proven my instincts to be fairly good, my Facebook page proclaims my accepted role in the world as the irritant in the oyster that hopefully yields a pearl. I am accustomed to my ideas being outside the commonly accepted "norm." My very being is the result of years of related experiences, of fixing other people's "problems." It's my life's work to see the results of wear and tear, excessive heat, acts of nature and the unfortunate tendency of some people to be penny-wise and pound-foolish, and try to make things right. I also know I can't do it alone.



Eddie Ciletti proudly presents the results of his "Personality Profile" as defined by the Insights® Discovery program

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Why Am I Writing This?

For newbies, especially those fresh out of school, there is intense, often self-inflicted pressure to be independent, self-sufficient and, uh, “make big bucks fast to pay off that loan!” As hard as any business endeavor is these days, some of my audio peeps are remarkably busy, and although it might be hard to imagine, too busy.

What keeps me busy is the ability to wear many hats, and the fact that my work as a teacher and a maintenance tech brings me in contact with many types of people. I see a similar trait in my assistant, John Rausch. He’s a drummer/engineer with a serious interest in microphones, preamps and acoustics. He is motivated, good natured, determined and eager—sometimes too eager, if that’s possible. His most recent baptism by fire was the result of agreeing to do a multi-track recording on the day of a sold-out live show and pulling it off, despite technical obstacles and the completely new experience of interacting with a union staff.

Our relationship is based on common interests and the simple understanding that we are not competing for business, that together (as a team) we can do more than either of us individually can—the whole being greater than the sum of the parts. We are two independents with the benefit of overlapping territory.

When a client asked me to organize a console recapping, John was both my remote control and the “teacher” who showed the studio’s in-house engineer how to do the work. When the job went according to plan—on schedule and within budget with minimal side-effects—the owner did what most owners do when things are going well. He said, “While you’re in there, could you re-install this remote talkback switch that used to connect to the previous console?” On the surface, this seemed like a no brainer. After all, how hard could connecting one switch be? Then the phone rang. I had been completely out of the loop when I learned that the client’s console was stuck in Talkback mode. What to do? “I’m on my way to school,” I said. “Meet me there with the schematics, and we’ll figure it out.”

We figured it out. III

Eddie’s teaching instincts are revealed at his Website, www.tangible-technology.com, now 15 years old.

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World Radio History

"I did it myself... ...Primacoustic made it easy!"

A conversation with jazz/blues guitar legend Scott Henderson

(Tribal Tech, Chick Corea, Jean Luc Ponty, Joe Zawinul, Jeff Berlin, Victor Wooten)

Scott, tell us about your studio.

It's a two room overdub studio - a control room and a room to mic guitar cabs, horn players, singers, etc...

What do you do there as opposed to in commercial studios?

I use commercial studios when there's a drummer involved, but I get the best guitar tones at home.

What were some of the problems you noticed with the acoustics?

Actually I never thought there were any problems, until I A/B'd the Primacoustic Broadway panels with what I was using before.

What type of panels did you have?

I had a popular brand of foam and needed to take it down because after 3 years it started to crumble and fall apart.

Did you do the set up yourself?

I did it all myself. Primacoustic made it easy and fast. Believe me, if I can do it, anyone can. All you need is a drill, screws and a level.

How did you configure the panels?

In the control room, because there's a lot of gear to work around, I just put them where they fit. The mic'ing room was just bare walls so it required planning. I configured them randomly to cover about 30% of the walls.

What improvements did you hear?

A big difference! Tighter low end with more of it, plus a sweeter top end and a clearer, open sound.

How would you compare it to foam?

The foam gave the guitar a bit of a nasal sound - more emphasis on mid frequencies, and not good tones in my case.

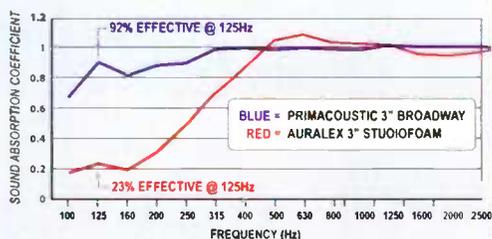
What would you tell someone thinking about acoustic treatment?

Whatever you do, don't use foam, especially attached with glue. The foam turns into dust after a while and is a total mess. Even worse is trying to get the glue residue off your walls. Mine had to be completely sanded and re-painted. Plus foam doesn't sound nearly as good as the Broadway acoustic panels.



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Tests performed by Riwrbank Labs on 3" Primacoustic Broadway panels and common acoustic foam. Both absorb high frequencies but as sound shifts to bass, the foam stops working.



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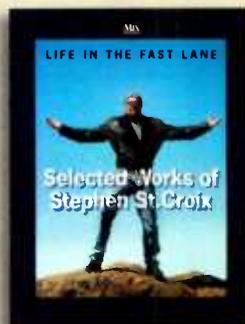
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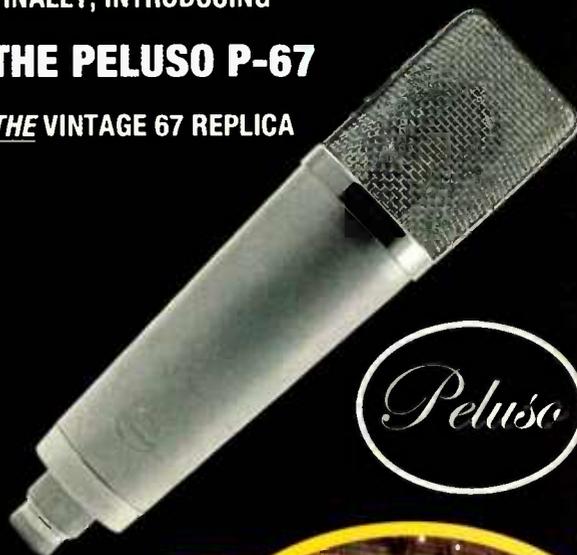
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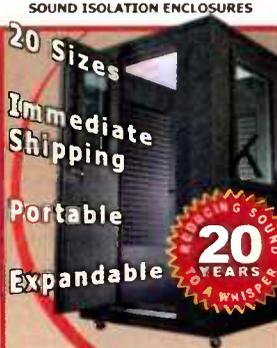
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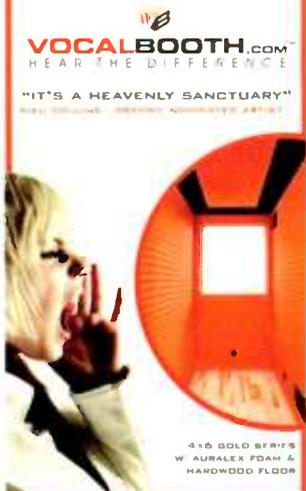
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- Strong sales drive and experience
- A proven track record in sales.

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Neumann TLM 102

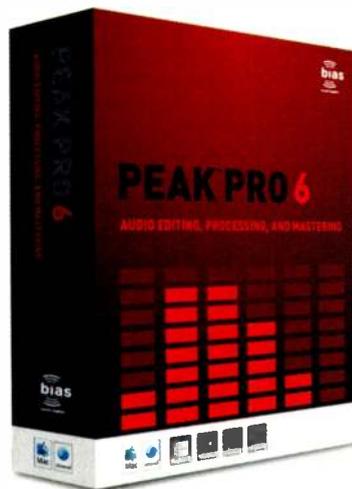
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Russ Berger

Veteran studio designer/acoustician emphasizes building viable businesses, asking the right questions.

You've been at this a long time. What have been some of the important changes to your business over the years?

The biggest change was almost 20 years ago when we merged architecture with acoustics into a comprehensive service. It allowed us to deliver a quality product that matched the expectations and serviced the needs of our clients. Although I've been in the business for more than 35 years, Russ Berger Design Group is celebrating its 20th year in business.

We see small technology changes that make a big difference in how we work. For example, *Mix* had a write-up about the acoustical analysis iPhone app from Studio Six Digital [AudioTools, February 2010 issue]. I've been beta-testing their iAudioInterface over the past six months, and it's going to stand the testing industry on its ear for power and convenience. It's a great product, it's affordable, and the cool thing about the app—it readily connects to our best cal mics.

I guess if I had to choose one major change in the music business, it would be the way artists get compensated for their work. The same issues apply to any creator of intellectual property, including architecture and studio design. Everyone wants good music and good design but is reluctant to pay for it. You can visit Websites to find any number of opinions about how to build a bass trap, but none of them can offer judgment on *should you build one*. Do you need it to solve your particular problem? You can look up: "How do you build a floating floor?" But the first question should be, "Do you need one?" And if so, how do you fabricate it to solve the problem without spending too much? The information out there is cookbook in nature, and that's not necessarily the best starting place to get results.

Where do you start?

As president of the NCAC [National Council of Acoustical Consultants], finding a qualified consultant is where I recommend you start. Before identifying the scope of a project, we want to be sure that the clients have reasonable expectations and a viable business plan. We don't want to simply take a check from someone who says, "I'm going to build a room, and they will come," and I'll get rich." Not happening now, and it never really did. You have to have other creative components, such as excellent engineering talent, great service and some type of in-house creative—whether it be music or writing or production.

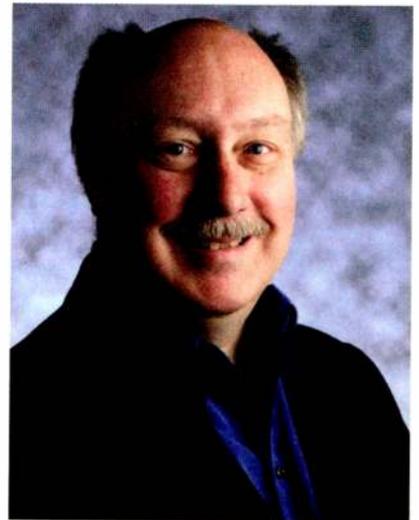
Most of the clients I work with are risking everything to build their studio. It always costs more than they expect, and oftentimes it's traumatic in some way or another. Our job is to help ferry clients across these troubled waters to the other side, and that goes beyond simply helping them negotiate the complex process of design and construction; it's helping them form their business plan and delivering a reliable result.

Thinking about young people who might pursue a career in studio design, what do you see as the essential skill set for a studio designer today? Does a designer have to have an engineer's ears?

It certainly helps. I came out of that world as a musician, and I've owned studios and worked in that world and those experiences have been invaluable. One person doesn't have to know everything, but it helps to have a good overview to put together the right team and the right plan.

As an acoustician and an architect, you wear different hats. You have to be able to communicate not only with the studio owner on a business level, but to understand how they will use the facility and what they need to do their job. That has to be translated into terms that the engineering team and contractors understand and presented in a way that is respectful of their needs. How well you establish and maintain lines of communication is key to a successful project.

The acoustician also needs to touch all of the same things as the architect. We want to control



the volume of the space, the orientation of the space, where it's located, access and egress, the fenestration [where things come into and go out of the room], where natural light originates and whether the design is environmentally sustainable because we're seeing more and more clients that care about sustainable design.

In our business, we're putting buildings together. It's not about sticking a piece of fuzzy stuff on the wall; although that's part of it, it's a very small part.

People who haven't undertaken a new studio design may not understand the amount of research and questioning that goes into every single decision that gets made.

Each project has a different set of priorities and challenges. We believe the success we've achieved is due to the importance we place and the time we spend on the initial project planning stage. The more rooms you design, the more vocabulary you build with respect to design options. You're able to recognize, synthesize and recombine the similarities, differences and variations.

We're still coming up with new ideas about how to make rooms better sounding, more accurate and quieter, less expensive and timeless in their look and feel. I'm especially proud of the rooms we've designed that, 10 or 15 years later, look and sound as great as if they were built yesterday. ■

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