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A black and white photograph of a hand holding a microphone over a mixing console. The hand is in the foreground, reaching from the right side of the frame. The microphone is held in a way that it is positioned over the console. The background shows the rows of faders and knobs of the mixing console, receding into the distance. The overall scene is dimly lit, with a strong light source from the left, creating a dramatic effect. The text 'AUDIO INTEGRITY' is overlaid on the top half of the image.

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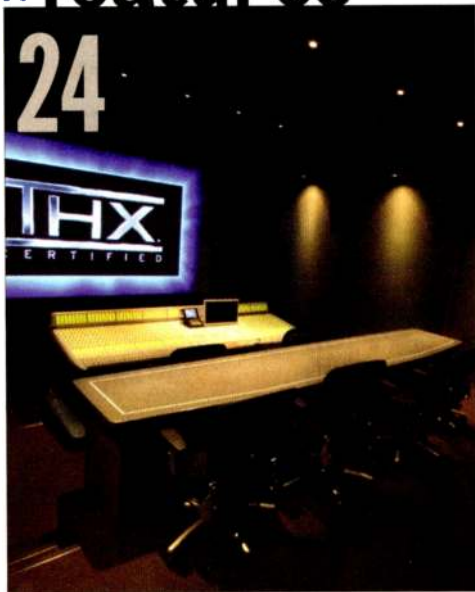


DOLBY

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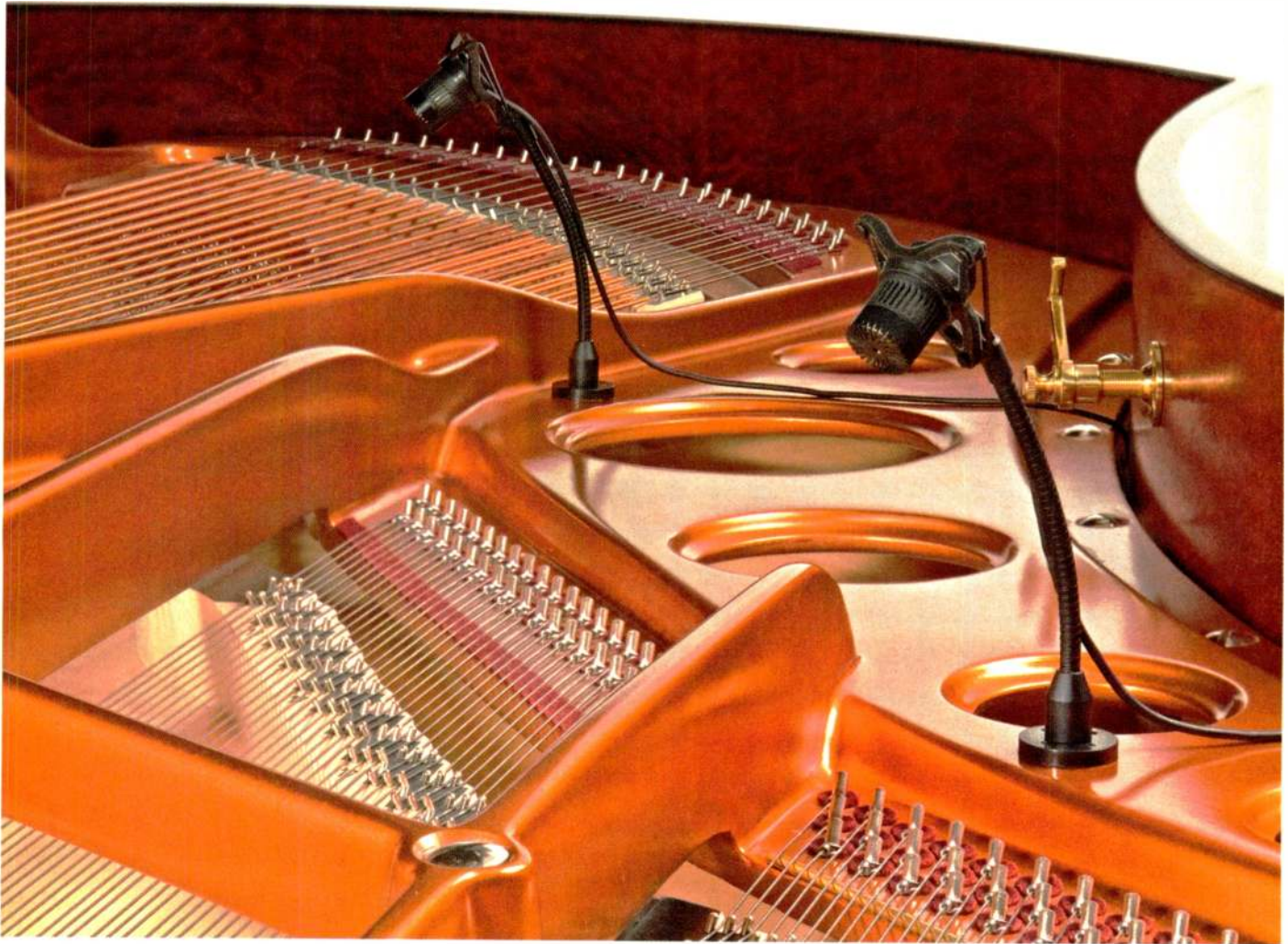
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On the Cover: The 96-input SSL Duality room at Odds on Records and Studios, Las Vegas, was designed by Carl Yanchar and features Pro Tools and tape-based recording, and Allen Sides' Ocean Way monitoring. Photo: Ed Colver. Inset: Steve Jennings.



(Volume 33, Number 11) is ©2009 by Penton Media Inc., 9800 Metcalf Ave., Overland Park, KS 66212. *Mix* (ISSN 0164-9957) is published monthly. One-year (12 issues) subscription is \$35. Canada is \$40. All other international is \$50. POSTMASTER: Send address changes to *Mix*, PO Box 15605, North Hollywood, CA 91615. Periodicals Postage Paid at Shawnee Mission, KS and at additional mailing offices. This publication may not be reproduced or quoted in whole or in part by printed or electronic means without written permission of the publishers. Printed in the USA. Canadian GST #129597951. Canadian Post Publications Mail Agreement No. 40612608. Canada return address: BleuChip International, P.O. Box 25542, London, ON N6C 6B2.

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Audio Education Today

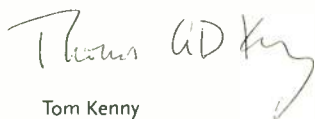
A couple of months ago, *Mix* conducted a focus group at Ex'Pression College for Digital Arts (Emeryville, Calif.). We were looking to find out a couple of things. First, how do students coming up today—the “digital natives,” to borrow a term from Apple—receive technical- and application-based information outside of the classroom? And second, what do they expect out there in the world when they go job hunting; what is it they are looking for? The answer to the latter was pretty straightforward: While some were expecting to strike out on their own, most just want a job, any job. The answer to the former was a bit more complicated.

In a nutshell, students are less Twitter- and Facebook-oriented in their budding professional life than one might expect. They see a separation between pro media of delivery and how they conduct their personal lives. They use video chat while working or ftp sites or YouSendIt. They want to work with uncompressed media, at high resolution. They still bump shoulders in the hallway, and they are big on collaboration across all media. When we asked whether it was important for an audio engineer to understand video formats, there wasn't any hesitation. Of course, they all said.

We assembled the group from the audio recording program, digital arts, animation, film and motion graphics. At one point, a young woman from motion graphics, who was aiming for a career in game production, talked about having been up until 3 a.m. working on the soundtrack for her midterm project. The audio students were all conversant, at least on a basic level, with Final Cut Pro. And the film students seemed familiar with formats from all disciplines. When we asked them how they find tutorial information, they all said YouTube first, then if they needed more, either forums or a manufacturer's Website. They overwhelmingly prefer video as a means of learning about a product or perfecting a technique.

From that focus group, and in subsequent visits to Full Sail and the Institute of Production and Recording, and in talks with educators across the country, it became clear that tomorrow's engineers are living in a true multimedia world, both in how they produce projects and in the ways they consume information. It's natural for them to associate music or sound with picture, whether that picture is captured on film or produced in the computer. When they need to learn more, go beyond the classroom, they go and find it. And their curiosity is not limited to their field. When they leave school, all digital artists are their peers. All talk the same language.

In this space, in previous Audio Education issues of *Mix*, we frequently talked of how education is a lifelong pursuit; about how, when you live and work in a technology-driven field, you never really stop updating your skill set or learning from the masters. Today that is more true than ever, and there are countless available ways to gain knowledge. The real revelation today, however, is that it's not just audio anymore. It's a true multimedia world.



Tom Kenny
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BACK ISSUES: Back issues are available for \$10 each by calling 866/860-7087 or 818/487-2020.

POSTMASTER: Send address changes to *Mix* magazine, P.O. Box 638, Mt. Morris, IL 61054.

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cakewalk
 by Roland

Bob and Sarah Heil on Les Paul

Les and I share adjoining displays in the Rock and Roll Hall of Fame Museum in Cleveland. I have seen and met him throughout my years at many NAMM shows, but after the Rock Hall honored Heil Sound with the only display from a manufacturer, our friendship grew closer.



Bob Heil (left) and Les Paul at Iridium Jazz Club in New York City in 2007

My last time to be with him was at the AES show in 2007. He came by the booth to say “hello,” and invited Sarah and me to his afternoon soundcheck at the Iridium as the club had installed Heil microphones. It was an afternoon of sheer enjoyment and excitement to be with Les and his son, Rusty. Of course, he had us stay for the show and gave me permission to record him, so I brought out my trusty little Walkman MiniDisc and a pair of Heil Sound’s small 4-inch-long Handi Mics that I laid on the floor in front of him.

After the soundcheck, we sat in the green room, listening to Les tell about some of his wonderful groundbreaking experiments with the Ampex recorder that Bing Crosby had given him and, of course, that led into his “bodiless” guitar

experiments. It was just so fascinating to hear about these things that we all grew up around, but hearing it from Les was something so special. In turn, he wanted to know about my experiments with the pipe organs, huge ham radio antennas [with which] I bounced signals off the moon, and that led him to get into how we came to design the new technology of large-diaphragm dynamic microphones that he had just discovered and loved.

This was something that Sarah and I [will] never forget. Cherish the memories forever and hope to live a life as long and enjoyable as Les Paul. He truly can be called a legend.

Bob and Sarah Heil

For more remembrances of Les Paul from leading members of the pro audio community, see Mix’s special Les Paul Tribute from the October 2009 issue at mixonline.com and Mix’s Les Paul Tribute page at mixonline.com/ms/les_paul.

More on Les Paul

I’d met Les numerous times through mutual friends. He was always gracious and friendly, though I was never completely sure that he knew exactly what I did. But I always looked forward to a friendly handshake and a short chat at the Audio Engineering Society conventions. I’ll miss that this year.

I do have one little chapter to share. On Sunday afternoon, August 21, 1994, Les came to the Thomas A. Edison National Historic Site in West Orange, N.J. That site is about 10 minutes from House of Music Studios where the Synergy [electronic music] albums were all recorded. The Edison Laboratories were where the recording industry was born. Les, accompa-

nied by Lou Pallo, was recorded that afternoon by cylinder recordist Peter N. Dilg into an 1890s-vintage, horn-pickup, acoustic wax-cylinder recording machine. I thoroughly enjoyed the convergence of the oldest recording technology being used to record one of the men who advanced the art so significantly, playing his signature electric guitar into a Fender Twin Reverb, with a 100-year-old acoustic horn shoved up against the guitar amp speakers. The perfect blend of art and technology.

Larry Fast

The Producer’s Job Description

I just cracked the September issue of *Mix* and when I saw “From

the Editor: So You Wanna Be a Producer...” I thought to myself, “Yes, I wanna be a producer.” And then I thought that it was really great that, after decades of being a producer, I still “wanna” do it.

Then I read of producer Dann Huff’s horror at the prospect of being asked what a producer does (“Q&A: Dann Huff”). I find it fascinating that most working producers know exactly what the job requires, but are at a total loss to articulate the job description.



Next month, *Mix* goes in-depth into the world of mastering. Tell us how mastering has helped your projects in the past. E-mail us at mixeditorial@mixonline.com.

The tasks required to accomplish the job vary with every project—and yet the job description remains the same.

Sometimes the most important function of the producer is to order lunch; sometimes it is to find the perfect song for the artist; sometimes it is to do nothing; sometimes it is to choose an appropriate recording format; sometimes it is bailing an artist out of jail; and sometimes it is just keeping an eye on the clock so as to not go horribly over budget, etc. Very early in my career I found that not only did I need to explain what a producer is to family and friends, but I had to also explain it to clients to explain why I would be an essential part of their project.

I humbly offer my definition of what the job of producer is: A producer is the liaison between the song, the artist and the medium.

Phil Appelbaum

Thunder Digital

Albuquerque, N.M.

Classic Sampler

Producer David Kahne gave Gaby Alter some wrong information regarding the Emulator used for The Bangles (“Classic Tracks: The Bangles—“Walk Like an Egyptian,”” September 2009). The only E-mu sampler that could hold 8 megs of RAM in the 1980s was the Emulator III, which was not released until more than a year after The Bangles’ album [*Different Light*] was released, and it couldn’t perform 8-bit playback as he claimed. If he was referring to the Emulator II, which was an 8-bit machine, its street price, new, was \$5,900 and it could only hold up to 1 meg of RAM.

Plex Barnhart III

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Odds On Records & Studios

The recording studio scene in Las Vegas has always been something of a puzzle. Big town, lots of entertainment, very few high-end studios. That made sense 20, even 10 years ago, when studios generally booked blocks of time and nobody was coming to Vegas for an extended stay. But as the methods of production changed and bookings became shorter, a number of high-end facilities have opened to cater to the talent that passes through on a regular basis. Studio at the Palms made a big splash in 2007, when local favorites The Killers opened a room that has since gone commercial, and in early 2009 Odds On Records & Studios opened seven miles from the strip, with a three-room complex fronted by the SSL Duality A Room, featured on this month's cover.

"Vegas is a great location," says Bobby Ferrari, studio manager/producer/engineer at Odds On, and a former studio rat in L.A. and long-time touring bass player. "I've been sensing this change in the wind, where more live music is happening, even in hip-hop and R&B. With that in mind, we wanted a space that was true, where people could come in and record for a guitar sound or a string date.

"Then we also wanted a small boutique label for heritage acts and new talent," he continues. "Not a glut of artists, just a select few that we could bring back A&R and have real artist development. We have Air Supply coming out with new music soon, and will also release a new record from Ultraviolet Sound."

Odds On today is an all-SSL facility, with a 96-input Duality in the main room, a 9080K in the mix room and a Matrix in the utility room, all purpose-built to accommodate budgets and workflow. Earlier in the decade it was a single-room 9000 K space, in the same location, attached loosely to the CD/DVD replication facility next door. Ferrari had worked as staff engineer and when there was a management change mid-decade, he was approached about an expansion. After a brief series of fits and starts, and some "caveman sketches" to outline his vision, Phil Wagner of SSL introduced him to studio designer Carl Yanchar.

"We met and there was immediate chemistry," Ferrari recalls. "When you're building a studio, it's kind of like a producer meeting a band for the first time. Carl has massive amounts of experience and

that was important. We knew what we wanted in terms of layout, form and function. Then it was the age-old question of, 'Can you make it sound real good?'" [Laughs]

Yanchar was introduced to the team in November 2007 and began drawing up plans in January 2008. The existing warehouse space was gutted except for a couple of structural columns. The 96-input Duality and Allen Sides monitoring system had been ordered, so they worked it up from there.

"We ended up tearing up about 50 percent of the concrete to fit some very deep and wide troughs," Yanchar explains. "They bought the consoles with much longer cables than they needed so they used it to store excess. Then they also wanted to prefab all the interface panels with the connectors, so they wanted troughs to pull all that through fairly easily. It saved them a lot of time and money.

"That control room is bigger than most, about 950 square feet," he continues. "The height was less than ideal; we wanted to maximize the height and the A/C was on the roof. We added more mass, layers of drywall and insulation. We had to do everything to new trusses that we installed because of structural limitations; they are right under the other ones. So it is definitely a room within a room."

The large Allen Sides monitoring system is not soffit-mounted but free-standing, according to Sides' specifications. There is very little fatigue, even at higher volumes because of the linearity of the speakers and the absence of mid-range peaks. "The speakers sound great, clients love them and they really are microscopes," Ferrari says. "With control rooms so right, you can turn up the mains and still hear accurately, and that's what these monitors do."

The control room is loaded with bass trapping and open diffusion along the back wall, with plenty more trapping in the ceiling. Line of sight



In the K mix room, from left: chief engineer Sean O'Dwyer, staff engineer Matt Salvesson and studio manager/engineer Bobby Ferrari

was crucial to Ferrari, so there is floor-to-ceiling glass, which Yanchar explains simply had to be rigid enough to avoid it becoming a diaphragmatic absorber. Yanchar is particularly proud of the isolation he achieved; even though the studio sits below a flight path to McCarran International Airport, not a plane can be heard.

In preparation for the build, Ferrari and his team began collecting gear, much of it coming from the closure of RPM Studios in New York City. "The mic collection is the most amazing thing," Ferrari says. "We bought them out of RPM Studios, a vintage collection that nobody in Nevada has. When you come here to work, we have that ribbon mic, that tube mic. David Bock has been doing restorations since we got them. We also got some amazing outboard gear—a Fairchild, some API stuff, some LA-2As, a Delta T delay, some PrimeTimes and R2D2. We have Pro Tools 8 HD3 and tape. We ran HDMI throughout the building so Pro Tools is at full resolution; no squinting, the TVs are actually functional!"

The combination of booking and development should bode well for Odds On. "There was a big hole where people were trying to do projects here," Ferrari says. "None of the rooms were at this level till the Palms came along. But the shows are huge and they have tracks they need to record. Our rooms work because you can bring in the band from *Ka* or any major artist. They don't have to go to L.A. anymore." ■

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EDUCATION SPECIAL!



SERGEY MANDAKOV

This month, *Mix* focuses on audio education—whether you're just getting your feet wet or have been behind the desk for more years than you can count and want to get up-to-speed on the latest technologies. Log on to mixguides.com/education for a full list of North American schools offering audio education programs, links to helpful resources and other articles from the pages of *Mix* that focus on education.

Greg Ladanyi, 1952-2009



Engineer/producer/label exec Greg Ladanyi passed away in late September after suffering severe head trauma from a fall on the concert set of Greek artist Anna Vissi (whom he was producing) at the GSP stadium in Nicosia, Cypress.

Ladanyi's most recent work was producing Vissi's *Apogorvmeno* album, but his credits go back decades, working with top acts such as Jackson Browne (six albums, including *Running on Empty*, *Holding Out and Lawyers in Love*), Toto (four albums), Don Henley, Fleetwood Mac, The

Church, Jeff Healey, Jaguares and others.

In 1982, Ladanyi won a Grammy Award for Best Engineered Recording—Non-Classical with Toto's *Toto IV* and was nominated for Producer of the Year for Don Henley's *The Boys of Summer* and for Best Rock Album for Jaguares' *Bajo el Azul de Tu Misterio* at the first annual Latin Grammy Awards.

As president of Maple Jam Music Group, Ladanyi evolved the company from the original Maple Jam Records label founded in 2004 to a full-service entertainment entity that works hand-in-hand with the artist to fully develop their careers. Maple Jam Music Group offers its artists the opportunity to engage not only the services of a record label, but additionally get access to virtually all of the support mechanisms needed to create long-lasting, meaningful careers with management, publishing, merchandising, marketing, publicity, retail and digital delivery—all available under one roof.

As a home to many established and up-and-coming artists, MJMG's work will continue, keeping Ladanyi's legacy alive.

seen & heard

"[Randy Thom, pictured] has collaborated with some of the finest producers and directors on projects as varied as blockbusters, independent films, cutting-edge animation, commercials and videogames. His work exemplifies the perfect integration of sound with image."



—CAS president Edward L. Moskowitz on selection of re-recording mixer/sound designer Randy Thom to receive the Cinema Audio Society's CAS Career Achievement Award on February 27, 2010.

Hyde Street 101

Attention project studio/home-recording musicians! Hyde Street Studios (S.F.) has begun offering a series of classes designed for those who want to learn how to improve a project's audio quality. The first 8-week course is Basic Recording Techniques for Musicians; the studio plans to add a series of workshops and additional courses (for a total of 10). These classes vary in length from a single four-hour workshop to an eight-week-long series of classes that total 24 hours of instruction. The cost varies according to length, running from \$95 to \$450. Visit hydestreet.com for additional information.



"Father of the Grammys," Pierre Cossette, 1924-2009

Pierre Cossette's old-school verve and skill transformed the annual Grammy Awards ceremony from a small industry event into a live broadcast phenomenon.

—Grammy Museum exhibit "Pierre Cossette: Mr. Grammy"



Industry News

Foley artist **Gary Hecker** joins CSS Studios' **Todd-AO** (Hollywood)...**Masque Sound** (East Rutherford, NJ) welcomes **Matt Peskie**, who joins the sales team with a focus on installations and production...Director of sales worldwide for **Apogee Electronics** (Santa Monica, CA) is **Jeremy Stappard**...Filling the newly created position of **Universal Audio's** (Santa Cruz, CA) director of product management is **Scott Church**...**John Sexton** is **Ashly Audio's** (Webster, NY) new national sales manager...Distribution deals: **Yamaha Commercial Audio Systems** (Buena Park, CA) adds **R. Joseph Group** (Indiana, Kentucky, Ohio, West Virginia and Western Pennsylvania) and **Highway Marketing** (Texas, Oklahoma, Arkansas and Louisiana) to the Nexo rep team; **Audient** (Hampshire, UK) expands its distribution in the U.S. with **FDW Corp.** (Madison, WI); **Northeast Marketing** (Wallingford, CT) will handle New England and upstate New York areas for **Ultrason** (Wildomar, CA); and **Harman Professional** (Northridge, CA) names **Hi-Tech Audio Systems** as distributor for India.



Jeremy Stappard



Matt Peskie

on the move

James Albhorn
Shure VP of finance/
CFO

Main Responsibilities: all company financial functions and strategic counsel as member of the company's executive staff.

Previous Lives:

- 1997-2009, Tuthill Corporation VP of finance/CFO
- Deloitte & Touche, finance and auditing positions

The best thing about working in this industry is...working for an audio company is much cooler than working for a company that made process pumps for wastewater treatment.

When I'm not in the office, you can find me...running. I have run the Chicago Marathon twice and I try to run four to five times a week.



Mix Master Directory Spotlight

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

Millikin University, Studio Pressure Night

Studio Pressure Night is a unique lab experience that puts Music Industry majors in a real-life studio pressure-cooker environment. Students bring their skills during a weekly "Tuesday night to Wednesday morning" recording session under the direction of a faculty producer. Completed productions are evaluated for "things to work on." The course is taught by David Burdick.



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GRACE DESIGN HITS 15 YEARS



Eben Grace (left)
and Mike Grace

"Fifteen years has flown by. It seems like yesterday that Mike [Grace, founder and chief audio designer] and I were scrambling to bolt together the very first model 801 in our old basement shop."

—Grace Design co-founder, equipment designer and marketing manager Eben Grace

SESSIONS

Program Changes at Peabody Institute

The Peabody Institute (www.peabody.jhu.edu/recordingarts)—the music school within Johns Hopkins University—has been a respected training ground for musicians for more than 50 years, and for classical and jazz engineers for more than 25 years. The program's emphasis on the mathematics and science behind engineering and acoustics, and on high-level instrumental performance and composition, means that a bachelor's degree takes five years to complete and results in a double-degree either in performance and engineering, or in composition and engineering. Now with director Scott Metcalfe onboard, Peabody is broadening its musical horizons.

"The philosophy has always been to emphasize classical and jazz music and production," explains Metcalfe. "I'm shifting the program so the focus isn't so largely on classical and jazz. Though my experience is more in classical and acoustic music recording, engineering and production, I want students to be able to handle a rock session, folk, jazz, et cetera, but still be equally qualified to record an orchestra or a string quartet."

In addition to revamping courses and adding faculty, Metcalfe added an assortment of outboard processing hardware to Peabody's studios.

"In recent years, we installed a Sony Oxford console, and upgraded to Pro Tools HD3 running Version 8 software, a Pyramix MassCore System and a TC Electronic System 6000," Metcalfe says. "This past summer we added API parametric and graphic EQs, a UREI LA-2A and an 1176 alongside our existing Lang EQs, 1178 and two LA-4s [modified by Eddie Ciletti]; two Distressors and a Fatso Jr; Chandler Red Devil EQs and compressors; mic pre's from Great River, Millennia, API and Grace Designs; a Z-Systems mastering EQ; a Manley Vari-MU compressor; and a pair of dbx 160 compressors.

"The advantage of having these analog devices is that even if our students are using plug-ins, if they call up an optical setting on a Waves compressor, for example, they know what that refers to and what sound they're going to get because they've used the device on which the plug-ins were modeled.

"Some projects they do are



PHOTO: ED TEFREAU AND SCOTT METCALFE

Studio A features a magnificent Steinway D grand piano.

Scott Metcalfe is the new director of Recording Arts and Sciences at Peabody Institute

PHOTO: BILL MORGAN

completely in the box, either Pro Tools or Pyramix," Metcalfe continues, "but on some projects, the DAW is used just as a tape machine, and everything else is done on the console with outboard gear, and they're fully mixing on faders. We give them the opportunity to see what works best for them, or for their project."

Peabody's performance spaces are wired to the studios to accommodate large-ensemble recording, but soon, it may be just as likely for a student to be tracking guitars in the studio as setting up a Decca Tree on an orchestra.

"Students will be able to borrow techniques from a rock/pop-style production and apply them to a 20th-century classical string quartet," Metcalfe says. "A classical engineer might think of something different from what someone out of the rock 'n' roll handbook would come up with, but either approach might be appropriate for that composition." —Barbara Schultz

project studio Axis Sound



PHOTO: BEN ROWLAND

Jesse Lauter tracks in Axis Sound (pictured) and often mixes in his home studio.

Jim Anderson, current AES president and a professor in the Clive Davis Department of Recorded Music at New York University, pointed us to this month's project studio owner, Jesse Lauter. A graduate of the Clive Davis school, Lauter is now one of three partners in Axis Sound (www.axisound.com), and mixes in his own living room studio, Oquestern (pronounced Western).

Lauter actually began his engineering career before entering NYU. He worked as a second at ZAC Recording in his hometown of Atlanta before earning admission to the Clive Davis Department in 2005.

"To my mind, this school has one of the most outstanding faculties," Lauter says. "My sophomore year, I had as my studio teacher Nick Sansano, who worked with Sonic Youth and Public Enemy. My writing teacher was revered critic Robert Christgau. My junior year, I had Bob Power as my studio teacher; he produced The Roots, D'Angelo, all sorts of great acts. My senior year, I had one-on-one sessions with Tony Maserati and Kevin Killen. I was

Pool Party

This past September marked the grand re-opening of London's unique The Pool studio (www.miloco.co.uk/studios/pool). The facility was redesigned and rebuilt, and now includes an expanded control room that over-

pressive collection of vintage analog outboard gear. Acoustic panels are covered with blue fabric (carrying on the pool theme); other improvements include new AC and lighting, and a new high-def flatscreen TV.



The reburbished Pool Studio re-opened with a new design and vintage gear.

looks the live room, where a drum booth was also added.

The new control room is situated at the front of the studio on what was the loading bay; it's built around a 30-channel EMT console and Genelec 1031 monitors. Also on hand is an im-

The Pool is run by Miloco, which owns numerous other studios in the UK and abroad, including The Square, The Garden, Assault & Battery and The Engine Room. A "Refurb Blog" on the studio's Website offers an insider's view of the studio renovations.

by Barbara Schultz

pretty spoiled, and I'm not ashamed to admit it!"

Lauter also maximized every extracurricular recording opportunity. He tracked an entire album for country-soul group The Woes while he was in school, as well as seven tracks with Smokey Hormel's Roundup with fellow student Sean O'Brien, and a full-length for the Low Anthem.

"One of the great advantages of going to an engineering school is, during the holidays I could get gear from kids who were out of town," Lauter recalls. "I went to Block Island, which is 10 miles off the coast of Rhode Island, and set up a studio there. That [Low Anthem] record has had great success; they got signed to Nonesuch Records off of the album I worked on [*Oh My God, Charlie Darwin*], which got reissued and remastered by Bob Ludwig."

Now, Lauter does most of his tracking in Axis Sound (New York City), which he owns with founding partners Steve Rossiter and Jeff Peretz. The studio is centered around a 32-channel Soundcraft Ghost console, a Mac G4 running Pro Tools HD6 and JBL 4408 stereo monitoring. Also key to the Axis operation

are outboard pre's and processing such as API 2500 bus compressor, two API 550B EQs and 512B mic pre's, Ampex MX-10 4-channel vintage tube line mixer/mic pre, two Vintech 1272 2-channel Neve clones and two Empirical Labs Distressors. The studio also uses plug-ins such as the Waves TDM Platinum plug-in bundle, and an assortment of mics from Neumann, Lawson, Royer, Electro-Voice, Shure and Sennheiser.

"The studio is in an old apartment building in Hell's Kitchen," Lauter says. "We have the whole building. You walk in and it's a total ghost town, but that's great because we have this wonderful stairwell that I mike all the time. The room acoustics are very dead, even though it's an open studio—there's no glass wall between the control room and the live room."

Some of Lauter's other credits, at Axis and beyond, include James Blood Ulmer, The Miamis, Ingrid Michaelson and Alana Amram & The Rough Gems. For information about Lauter's home mixing room, visit www.mixonline.com. ■■■

Track Sheet

Singer/songwriter Andrea Nardello visited Range Recording Studios (Ardmore, PA) to begin work on her new full-length album with a band of

musicians from her home state of New Jersey: Christie Lenée (lead guitar/backing vocals), Phil D'Agostino (stand-up and electric bass), Dave Eckman (saxophone) and Dante Bucci (drums/congas). The sessions were produced by Aaron Levinson and recorded by chief engineer Brian Ritrovato... Peter Grueneisen of nonzero\architecture announced the completion of Hans Zimmer's new Remote Control Productions (Santa Monica, CA) facilities. Grueneisen designed the 7,000-square-foot complex, which includes five composing suites, four music-

edit rooms and a shared lounge with outdoor deck...Phoebe Snow tracked an upcoming album in Skip's Place (Northridge, CA) with producer Chris Coleman and engineers Skip Saylor and Ian Blanch...Avatar Studios (NYC) hosted sessions with Tori Amos, who recorded in Studio C with producer Marcel van Limbeek, engineer Mark Hawley and assistant Justin Gerrish. Joshua Bell and Regina Spektor were in Studio A at Avatar, working with producers Steven Epstein and David Kahne; Todd Whitelock engineered and Aki Nishimura assisted.



Andrea Nardello in Range Recording

Send "Sessions" news to bschultz@mixonline.com.

NEW YORK Metro

by David Weiss

I magine if they'd had the Internet available at the same time that the masters of classical were in full swing—how would a good Website have helped out Herr Mozart when he launched *Don Giovanni*?

It's too bad that Vienna's bad boy of opera didn't have access to Walt Ribeiro (www.waltribeiro.net) back in the day. A prolific composer who finds his own muse in the expansiveness of classical music, Ribeiro's career path represents an ideal synthesis of production, educational ability, marketing savvy and online instincts essential for artist/producers in the 21st-century.

Ribeiro's love for classical arranging began when he was studying music at The University of the Arts in Philadelphia. "I like options," he says. "It's one thing writing for a four-piece band, but

friends," says Ribeiro, who frequently sported a Mohawk in his videos as he pontificated on pizzicatos. "When you're building a community/fan base, you're also building a 'friend base.' Now I've got thousands of friends I've helped along the way, and they've helped me. So while I was gaining an understanding of how the Internet worked, I gained a musical community also."

Ribeiro's Internet traffic has steadily grown, opening the door to significantly monetizing his site via such avenues as sponsors, affiliate marketing relationships, digital downloads, merchandising and more. Along the way, Ribeiro has made a number of observations on what actually constitutes online success.

"People always go for high numbers, saying things like, 'I need 50,000 e-mail subscribers tomorrow,'" he explains. "There are three things wrong with that. First, with that mindset you're looking at the numbers rather than the connection—you're better off with 500 tight subscribers than 50,000 who aren't engaged. The next

thing is that after you get connected, you have to stay connected so you develop strong relationships. The third thing that's wrong is that they want it all to happen overnight. A real community takes a long time to build, but it also takes a long time to break."

Ribeiro was fortunate to have found a window of opportunity with his music lessons, but he also believes that every producer, engineer and artist has his or her own unique angle that they can work on the Web. "Everyone is using the Internet for everything because of how convenient it is," Ribeiro points out. "If you have a trade, it makes sense to go online and do an audio or video podcast. Even as you're sleeping, people can find out about your service, which can translate into business.

"If you're passionate about something, then there are millions of other people who are just as passionate about it and want to know about it. So you should pay it forward, and give your knowledge to people who want to learn as much about it as you did. If you have skill or knowledge, you can turn that into a podcast or some other interesting market online presence that will help you to connect with people and stay connected. And it's free: The Internet costs nothing, yet you have all of this real estate that you can conquer and then monetize via sponsors, Google AdSense, affiliate deals and subscriptions, plus direct sales of content."

As a man who likes options, Ribeiro has a new world he's conquering with his latest offering, fororchestra.com. Stocked with his fresh orchestral arrangements of "guilty pleasures" by the likes of Lady Gaga, Michael Jackson, Madonna and more, the site satisfies his classical cravings while allowing him to take his social-networking skills to original places—online and offline.

"I always enjoy new takes on things, and so much has happened to me because of my podcasts," Ribeiro says. "I'm always learning new things and making new friends. When you're locked away in your studio writing music, you can forget there are such things as hiking, or Pittsburgh or a buffet-eating contest in Mississippi that one of your students told you about. There was just so much more about life that I've learned from connecting with people." III

Send "Metro" news to david@dwords.com.



Walt Ribeiro creates music-education videos in his home studio.

writing for a bassoon, flute, cellos, violins and percussion is so much more adventurous. It makes you excel as a composer."

Shortly after graduating from college in 2006, Ribeiro came out with his first album of original music, *1.1*, an exquisitely arranged and performed all-MIDI affair recorded in his west New Jersey home studio. "I started trying to market *1.1*, and I was not doing it successfully," he recalls. "Marketing it through TV or magazines was too big a jump for me, so that's when I started looking into online marketing."

Ribeiro began to scour the Web, and before long he'd picked up on an angle that he thought might get him noticed: video music lessons. "I looked online and what was there was buried or else simply didn't exist," says Ribeiro, who is now New York City-based. "I've always been really good at music lessons because people can relate to me, so I became interested in giving my knowledge to other people.

"My first video was called *How to Read Music*. I uploaded it to YouTube in 2007; let it sit, sit, sit; and it got a lot of views over time—now it has over 230,000 views. That's when the light bulb came on over my head, and I said, 'People enjoy my teaching! Maybe I can do this full time.'"

From there, it was full speed ahead, as Ribeiro discovered that he had razor-sharp instincts for bending the Web to his will—at the same time, the human factor was always forefront in his mind. "As I continued this course, I acquired thousands of followers and

"Amazing desk guys,
Thanks for making
my job easier!"

Pro.

Tools.

"I just spent the last two weeks doing overdubs at Blackbird in Studio E on the 1608. Wow, this is an amazing sounding console; so punchy and open on the top end. The preamps are huge! In the box or outside the box, everything should pass thru this console once. Amazing desk guys, Thanks for making my job easier! Cheers!"

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NASHVILLE

Skyline

by Peter Cooper

There were a couple of ways to look at the situation. "Well, I knew it was going to be a challenge," says acoustician David Rochester, who runs Technical Audio Services and who has been hired by Belmont University to help resurrect Nashville's famed Quonset Hut. One can view such a project as a chance to shape history. One can also view it as a whale of a task. "Most people don't

for what is now Music Row. The hut was attached to Bradley Film & Recording, and it preceded RCA Studio B, which opened in 1957. The Bradleys sold the building to Columbia Records in 1962, and it remained in heavy use until 1982, when Columbia dismantled the studio and used the space for its art department.

"It was always a half-pipe setup, kind of like half a Coke can stuck on the ground, but it was a great vibe room for the way they recorded at the time," says Janas, who had worked as studio manager at RCA Studio B and who began overseeing the Quonset Hut's revitalization in 2007. "We initially planned on trying to re-create 1962, but ultimately we found out that we were better off taking a different route."

Enormous expense was one barrier to replication: The wood that featured prominently at the original Hut was relatively inexpensive in the 1960s, but not so much in the new century. But Janas, Rochester and others on the project also realized that while the original studio was intended as a place to record music live and without headphones, the new model would need to bolster the experience

of students who sought to learn about new-era audio engineering. It would also need to multitask and be appropriate for classroom sessions and meetings.

"I've done a lot of projects, but none that prepared me for this," Rochester says. "I've never dealt with a place where all the energy focused back to the center of the room. We had to distribute the sound evenly and not over-dampen it. It needed to still have some life and musicality. And Mike Curb's request was to leave it so you could tell it was a curved ceiling, and that's another challenge.

Roughly half of the material used for diffusion was purchased, while the other half was custom-made by Rochester's team. Among the hand-crafted items are the big polydiffusers on the side walls, made of bendable plywood. Much of the diffusion system was made by Novawall, which produces fabric walls and ceiling systems. The barnwood paneling of the Quonset Hut's heyday, a backdrop for television shoots, is no longer present.

In the control room, students will learn signal flow via a 24-track Toft Audio Designs console. Curb's "Audio 1" class moves between the Quonset Hut and RCA Studio B, and Janas wanted the monitoring system to be the same in both studios, so the Hut now features Mackie 824s and Yamaha NS-10 near-field monitors. There is also a supply of classic outboard gear (Teletronix LA-2A compressor, UREI 1178 stereo compressor, etc.) and some not-so-typical gear.

"We have some mic pre's that we build ourselves here at Belmont," Janas says. "Our maintenance class builds these 6-channel pre's with some technology based on API, some based on Sphere and some based on Millennia."

The Quonset Hut's microphones and other original gear were sold in the early 1980s to various buyers, but at least one major recording tool remains. "We do have the original reverb chambers here," Janas says, smiling and pointing to the back wall. "There's a tech shop right behind the control room, and the chambers are right above the tech shop." ■

Peter Cooper can be reached at peter@petercoopermusic.com.

PHOTO: MICHAEL KROUSKOPF, COURTESY OF BELMONT UNIVERSITY



The Quonset Hut retains its curved ceiling but appears quite different from the studio where Owen Bradley produced hits for Patsy Cline and others.



Belmont studio manager Michael Janas at the Toft Audio Designs console

PHOTO: PETER COOPER

build a studio in a half-pipe," Rochester says. "The eight-second reverb time in the room was probably the biggest part of the challenge."

For months, the studio where Patsy Cline's "Crazy" and Brenda Lee's "I'm Sorry" had been recorded was a cacophonous environment, as carpenters pounded drywall and cringed as each bang of the hammer was echoed and amplified. But in the end, a room that had been closed for studio business since 1982 was resurrected as a working studio and as a classroom for Belmont University's Mike Curb College of Entertainment and Music Business.

"Part of the students' experience is understanding the history here," says Belmont studio manager Michael Janas. "Students approach a sound engineering class differently when they realize they're standing in a space where Johnny Cash recorded, or that they might be standing on the very spot where Patsy Cline sang 'Crazy.'"

Built in the 1950s by Owen Bradley and his guitar-playing brother, Harold Bradley, the Quonset Hut became an essential building block

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L.A. Grapevine

by Bud Scoppa

North Hollywood's Track Records, built in 1980 by producer Brian Ahern for his then-wife Emmylou Harris, is under new ownership. In early 2008, the facility—one of the last to be constructed during the golden age of L.A. rock studios, and the birthplace of memorable hits from Jane's Addiction to Maroon 5—was renovated by A-list writer/producer Harvey Mason Jr., who upgraded the two-building complex and renamed it Mason Sound. Since then, it's been the site for all of his projects, with such clients as Jennifer Hudson, Britney Spears, Leona Lewis and Whitney Houston.

Harvey Mason Sr., a jazz drummer and longtime member of Fourplay, was signed to Arista while I was doing West Coast A&R at

recording spaces were left intact. The earth tones of the décor evoke Track Studios' retro vibe while feeling thoroughly contemporary.

Mason Jr. and Sharp give me a quick tour, first upstairs, which boasts a roomy, well-appointed lounge with a recess in the wall just big enough for him to stretch out his long frame and crash or chill out and watch TV on the flat screen. "It's my private spot," he says.

We descend the stairs and head down the long hallway—its walls covered with rows of Mason Jr.'s Gold and Platinum records—to Studio B. Aside from some tasteful cosmetic touches and a major main speaker system overhaul, B is essentially unchanged from its original state, though the previous owners installed a late-model, 80-channel SSL 9000j in the 20x21-foot control room, adjacent to a righteously old-school 30x40x18 tracking room, which was recently used to record strings and a choir for the soundtrack.

Down the hall in Studio A, the first thing that catches my eye is the looming row of four brown lacquer custom Augspurger subs spread across the floor in front of the glass separating the control room from what was formerly the recording space, which Mason Jr. has converted into a weight room as well-stocked with iron as Gold's Gym. Between those honkin' woofers and the stacks of weights, the feeling of power is palpable.

"This is where I am most of the time," says Mason Jr. "Every record comes through here, writing-wise and track-wise. When I finish, we mix in B." Gone is the E Series SSL that formerly dominated the room. A is now a state-of-the-art Pro Tools workspace. Mason is running Pro Tools 7.3 and Logic 8 on a pair of Mac G5s, along with a third G5 for throwing down quick mixes.

One of his most in-demand skills is producing vocals, and he has a tried-and-true methodology of recording singers. "I've been using a Sony 800G since 2000," he says. "It's a really clean, simple microphone that's very true. It doesn't have any crazy boost on the high or the low; what you put into it you get back. I like my vocals to be pretty bright, but the high end on the Sony is very smooth. I find that some of the vintage mics aren't transparent enough on the high end for my taste. I've been using an Avalon M5 mic pre since day one, and usually a Summit TLA100 compressor. That's the magic formula—and if you tell everybody that, I may be out of work," he says with a smile.

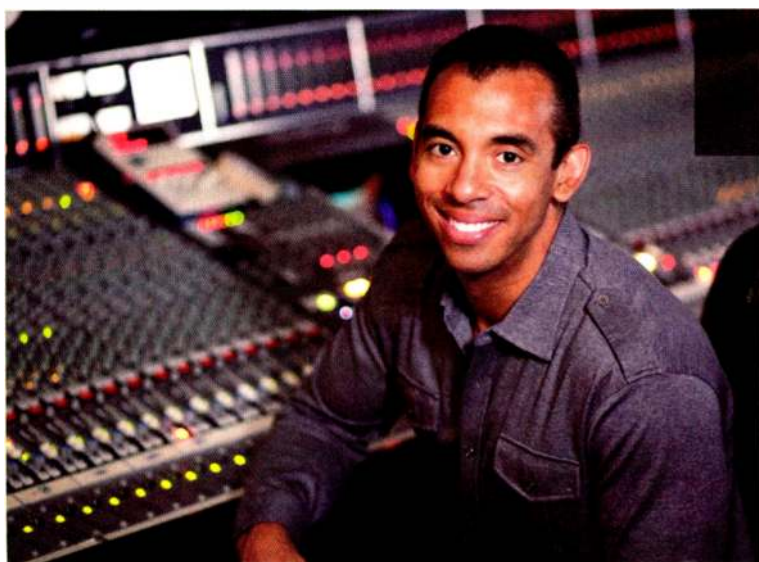
"Mix-wise," he continues, "I use a bunch of vintage gear like Neves for EQ, UREIs for compression and several TC Electronic 3000s that I use at times for reverb."

Mason Jr. continued to produce and write high-level projects while shepherding the *More Than a Game* film project through the Hollywood gauntlet, and then creating the soundtrack from scratch. This guy is obviously a multitasker.

"I've got a big head—I wear a lot of hats," he deadpans, and Sharp laughs knowingly. "We've been together for 23 years," he points out.

"Harvey expects to be here for a long time," says Sharp, looking completely at home in their spiffy new crib. It's gratifying to see such an important piece of L.A. recording history in such good hands and being put to such good use. ■

Send L.A. news to Bud Scoppa at bs7777@aol.com.



Harvey Mason Jr.'s new domain is the former Track Records facility in North Hollywood

PHOTO: DANIELING-HANWARD

the label in the late '70s and early '80s, and it's cool that Harvey Jr. is now working with Clive Davis, just as his dad once did. They worked together on two tracks for Houston's comeback album, *I Look to You*, meeting during Davis' frequent visits to L.A. in his bungalow at the Beverly Hills Hotel. "Clive still gives as much input as ever," says Mason Jr., sitting alongside his wife, Jeannine Sharp, on a leather couch in one of the studio's comfortable lounges.

The younger Mason practically grew up in studios before dedicating himself to basketball. At the University of Arizona, he played for legendary coach Lute Olson on a team that made it to the 1988 Final Four before blowing out his knee. Fortunately, he had another elevated skill set, and soon after graduation began his career in music. More recently, Mason Jr. combined his two loves, producing the LeBron James feature documentary *More Than a Game* and executive producing the soundtrack out on his own Harvey Mason Music, a joint venture with Interscope. Much of the work was done right here.

The retired Olson and several of Mason Jr.'s Arizona teammates attended the movie's premiere the weekend before I visited, and Sharp says her husband is "still coming down from his big night. That project was his baby."

He began working at Mason Sound in early 2008 after spending six months on the renovation, "getting it to feel right," says Mason Jr.. Common areas were stripped down to the walls and studs—but

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New Classrooms

There's an art to creating a space that serves the dual purpose of professional-level studio and classroom. Pictured here are a selection of new and redesigned studios within colleges and universities—studios that give tomorrow's engineers the opportunity to get their hands on pro-level gear and learn the tricks of the trade.



For a full list of schools, visit mixguides.com/education.



PHOTO: JAY HENRY



Southwestern College

(Chula Vista, Calif.)

Carl Yanchar of Carl Yanchar Design developed the main studio for the Center for Recording Arts & Technology at Southwestern College (www.swccd.edu).

The control room (pictured) is equipped with an SSL Duality console and full-range YDCG stereo monitors, as well as a JBL LSP 4338P 5.1 surround system. Tielines to the adjacent 1,590-square-foot rehearsal space allow recording of up to 55 musicians. The 1,175-square-foot tracking room is treated with maple hardwood and fabric panels, and can be subdivided with sliding glass doors to create two separate isolation rooms.

Musicians Institute (Los Angeles)

Kaufman & Associates Architecture & Acoustical Design converted an unused hallway and storage room into the Musicians Institute's (www.mi.edu) new THX-certified dubbing theater. The 800-square-foot room is equipped with a 48-channel Digidesign ICON D-Control, Pro Tools HD6, JBL 3632 and 4645 monitoring, Stewart Microperf X2 screen, a Panasonic PT-AE2000 1080P projector and Dolby Lake processing. This theater supports the school's new Post-Production Audio program, which offers small classes and workshops focused on applied hands-on learning.



PHOTOS: JAY BAUFMAN



Art Institute Studios

The Art Institute's (www.artinstitutes.edu) system of more than 40 North American schools provides courses in design, media arts, fashion and culinary arts. A push to expand and upgrade its audio production facilities resulted in the opening of several new studios during the past year.

Washington, D.C.

Jack Chester, director of facilities for The Art Institute of Washington, D.C., contacted the Walters-Storyk Design Group to redesign the college's existing 1,200-square-foot complex. Included are a 500-square-foot live studio, a 350-square-foot control room, a 135-square-foot multipurpose Sound Lock, 100-square-foot iso booth and a 140-square-foot machine/storage room. The facility is used for students' music projects. Featured equipment includes an SSL AWS 900 console, Genelec 1038 main monitors and Dynaudio AIR 15 surrounds. WSDG also designed an SSL Duality-centered facility for the Art Institute's Austin, Texas, campus this year.



PHOTO: WALTER SWALING



PHOTO: JIEGEN NICCAI

Los Angeles

The Art Institute of L.A.'s new studio was designed by Peter Grueneisen of nonzero\architecture's studio bauton. Situated in the middle of a busy campus building, the facility's tracking/mixing studio includes a control room and tracking room with an extended rear area for student seating and class participation. A machine closet separates noisy equipment racks from the mix room. Red cotton panels provide sound absorption and, with the black wood trim, pick up the school's colors. This studio is used for tracking, mixing, post-production, animation and game-cinematics projects. Featured equipment includes an SSL C200 console, Pro Tools HD3 and JBL LSR4300 5.1 monitors.

Gold Studio, MediaTech Institute

(Houston, Texas)

Engineer Skip Burrows designed this new studio within MediaTech Institute's Houston campus; the facility serves Burrows' commercial clients, as well as projects done by students in the school's music recording and post-production departments. Final exams for the post-production students require them to choose a movie of their selection; obtain actors, voices, music and sound effects; and apply to film with the proper timing and balance. The studio is centered around a 32-fader ICON D-Control console. Monitors are Genelec 1029 surrounds; Genelec 1031As are also on hand as are Yamaha NS-10s. Burrows implemented a blend of acoustic treatments from RPG, Auralex, Pac International and Acoustic Systems to vary the stone room's acoustics. Motorized curtain panels are used to dampen reverb time.

PHOTO: SKIP BURROWS





American University (Washington, D.C.)

The Mixing Suite, which serves American University's (www.american.edu) Audio Technology program, was renovated this past summer to accommodate a new 32-channel API 1608 console. The studio is used to develop analog mixing techniques in stereo and 5.1 surround. In addition to the new board and updated acoustic treatments, equipment upgrades include the addition of Avedis Audio and A-Designs EQs, Argosy and KK Audio racks, Pro Tools HD2, Focal and Genelec monitors, SSL XLogic and more. The university plans to further upgrade and expand its studio facilities, and has retained the Walters-Storyk Design Group to design a complex of new studios in the coming year.



From left are American University's Michael Harvey (assistant professor), Matthew Boerum (studio manager/adjunct professor) and Paul Oehlers (director/assistant professor)



Cuyahoga Community College (Cleveland, Ohio)

The new Walters-Storyk-designed complex at Cuyahoga Community College (www.tri-c.edu) includes seven recording studios, three multistation labs, a 5.1 surround classroom and a two-story, 3,000-square-foot, green screen-equipped soundstage/TV studio. All of the rooms feature A/V production panels that allow multichannel recording via a 192-channel, three-network Aviom Pro64 A-Net system. Pictured here is Studio A, with its 48-input SSL Duality console, ADAM S6VA Mk2 monitors and 48 tracks of Pro Tools HD3. This room is used for recording and mixing labs, student capstone and college record-label projects.

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Webster University (St. Louis)

Webster University's digital suite, Studio D, was designed by Paul Hennerich of Pan Galactic Recording. The studio was conceived as a critical listening space that also serves as a classroom for teaching digital theory and practice; the university plans to expand uses for this room to include



Professor Paul Hennerich with student Cate Cearley

courses in mastering and mixing for 5.1 surround. Featured in Studio D is a Euphonix Fusion System 5 console supplied by Ozark Audio and coordinated by Lee Buckalew of Pro Sound Advice. Also included is a RADAR 24-channel hard disk recorder, Tascam DV-RA1000 master recorder, Genelec 1031A monitors, and Macs/PCs running Pro Tools, Nuendo and Final Cut.



Students Robert Hallmark (left) and Jeff Harder at the ICON

Tools HD, and finally have the opportunity to work on a Neve Genesys console with 32 I/O of Apogee converters. All of the SAE control rooms are also fitted with outboard gear from Focusrite, TLA, Neve, SPL, Lexicon and TC Electronic. Monitors are from Boxer, Genelec, Blue Sky and KRK. III

SAE Institute (San Francisco)

SAE's sixth U.S. campus opened this year in San Francisco. Students begin the program with the use of the school's Mackie 8-Bus-equipped studio; they later progress to working on an SSL AWS 900 (pictured) and Euphonix Artist Series MC Control and MC Mix. They also complete music and post-production projects in the 5.1 Digidesign ICON room using Pro



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Setting The Course

Online Education Offers New Paths to Learning

By Sarah Jones

Distance learning has come a long way. Once the domain of dubious “as seen on TV” correspondence courses promising diplomas in such arcane disciplines as air conditioning installation and VCR and gun repair, distance education has entered the mainstream. Today, institutions ranging from the Ivy Leagues to local K-12 programs offer virtual coursework on their Websites, iTunes, YouTube and Second Life. Originally designed for working adults, online courses are now a real component of every phase of “traditional” education, and for a generation brought up on the Internet, the transition is seamless. According to the U.S. Department of Education, 66 percent of post-secondary learning institutions offer distance learning programs, with 12.2 million enrollments in college-level credit-granting distance education courses in 2006-07.

The immediate benefits are obvious: Online courses offer flexibility and convenience; and students can usually log in anytime, anywhere. Classes are generally available on an affordable a la carte basis—and with the average yearly tuition at a four-year college creeping over \$25,000, cost is certainly a consideration.

Distance learning works well for many, but not all, aspects of audio education, which has never followed a “one-size-fits-all” approach and—unlike age-old disciplines such as math, pure science and humanities—evolves quickly with technology. Critical listening is still the province of being in a good room, with a good

set of ears, but students can learn advanced mixing techniques, composition and songwriting, and even complete gear certification through media-rich learning modules and live lectures, videoconferencing and active forum discussions.

Web-based audio curriculums are exploding: Berkleemusic.com, which is largely recognized as the pioneer of online audio education, leads the market with the world’s largest catalog, offering more than 100 accredited courses and 30 certificate programs to more than 25,000 students in 90 countries. SAE recently launched an online school offering classes that range from hobbyist to the master’s level. And Full Sail Online, which offers 12 complete-degree bachelor’s and master’s degree curricula, has expanded from 30 employees and 12 students in 2007 to 220 employees and 2,200 students in July 2009, with growth expected to double in the next year.

Beyond Classroom Walls

Distance learning is based largely on the idea that communication doesn’t need to happen in real time, face to face to be meaningful. “I think that this notion that we all have to be in the same room together to learn is really a myopic view of what the learning experience can be,” says Luis Garcia, VP of Full Sail Online, which is slated to add 200 teachers to its program by next summer. “You don’t have to be in the same room with an instructor telling you what’s already in the book to be learning.”



This notion that we all have to be in the same room together to learn is really a myopic view of what the learning experience can be.

—Luis Garcia, Full Sail

Garcia notes that Full Sail was late to online education—for a reason. “Online education has been around for about 20 years, but it had really started as an extension course, correspondence education,” he explains. “We didn’t think that the technology was there for us to deliver the type of quality education that we deliver on campus.” In 2005, the school decided that com-

puters and bandwidth were fast enough. They launched a pilot program of a few courses for their on-campus students, and after two years offered their first online program. “Every two or three months, we launched two or three additional programs,” says Garcia. “Two years later, we offer 12 online programs.”

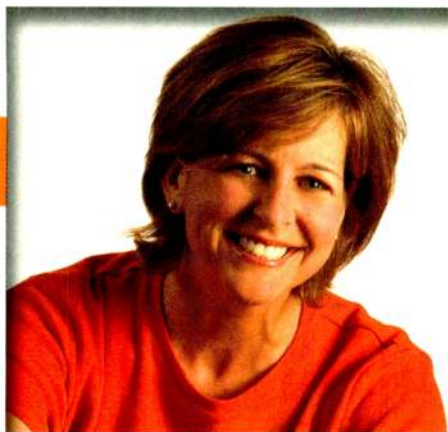
puter suites tailored to their degree programs that will be the centerpiece of their learning experience. “The MacBook Pro is not only a powerful tool for media creation, content creation, but it is a powerful communication platform,” Garcia says.

At Berklee College of Music, distance learning tools are a far cry from the mail-in music theory correspondence courses the school of-

fered back in the '50s, but the goals are the same: to connect Berklee’s instructors and curricula with a global network of musicians. According to Debbie Cavalier, Berklee’s Dean of Continuing Education, the scope and learning outcomes for Berkleemusic.com courses are similar to Berklee’s face-to-face environment, but the path to get there is different. “We’ve structured our online courses to address many different learning modalities,” she says. “Text, audio, video, live chat, discussion board activities, Flash interactions and hands-on projects are all provided throughout the lessons to help students gain knowledge through their preferred learning style.”

and instructor throughout the 12-week term.”

Cavalier adds that Berklee’s online classes are ideally suited to hands-on learning. “For example, a Mixing and Mastering in Pro Tools course may include a lesson topic on applying parallel compression to guitar tracks in a mix,” she says. “Students read about the concept, look at diagrams, watch the instructor demonstrate the technique in a movie file and then try to apply parallel compression with the Pro Tools session provided for that lesson. Each student uploads their version of the technique in their Pro Tools session for the instructor to review and critique.” Files are transferred via DigiDelivery, and students submit mixes as MP3s.



The class community becomes a vibrant online learning environment with lots of communication and musical exchange.

—Debbie Cavalier, Berklee

Full Sail’s online degree offerings include Music Business, Entertainment Media Technology and Internet Marketing. Curricula are complete-degree programs. (Classes are not available individually.) As part of the tuition fee, which ranges from \$28,000 to \$54,000 for a complete-degree program, students are given a “Launchbox,” an Apple laptop outfitted with software

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Free Resources for Students

Many schools offer free online lessons; while you won’t access professors or earn degrees, you can learn valuable information and sharpen your skills. Check out this sampling.

Berkleemusic.com offers more than 100 free lessons on topics ranging from fattening guitar tracks in Pro Tools to breath control for singers. youtube.com/user/Berkleemusic; more lessons are at the free Berklee Shares

site, www.berkleeshares.com.

MIT’s Hip-Hop course examines the genre’s political and cultural influences during the past 30 years. ocw.mit.edu/OcwWeb/Music-and-Theater-Arts/21M-775Fall-2007/Courses/Home/index.htm.

Loyola University’s Music Industry Studies series on iTunes U offers 16 hours of material, featuring lectures from guest artists such as Harry

Shearer, Kirk Whalum and Terence Blanchard.

Got a crazy plan to build the next iPhone whammy bar? Check out **Stanford’s course on iPhone application programming**: itunes.stanford.edu.

The Open Courseware movement, pioneered by MIT in 1999, was founded to provide free public access to high-quality course lectures and related materials (such as video, audio

and slides) in the form of online classes. Today, the **OpenCourseWare Consortium** is a global collaboration of more than 200 higher-education institutions and associated organizations offering educational content using a shared learning model. Thousands of classes are available through the OCW—MIT alone offers 1,900 courses, nearly its entire catalog, online. www.ocwconsortium.org.

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Media entrepreneur Chris Hambly has been developing online programs since he founded audiocourses.com nearly 10 years ago. Today, he is working with SAE to develop its SAEOnline school, which currently offers 22 courses in topics ranging from Sound Design for Film to Music Theory Using Logic Pro to Digital Mastering. The four-week courses cost about \$550 each and cycle each month. In addition to interacting with their professors, students are assigned Learning Advisors who help them navigate the courses.



I feel like I can get students involved in a conversation more easily in the classroom.

—Gary Gottlieb, Webster

"If we think of different generations of distance learning technology," Hambly says, "we can see that the model has shifted from one of broadcasting—or one-way—to two-way, or multidirectional, especially if we consider that all participants in a group can interact on various levels, both synchronously and asynchronously."

Hambly is adamant that the quality and standards of online courses are the same as face-to-face classes. "In addition, the curriculum itself should be identical," he maintains. "If the course outcome is to up-skill a student in preparation for a job in film scoring, there should be no discernible difference in the outcome, be it available on- or offline. The difference comes in the applied use of technology, how the student experiences their learning and how they communicate with their learning advisors."

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Hambly notes that it can sometimes be difficult for "traditional" teachers to create an engaging virtual experience. "You have to be tech-savvy and a skilled communication moderator; you have to get the students engaging with each other," he says. "In the virtual world, there is generally very little opportunity to use body language, gesticulation or even facial expression. Online instructors have to develop alternative skills to facilitate student participation."

Berkleemusic professor Erik Hawkins, who teaches music production courses such as Pro Tools 110 and Producing Music With Reason from his home studio in Los Angeles, says he strives to keep class content accessible and interesting to all levels of students. "Students who are new to music production can jump in at the basic level with videos and interactive Flash workshops, while more advanced students can dive into discussion questions at more length and tackle the extra challenge portion of a weekly assignment," he says. "There's something for every level, and you can pick and choose the materials within a lesson that best suit your personal goals for the topics presented."

Hawkins spends the first few weeks making sure that everybody understands the basics of the music software programs that the class is working with. "This frees up the remaining weeks for getting creative," he explains. "For ex-

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The model has shifted from one of broadcasting—or one-way—to two-way, or multidirectional.

Chris Hambly, SAE

ample, beginning in week eight of the Producing Music With Reason course, students start writing and producing their own song that I expect them to have completed, mixed and mastered by the end of week 12 of the course. And in my Remixing With Pro Tools and Reason course, students complete three remix sketches as a warm-up for producing a full-length remix beginning in week seven. It's an intense ride, but there's no better way to hone your music production chops than to apply the production techniques that I'm teaching in the lessons to actual projects."

It's not just the teachers who have to work harder at interacting online. Being an online student often requires an active and disciplined student, says Garcia. "The campus student is, in a sense, a less-proactive student because sometimes what you do is sit down in a classroom and receive information, and that's how you learn, whereas the online student has to go find information and learn from it."

"Oddly enough, it seems to me that the online environment returns us to the expert lecturing in front of the room, oblivious to the subtle feedback students give," says Gary Gottlieb, a longtime engineer/producer who runs the Audio Production program at Webster University in St. Louis. "Even though students are encouraged to post their thoughts and comments, I feel like I can get students involved in a conversation more easily in the classroom, while an online class lends itself more to the teacher teaching at the students rather than allowing the class to develop in an organic fashion."

"I am a big fan of online classes for some of the building blocks of an audio education, such as classes that are rich in theory and terminology," he continues. "The model falls apart to me when listening is involved. Audio aesthetics and critical listening require an acoustically reliable environment. It's hard enough to set up classrooms to be critical-listening spaces. Can I get a student to listen critically to something I send in an online class? I believe this to be the deepest problem in online audio classes—as soon as we get into critical listening and ear training, we are on very sketchy territory."

Terri Winston, executive director of Women's Audio Mission and professor of Recording Arts at San Francisco City College, says online education is a great way to reach people who wouldn't otherwise have access to training and to get more people interested in studying audio—but it has its limitations. "They can get introduced to the theory, history and the basic

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concepts of audio and then hopefully this motivates them to get into a studio classroom environment to learn the hands-on and workflow portion of the craft," she says. "Now, taking the online concept too far by eliminating the group learning environment makes it too comfortable and prevents students from learning the difficult and critical people skills that are required in this industry."

Winston believes online learning can augment training, but only a group, in-studio learning environment can teach studio etiquette, workflow, group dynamics and people skills. "One of the most important requirements to be successful in this industry is the ability to work well with people in high-stress situations," she says. "It's important for students to get themselves in those environments as often as possible so they can see what this actually feels like and learn what is appropriate behavior. You need to have the adrenaline of getting chewed out on a session to really learn that."

"There is no substitute for being in the room with great engineers and absorbing their techniques," Gottlieb adds.

That said, the notion of the "real world" is evolving, and smart students are exploring new models of working. "Global collaboration is taking place in all sorts of industries," says Garcia. "In recording, people are collaborating and working together more without being in the same studio. I think distance education actually prepares you for that new world, where you are working with people who you don't see, people you are not in the same room with."

Ultimately, online education is just like most things in life: What you get out of it is in direct proportion to what you put into it. "It is an utter myth that online or distance learning is simply a bunch of resources made available online—it is not," says Hambly. "What is essential is carefully crafted pedagogical systems where a relationship forms between the student and his or her peers and learning advisor. If potential students find that the courses are without appropriate advisor moderation and guidance, my advice is to stay well clear of them as you will not be getting a valuable educational experience. It is in the interaction, or, 'social learning,' where the real learning takes place." ■■■

Sarah Jones is the associate director of Women's Audio Mission, a San Francisco-based nonprofit dedicated to the advancement of women in the recording arts.



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MTSU Students Get a Crash Course in Professional Recording

By Tim Hall

At a chance meeting at our Mix Nashville event in May, we learned of this real-world recording project going on at Middle Tennessee State University. We asked graduate student Tim Hall to write about it for Mix's annual audio education issue. —Eds.

It was just another day at MTSU until 4 p.m. rolled around and 40 students, a string section, a drum corps, bass player, improvised choir, vocalist, two Grammy Award-winning engineer/producers, a few camera operators and myself walked into Studio B with only four hours to record every element of a song our professor, Dick Williams, had chosen to release internationally. None of us had met or rehearsed together, and we didn't know exactly what we were about to record.

But we had a student in the class with a great voice, Hannah Phillips, lined up to do vocals, one of the school's string sections to perform strings, Lalo Davila and his drum corps to lay down the beat and a pseudo-band pieced together from the rest of the class ready to put down some tracks. At one point, Dick announced that he wanted to record a choir. We didn't have one, so he asked the class, "Who can sing?" At least eight people raised their hands; Dick told them that they're our new choir and to get ready to record.

The vibe going into the session was an interesting mix of excitement and confusion—with a hint of the frantic from my end. Thankfully, industry pros John Lawry, John Jaszcz and Grant

Greene were there to coach us—all I had to do then was to set up the console for tracking, show Grant and John Jaszcz how everything worked, do the patching and then come up with a guitar part for the song while setting up to record it. Did I mention we started out with only four hours of studio time? We had to keep reminding ourselves that this was a class.

It all began when former VP of promotions at EMI Dick Williams came to teach a record label course at Middle Tennessee State University and decided to focus on international synergy. He had been a guest speaker the year before, and it got him thinking about giving back to the industry. After meeting with Chris Haseleu, chair of the Recording department, he signed up for the year, working pro bono; actually, they did pay him a dollar. His goal was to bring real-world experience to the classroom and to put out a product on the relatively new MTSU record label. He had the student and industry talent lined up, but he needed a song.

"I was channel-surfing one evening and stumbled upon a rerun of the movie *American Beauty*," Williams recalls. "In a poignant scene, Annie Lennox sings the Neil Young song 'Don't



Let It Bring You Down.' The song was stuck in my head for several days. Lyrically, it was an accurate depiction of the direction our economy was headed. And, musically, I could hear a similar arrangement, with some embellishment by incorporating the drum line from the university marching band and the string section from the school's orchestra. Most importantly, a Canadian artist wrote it. So it would fit the criteria necessary to demonstrate international synergy."

Once he had the song, Dick still had to get the players, and he found that it's not always easy to get every department at a big university working together. "I was naïve to university protocol and idiosyncrasies," he says with a laugh. "I'm a businessman, and when I see something that needs to be done, I figure out a way to get it accomplished. So I e-mailed Chris Haseleu to secure the musicians from the drum line and string players. He put me in touch with George Riordan, the director of the School of Music. George couldn't have been nicer, and was a great help. He connected me with Lalo Davila, the percussion instructor for the drum line and provided me with the necessary string players. We made up a choir out of our class members, and we got Tim [author] and Michael Dinse playing lead and bass guitar. In total, 40 students from the university performed on the track. It may have looked like an overly ambitious endeavor at the onset, but it was just another day at the office for pros like John Jaszcz, Grant Greene and John Lawry. I was very grateful that faculty member Cossette Collier and grad student Eric Jackson filmed the recording,

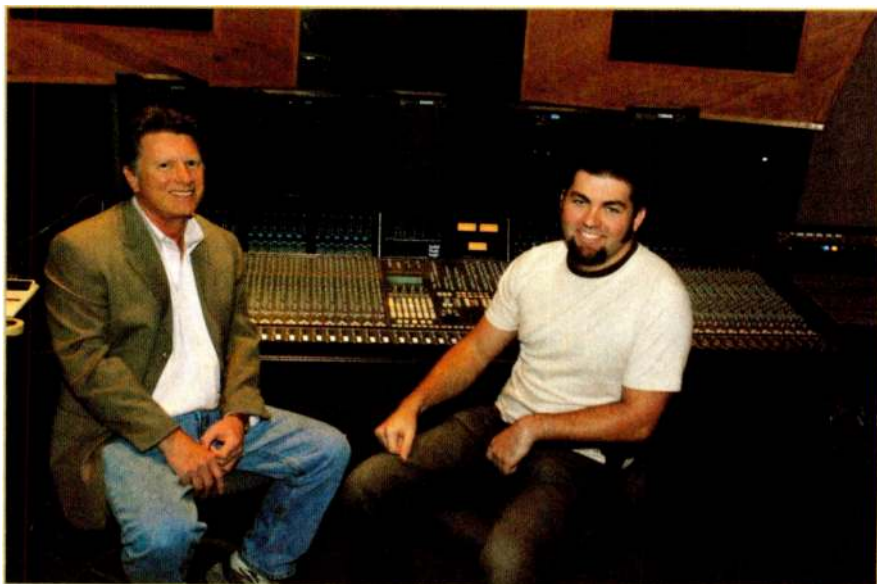
which can be seen at our Website, www.mtsu-records.com."

Once the players and times were secured, it was off to Studio B. Grant and I set some mics for recording strings with the help of a couple students while John Lawry began working on the string parts with the players. Grant wanted to use two Neumann TLM 170s set to omni as a spaced pair for the main room mics, so we set them up about eight to nine feet in the air, approximately six to 10 feet in front of the section and about 10 feet apart. We put those through a pair of Millennia mic preamps that sounded good enough to go straight into

Pro Tools. Then we used an ORTF pair of Sennheiser MKH 20s placed in the center of the section a few feet behind the conductor and a little bit above his head, also through a pair of Millennia mic preamps.

Studio B has a great-sounding large tracking room. Once John Lawry had them all together, the strings were starting to work well with the song. We didn't have to EQ or compress anything; it was already good and we wanted to save that for the mix.

I've had a lot of success recording drums (especially hard rock) in the main room there so it was no surprise that when the drum sec-



Top: MTSU students gather with label exec/teacher Dick Williams to track their version of Neil Young's song "Don't Let It Bring You Down." Above: Williams with grad student/engineer/writer Tim Hall.

Dick Williams and the Class

Former VP of promotions at EMI, Dick Williams has had a long and successful career with a hand in many hit songs from artists such as David Bowie, Lynyrd Skynyrd, Elton John, Wendy Moten and the list goes on. I had the pleasure of assisting his class last term by performing a lot of the engineering duties the class required, as well as acting as the temporary president of the newly renamed record label, MTSU Records. During the process, I gained much insight from the numerous guest speakers Dick brought in, as well as getting a first-hand look at what he wanted to do with the class.

Being that this was your first time teaching in a class setting such as this, what kind of things did you want to bring to the table?

My first inclination was to draw upon some of the gifted students at MTSU to fill my classroom. Ironically, as the semester was coming to a close, each of the recording classes put on display their most significant work in a two-hour listening session. This gave me a glimpse of the talent pool that I would be able to tap from. As you know, this is how you and Hannah Phillips were chosen to be the nucleus of the class.

The next step was to create an agenda that none of the other fac-

ulty members would have taught. So I chose to demonstrate international synergy. To do this with some degree of effectiveness, I called upon my friends John Jaszcz and Grant Greene to help me record something commercially viable. John and I had worked on several recordings together, and Grant, his assistant, is an alumnus of MTSU. They worked frequently at a studio owned by producer/arranger John Lawry.

How many people were interested in taking your class, and how did that inaugural class go?

After opening my class registration to anyone in the school interested in it, 42 students enrolled. To quickly recognize each of the student's capabilities, I devised an aptitude test covering a variety of subjects. I told the students on the first day of class, "You're not going to be graded on the results of this test. I just want to know your knowledge of the music industry."

I was pleasantly surprised to see such a diversified assemblage of students. There were those that aspired to be recording artists; others wanted to be producers, engineers, musicians, publishers, managers, record executives and songwriters. Some of them just took the

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class to gain a better understanding of the music business.

On my second class, I asked, "Who among you wish to be considered as artists that will have recording privilege?" Several students raised their hands. So I decided to have an audition on the following day of class. As the students entered the room, one of them, Jeffery Owens, pulled me aside and asked if it would be okay for him to sing a cappella as he didn't have a recording demo or music track to accompany him. There were eight students that wanted to be considered. When I asked who would like to go first, Jeffery volunteered. I was so moved by his courage; it really set the pace of my class for the entire semester. Everyone wanted to contribute in some way.

It really was something unique, getting all these students and the different departments working together. But you also went outside?

The success of the recording experience inspired me to call upon several of my former clients and music business colleagues to offer the students some guidance, motivation and knowledge from their personal experiences. Therefore, in addition to having a Grammy Award-winning production team, the students heard from recording artist Wendy Moten; Internet marketing specialist Greg Markel; CAA booking agent John Huie; world-renowned rock photographer Robert Knight; *Seinfeld* producer Tim Kaiser; guitar prodigy Tyler Bryant; my former promotion staff member and a current professor at Georgia State University Jim Davenport; and the former head of EMI Worldwide, Rupert Perry.

To cap off my semester, Bob Ludwig mastered our class recording project, and Deane Cameron, president of Capitol Records in Canada, agreed to press our CD and make it available to territories around the world. Now I'm prepared to do it all over again with a few additional surprises.

Jaszcz's Grammy Award-winning skills to mix the song at his place before it would get sent to Bob Ludwig for mastering. John Jaszcz put the song together perfectly and had each element sitting nicely within the track. He did a portion of the mix in the box using EQs and compressors by McDSP with some Waves SSL emulations and a few things by PSP, including that company's vintage gear emulations. The mix was then summed through a Raindirk Symphony console for that analog sound.

When everything was said and done, and Ludwig sent us back the master with a few dif-

ferent compression schemes from which to choose, Dick made his final choice and the song went on to duplication and distribution. It was a great learning experience for everyone who participated in the project, but that wasn't the end of the recording plans for MTSU Records. We still had a bunch of artists to record that semester, not to mention a new semester on the horizon. All I know is I had the opportunity to work with a lot of very talented and well-respected individuals in the music business that I'll never take for granted because an education like this is hard to come by. III

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Noah and the Whale, L-R: Violinist Tom Hobden, guitarist/singer Charlie Fink, drummer Doug Fink and bassist Urby.

By Blair Jackson

Noah and the Whale

BRITISH INDIE SENSATIONS SCORE WITH CONCEPT ALBUM

"I'm just in the process of buying some flowers, so if you hear me asking about flowers, that's why," Noah and the Whale leader, singer and songwriter Charlie Fink cheerily explains from a noisy cell phone in the heart of London. "Otherwise I'm completely engaged." The magic moment comes a few minutes later when I'm in mid-question. Fink tells a clerk, "I'd like a pink rose, a red rose and a white rose."

Normally, this sort of information would not find its way into a story I would write. But it's significant in this case because Noah and the Whale's just-released new album, *The First Days of Spring*—already a critical and commercial hit in England—is a deeply moody (but brilliant) concept album/song cycle about a breakup—reportedly, Fink's relationship with occasional Noah associate Laura Marling, whose

excellent debut album, *Alas I Cannot Swim*, Fink produced, presumably in happier times. "Are you buying flowers for a girl?" I ask Fink, and he just laughs. One hopes the dark days and nights that produced *The First Days of Spring* are well behind him now; certainly, he sounds more like the happy-go-lucky soul who warbled (along with Marling) the group's insanely catchy 2008 Top 10 British hit "5 Years Time"

(popularized here thanks to a Saturn car commercial and college radio play). The album that song came from—their debut, *Peaceful, The World Lays Me Down*—made it all the way to Number 5 in England; previously, they'd been favorites on the indie folk circuit and released a couple of singles (including a different version of "5 Years Time").

When I mention to Fink that he doesn't sound like a guy who just made one of the great end-of-relationship albums, he laughs again, and says, "It's a bizarre thing doing music. You write some songs that are incredibly meaningful to you when you're writing them, and there's a gap period of time, and then you record them, and then after an even larger gap of time, you talk about them when the album's ready. I'm always trying to express something that's relevant to me, so what's relevant six months or a year ago in my life might be a little different than what's relevant to me now. Still, the songs mean as much as they did then, and they're expressions of particular emotions so I have no trouble at all singing them and I feel comfortable talking about them."

Fans of the first album's breezy acoustic folk-pop and D.I.Y. aesthetic are in for quite a surprise when they hear *The First Days of Spring*. Aside from the bleaker subject matter—though the first album wasn't all "sun, sun, sun," to quote "5 Years Time," by any means—the sonics and the overall vibe are completely different. Many of the tempos are languorous, as befits the subject matter, and the dominant instrument on many songs is spare electric guitar—Fink's 1961 Fender Jaguar played through a 1962 Fender Twin—or solemn piano, perfect accompaniment for the singer's fragile and expressive baritone. Brother Doug Fink's percussion ranges from

tympani to a conventional kit that's heavy on the toms; in other words, darker tones. There are tasteful string arrangements courtesy of the group's talented violinist, Tom Hobden, as well as occasional horns and a judiciously used choir. One song, "For the Love of an Orchestra," features a fully symphonic sound blended with one of Fink's more driving tunes. Bassist Matt "Urby" Owens rounds out the group sound with his imaginative playing.

For this album, the group turned to American engineer/producer Emery Dobyns, who is probably best known for his work in this decade with Patti Smith, Suzanne Vega and Travis. Indeed, it was having worked with that last group—another band quite popular in Britain; less so here—that first brought Dobyns to RAK Recording in London, where he later recorded *The First Days of Spring* over a three-week period. "We'd talked about working with Emery before," Fink says, "and for whatever reason it didn't happen. Then his name came up again and we did a trial session two months before we went in to record the album proper, and things just clicked. I think one thing that was important was his confidence in the project from the start—he clearly understood and believed in what it was meant to be." Dobyns engineered the album and co-produced with Fink, working in RAK's large 30x20 main room, which adjoins a control room housing a 1970s API console. (The studio was built in an old Victorian schoolhouse in the mid-'70s by noted English producer Mickie Most.)

While the songs on *The First Days of Spring* don't tell a linear "story," they do follow an emotional trajectory that traces our hero's emotional struggles. Fink says, "We recorded it in order—track one, finish track one, go to track two, finish that, and so on. And the album is very much binded together. There are transitions between each song. We'd never heard the whole thing together until we finished recording. It was like putting together all the ingredients of a mad experiment and not knowing the results until the very end."

The "transitions" are mostly non-music recordings of church bells, streams and other natural sounds. "I wanted them to lend an atmosphere, a gentle bed," Fink comments. "I did those recordings binaural—with a dummy head. I went out to the Lake District, which is in the north of England, and I revisited some of

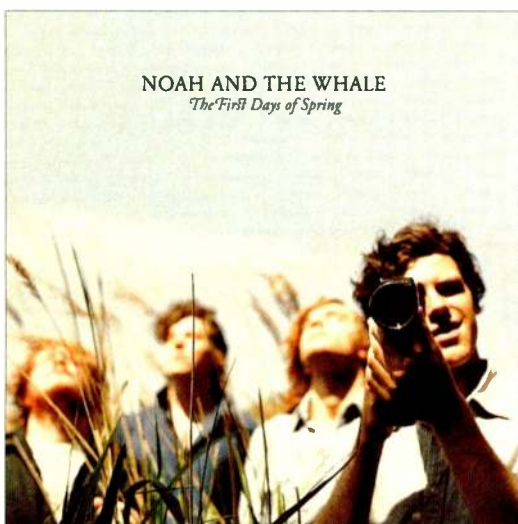
the places that had inspired the songs and captured sounds from there and then put it in the songs."

Fink says he had a fairly clear picture of how he wanted the album to sound from the outset, noting, "Whenever I write something, I can vaguely hear the finished thing, but that conception is definitely influenced by the mixture of musicians in the band, especially Tom—he is a classically trained musician, and he also used to play in a country band, so he brings those influences and approaches to the way I write songs, and because of that you're inevitably going to get something that's unconventional and still precise."

How much did the full band play on basics? "There were a few things, but generally it was [layering] tracks. We'd go in and work out the arrangements together live and we'd do a take live together, but because I had big arrangements and we didn't want to spend too much money on this album hiring other players, we decided that layering it was the best way. We hired in a choir and a few people to come play horns and woodwind instruments, but all the strings are Tom's layering. He plays violin, viola and cello."

"We layered them piece by piece, and on a song like 'Love Is an Orchestra,' which Charlie wanted to be this massive orchestra piece, it was quite challenging," adds Dobyns from his home base in Weehauken, N.J., Hobo Sound, where the album was mixed. "I had him move around in different positions to prevent phasing in one position. So we'd record the violins in one position, the violas a couple of feet over, sometimes with a different mic, and so on. Tom is incredibly brilliant—amazing pitch, an amazing ear. Some of the arrangements came about on the spot—'Let's try this harmony.' Nothing was scored out originally; then when there was a solid part, Tom would notate it. And by the time we brought in the two horn players, we were able to give them a score." As for the string mics, "I used a Royer 121 throughout the whole thing, but I also used an older [AKG] 414 at times, too." Dobyns also sometimes doubled and tripled horn and woodwind parts, as well as the work of the 12-voice choir, the Exmoor Singers of London.

Asked about aesthetic antecedents for the sound on the album—its overall spaciousness, the intimate foreground with guitar and vocal, and the intriguing sonic touches here and there—both Fink and Dobyns independently mention engineer Jim O'Rourke's work on Wilco's *Yankee Hotel Foxtrot* (2002) and *A Ghost In*



Born (2004). Fink says, "I really appreciate his approach to sound and the way it will work with the song. A lot of those Wilco songs are really beautiful songs, so the crazy, weird arrangements underneath work because you've got that solid framework." Adds Dobyns, "Charlie and I also both love Smog records [the alias of lo-fi pioneer Bill Callahan], and we definitely referenced Feist a bit, too."

Dobyns says that all of the tracks on *The First Days of Spring* were built around Fink's guitar and vocal—the latter captured using a Blue tube mic. "Most of them were first or second vocal takes," Dobyns says. "Also, I really wanted to get the drums percussive and dark, almost like that [Bob Dylan] *Time Out of Mind* feel—there might be another drum kit coming in for a bar or something, and in general we really broke down the drums from what was on the demos. The drums and bass are where we did a lot of restructuring. At RAK, they have eight beautiful FET 47s, so I used those a lot on the drums—for kick and overheads."

How much are we hearing the sound of the big room at RAK? "A good deal of room is on the recordings," Dobyns replies. "I had a pair

of [Neumann] M50s in the room. Some songs really feature the room vibe."

In preparation for the mix back at Hobo Sound, "I printed a lot of [Pro Tools] stems through the API at RAK and then brought them back here and mostly mixed in the box and put things through my 16-channel Chandler mini-mixer. I was also printing here through a Neve VR60, although we just got rid of that and we're most likely getting a smaller API."

No new parts were added at the mix stage, Dobyns says. "I mixed it for two weeks by myself and then [the band] came over for five days and we kind of tweaked it; then it was mastered by Emily Lazar, who did a great job."

After the album was done, Fink went back and directed a 46-minute conceptual video based around the song cycle—it's a fascinating work that captures some of the pastoral quality of the music and actually heightens the album's occasionally enigmatic character. That film is included with the album (along with two unusual performance videos). Since the al-



Producer/engineer Emery Dobyns says that tracks on *The First Day of Spring* were built around Charlie Fink's guitar and vocal.

bum was completed, there have been changes in the band. Fink's brother Doug has left to devote all of his life to his *real* trade—he's a doctor; he's been replaced by Jack Hamson. And now the touring group has a second guitarist—Fred Abbott.

"The new band sounds great," Fink says. "We've always had the philosophy that a song isn't ever necessarily 'finished,' so they can evolve and become different things as they grow. Despite the arrangements on the album, I think we're really capturing the essence of the record live, and all the old songs have been given a new varnish. They've been arranged more like the new songs and the set feels really fluid. I think it's the best we've ever sounded." III

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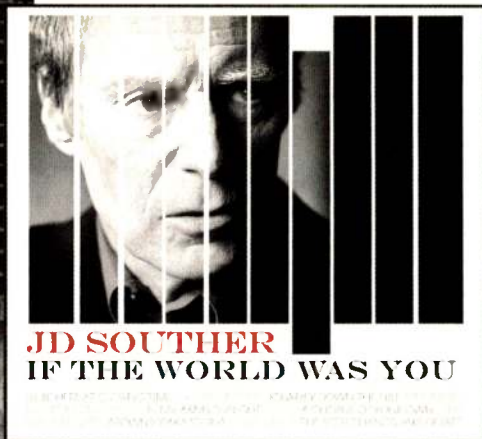
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J.D. Souther

SONGWRITER TAKES A SURPRISING TURN TO JAZZ

By Blair Jackson

Well, this is unexpected. J.D. Souther is best known for writing or co-writing songs in the '70s and '80s for the likes of The Eagles ("Best of My Love," "New Kid in Town," "Heartache Tonight"), Linda Ronstadt ("Don't Cry Now," "Faithless Love"), Bonnie Raitt ("Run Like a Thief"), James Taylor ("Her Town Too") and others. A fine singer himself, he's appeared on numerous albums and put out a handful of solo albums, the most successful of which was *You're Only Lonely* (1979).

What makes his latest album—*If the World Was You*, his first in 25 years—such a wonderful surprise is that it's one of the best jazz albums I've heard in many moons. Yes, it still features Souther's smooth, sometimes plaintive, always expressive lead vocals, and (mostly) conventional song structures. But this is no "L.A. Mafia" country-rock romp. Rather, Souther has surrounded his voice and guitar with an amazing quintet that alternately sounds like a hot band in some smoky New Orleans jazz club in the '40s, cool like some of Miles Davis' classic groups, rhythmically driving like the Buena Vista Social Club and right at home on country-tinged ballads and blues. Saxophonist Jeff Coffin, trumpeter Rod McGaha and pianist Chris Walters have plenty of room to blow on the 11-song disc, and they're ably supported by Dan Inmel on stand-up bass and drummer Jim White. The album has a loose, live-in-the-studio feel—a far cry from Souther's "perfect" L.A. re-

cords of yore—yet the band sounds like they've been playing together for years.

Souther has been living in Nashville for most of the past decade, but it was a visit to Cuba that seemed to push him toward making a new album. "That trip made a real impression on me," says the one-time Amarillo, Texas, native. "I was a drummer when I was a kid and I loved Afro-Cuban music. And I've always loved jazz, as well, so this isn't as much a stretch for me as it may seem." He found the players for his album scouring Nashville's jazz nightspots, and once he'd found his core five, they assembled in Souther's barn to rehearse and then played a couple of gigs in a Nashville club called The Basement before going into the studio to record.

L.A.-based engineer Niko Bolas, a longtime friend of Souther's, suggested the studio: "My friend George Massenburg had just built this great 5.1 mixing room at Blackbird [in Nashville], but the room itself sounded amazing, and Massenburg was going out of town, so I told J.D., 'Look, if you really want to do something old school, we'll go in there and empty the room and set it up for a tracking date.' The console was a split ICON that was small enough that I could roll it against the wall and use it as a table; and the control section I used to run the Pro Tools rig. All the mic pre's were in my road cases and I had them out by the door; we moved in a 9-foot Baldwin piano, and

we cut it with the six of them standing in a circle, the same way they played in J.D.'s barn. I just used headphones, and then when we were done tracking we would turn up the speakers and we'd see what happened. It was basically trust your instincts and trust your VU meters."

Because they were tracking completely live, including Souther's lead vocals, miking was critical for the sessions. In addition to close-miking each of the acoustic instruments, Bolas also hung four Sanken CO-100K mics from the ceiling 12 to 14 feet above the musicians to capture the room sound and the vibe. Different songs required different miking schemes. For instance, sometimes Bolas relied mostly on three Sennheiser 421s as drum overheads; other times he miked the drums individually. For the horns, he mainly used Royer ribbon mics, but occasionally went with Neumann 47s. He used "either AKGs—maybe 452s—or Neumanns" on the piano, "but the real battle was vocals—we tried a [Neumann] 67, a Shure SM7, a [Shure] 58, a [Telefunken] 251; it depended on the song. On louder things you couldn't get a very big microphone up there because of the leakage."

Indeed, leakage was both friend and foe on this project. On the one hand, it lends the project a warmth and immediacy that is positively intoxicating. From a technical standpoint, though, it made fixes very difficult. Souther says, "One of the things that makes this record sound a little bit different is that nothing is isolated. You can feel guys moving together and musicians of that caliber have a unique ability to listen to each other. They don't step on each other's toes."

Inspired by old George Jones and Miles Davis records Souther would play before sessions, the band found its sound in the room quickly and easily. "It was a blast," Bolas says. "The fact that J.D. trusted us to go in—on his dime—and experiment in that room in that fashion was really cool." III

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Jim Croce

"TIME IN A BOTTLE"

By Gary Eskow

It was a life cut tragically short and a song that eerily captured the meteoric rise and brevity of its author's career. "Time in a Bottle" reached the top slot on the pop charts in December 1973, but this posthumously released single was not Jim Croce's only Number One record, as his producers Tommy West and Terry Cashman vividly recall.

West was a senior at Philadelphia's Villanova University in 1962 and in charge of the university's Glee Club auditions when he first met Croce. "I interviewed Jim, and after the audition he invited me to his house for dinner. We became close friends. He graduated in 1965 and our paths crossed a few years later in New York City. Jim's stuff was okay, but not *that* good, to tell you the truth, until he hooked up with Maury Muehleisen a few years later."

A classically trained guitarist and singer who was a student at Glassboro College at the time, Muehleisen, according to West, played a

huge role in Croce's success. "Maury was a genius, the best guitar player I ever heard. Terry and I produced a record of his on the Capitol label, but it didn't go anywhere. He had a high, clear voice, like a male Joni Mitchell, and his ability to develop guitar parts that fleshed out Jim's songs was extraordinary.

"The sound of their two guitars was extremely important. Jim played a Gibson Dove guitar that he'd actually given to me in the '60s. It was a terrible-sounding instrument! I brought it to a guy named Phil Petillo who had a shop in New Jersey, and he shaved the bracings to make it sound brighter. Maury played two Martins: a D-35 and a D-18. The sound of the Dove and the Martins was gorgeous. I still get e-mails from around the world asking me how we got the sound of those guitars."

Engineer Bruce Tergersen also played a critical role. "We recorded all of Jim's stuff at

the Hit Factory [starting with the 1972 album, *You Don't Mess Around With Jim*], which Jerry Ragovy owned at the time," West continues. "Jerry assigned Bruce to our original sessions, but at first it seemed an odd marriage. Bruce had worked under Tom Dowd, but he'd never done an acoustic record. He was a rock and R&B guy, and he seemed a bit odd to me. He didn't talk much, but whenever we needed a sound, he'd play around with the patchbay and come up with something fantastic. I remember asking him at one point if he could make-believe the acoustic guitars were electric and process them in some special way. I don't recall exactly what he did, but the color was gorgeous. I don't think there have been any acoustic records that sound better than Jim's."

Cashman also remembers Tergerson quite well. "Ours was a match made in heaven—or hell—I never figured out which! Tommy and I weren't into the hippie kind of thing. We loved folk music, and Bruce was just the opposite. On our first session, in walks this guy with flowing red hair who was clearly into the electric group sound. Bruce brought something different to acoustic music. He had a wonderful way of miking guitars, and he insisted on keeping a tuner in the studio to make sure the players were always in perfect tune."

The rollicking title track off of the 1972 album *You Don't Mess Around With Jim* established Croce as an artist with broad appeal, but West feels that the tender "Operator (That's Not the Way It Feels)," off of the same album, was the best record they made. "That track established Jim as an *artist*, which was important to developing a serious, long-term career at that time. It wasn't just a clever piece of writing, which Jim was obviously good at; it was thoughtful and heartfelt." Less noticed on the album at the time of its release was another beautiful ballad, "Time in a Bottle."

No one in the production team ever thought that song was going to be a hit. "No way," says Cashman. "It was a waltz! We wanted to keep it simple, with Jim singing and Maury playing—that's it. But we stumbled over a harpsichord that was sitting in the Hit Factory, and Tommy was intrigued about the possibility of adding it to the record."

"That's right," says West. "The Hit Factory had a special vibe at the time. Jerry Ragovy

was a great songwriter. 'Time Is On My Side' is one of his compositions, and the Hit Factory always had creative people coming and going. We had recorded at Jerry's older studio on 47th Street, and when he moved over to the new facility at 48th Street we worked there. The console was custom-made by Lou Gonzalez, who later put Quad Sound together.

"To tell you the truth, the drum sound at the new Hit Factory wasn't the best. But Bruce could make anything sound great, and he was open to ideas. I remember that he tried using a condenser mic on the Dove guitar, but we all agreed that it sounded dumpy. I played him some of the demos we'd cut and he asked what microphone I'd put on the guitar. I told him it was an Electro-Voice RE15 and he had me go back to my office and retrieve it. We used it on all of the tracks from that point on. It's now hanging on my studio wall! Bruce used either a [Neumann] 87 or 47 on Maury's guitars. I also remember that we tracked the first album on a Studer 16-track 2-inch machine, but the last two were tracked to Studer 24-tracks. We used Dolby on all of the tracks other than the drums—I liked the brightness of the drums when they were cut without Dolby.

"Actually," West continues, "'Time in a Bottle' was originally cut on an 8-track machine. We didn't think we were going to need any more tracks than the ones required to cut two guitars and a vocal. We transferred the originals to the 16-track machine simply because everything else was on 16-track tape.

"The night before we were going to mix,

move it, walked into Jerry's office and asked if I could borrow the electric bass that was sitting on his couch, played that on just the second verse and the outro, and that was that! Radio compression worked in our favor on that record. It made the harpsichord blend with the two guitars in an unusual way. But we thought this record would only be an album cut."

Things were moving fast for Croce, Muehleisen and the production team that had helped make them a ubiquitous presence on AM radio. "In July of 1973, 'Bad, Bad Leroy Brown' [from the album *Life and Times*] hit Number One," says West. "'I Got a Name' [written by Norman Gimble and Charlie Fox for *Last American Hero*, a film starring Jeff Bridges] was about to be released, and Jim and Maury are stars with an international fan base."

It ended in a flash. On September 20, 1973, Croce, Muehleisen, several other passengers and the pilot at the controls of the private plane that was shepherding them between gigs died when the aircraft failed to gain sufficient altitude and crashed into a pecan tree located just off of the runway outside



Producers Terry Cashman (left) and Tommy West, circa 1972.

country were bombarded with callers asking who sang the song and where it could be purchased. Although Croce was aware that the song had piqued the public's interest, "Time in a Bottle" did not reach Number One until three months after Croce's death.

More than 35 years have passed since the accident, and both West and Cashman have both enjoyed success beyond that early phase of their careers. But the pain of that loss is still great, particularly for West, who had a special friendship with Croce. "It still affects me greatly," he says. "There couldn't be a more melodramatic story. Here were two guys about to go over the rainbow, and it ends in an instant. I still have days—particularly when the leaves are changing color—where I sit and cry. I saw a rerun of an old *Midnight Special* show several years ago. There were the three of us, playing onstage, and I thought their deaths was a dream."

West, who went on to produce successful records for Anne Murray and many other artists, operates a studio on his property in the farm country of New Jersey. Cashman, a former minor-league pitcher, eventually married his two passions and scored a major hit with the record *Talkin' Baseball*, his 1981 tribute to the game he loves. *Once Upon a Pastime*, a musical he's co-writing, is currently being given a reading at the York Theater in midtown Manhattan.

Croce's music is still around, too, helping define a transitional era when the strains of Hootenanny populism mingled with power chords and electric technology. He was an heir to Woody Guthrie, a tributary to the great river of American music. ■

We wanted to keep ["Time in a Bottle"] simple, with Jim singing and Maury playing—that's it.
—Terry Cashman

I was watching a horror movie on TV, and something must have lodged in my brain because when I walked into the studio the next day, I saw this harpsichord sitting in a corner and got an idea. A jingle company had used it on a session and in walked a couple of guys from SIR [Studio Instruments Rental] to haul it away. I asked them to take a lunch break and told Bruce to put a couple of mics on it. He was whining that it was out of tune, but I asked him to let me try something. I added two tracks of harpsichord, told the movers they could re-

of Natchitoches, La.

At the time of their deaths Croce, Muehleisen, West and Cashman had been working on a third album, also called *I Got a Name*. Posthumously released hits include the title cut, "Workin' at the Car Wash Blues," and "I'll Have to Say I Love You in a Song."

A week before the crash, producers of a now-forgotten ABC-TV *Movie of the Week* called *She Lives!* (starring Desi Arnez Jr.) featured "Time in a Bottle" in the soundtrack. The following day, radio stations across the

Live



PHOTOS: STEVE JENNINGS

By David John Farinella

Erykah Badu and The Cannabinoids

UNKNOWNNS KEEP ENGINEERS ON THEIR TOES

To prepare for previous tours, Erykah Badu would get the band and sound engineers Kenneth H. Williams and Kenny Nash together in Dallas for a couple of weeks of rehearsals. But when Badu called on Williams and Nash for a run of shows this September, there was no mention of rehearsal—all they knew

was that they were due in San Francisco on September 3, 2009.

Welcome to The Cannabinoids tour, a collective of Badu and seven producer/DJs: longtime musical director RC Williams, Jah Born, Rob Free. Symbolic One, Picnic, and DJs A ONE and Big Texas. The “band” was put together to

combine the vibe of live music improv with the technology found in the recording studio. Badu’s new musical peers pulled songs off of nearly every one of her releases, bringing new life to “On & On,” “Apple Tree,” “Danger” and “Soldier,” the latter from her latest release, *New Amerykah, Pt. 1: 4th World War*.

However, Williams and Nash didn't know this when they arrived at the San Francisco International Airport just eight hours before showtime. "The first time I met the guys was at the airport in S.F.," recalls front-of-house mixer Williams. "The first time I heard the band was at soundcheck. We didn't know the input situation with the computers and turntables, who was singing vocals, what parts they were singing or even the song list until we got there."

That might send other mixers scrambling but Williams had learned a valuable lesson when he joined Badu's camp six months earlier. "The first thing that Kenny and [lighting designer] Martin Thomas told me was that they subscribed to the Navy Seals motto of 'run and gun.' They said, 'Hey, we kind of know what's going on, but we just go for it. You'll get it after the first show.'"

"You've got to learn to do things on the move," Nash adds. "She's an artist. You learn exactly what that means, and you learn what she's looking for and how things flow in her world. Artists move really fast: They see life differently and they need people like us around to stabilize things. How do we make sure the picture she wants happens? That's on us on the technical side."

For the pair of shows in the San Francisco Bay Area—September 3 at Davies Symphony

vide the bottom and the other is going to do more of the melodic lines," Williams explains. "With the computers, samples and drum machines up there, any of the eight people could be the bottom or the drums or a melodic instrument at any point. And it would change from song to song. In fact, during the set I had to constantly use my headphones to verify who was playing what and figure out the structure of the song."

To solve part of that challenge, Williams set up his console in cells that matched the performers' positions onstage, starting with Badu, who was on number 1. The rest of The Cannabinoids formed a circle around her, beginning with RC Williams at Badu's immediate right, then Picnic, DJ Big Texas, A ONE, Symbolic One, Jah Born and Rob Free. "That way, whenever I saw somebody doing something, and I couldn't discern from the mix exactly what it was, I could go right to the cell and know what that person was playing," Williams explains. "It was easier to bring it up that way than having to jump around a bunch of layers on the console. It gave me a little more control and I knew where to look for everything."

The setup also helped him ensure that the mix kept up with Badu. "Erykah has such a broad palate to choose from that she'll go off and do something that seems structured to the audience," Williams says, "and I suppose it is because her instructions are simple: 'Go with me.' On the first couple shows with The Cannabinoids, I had to write down certain keywords that she would say to let us know where she was going. That allowed me to set up delays and know what I needed to do EQ-wise. She's so quick and in the moment, I don't even have pages set up. I have one template and I make the corrections as I go."

As far as outboard gear, Williams will usually use a Summit Audio TLA-100a on Badu's vocals. On this night, however, there was no outboard gear to be found.

Monitor Feeds on the Fly

Where Williams is a relatively new citizen in Badu World, Nash has been with the singer for 10 years. Nash's first introduction came when he subbed for the FOH mixer Gordon Mack III (which is also how Williams got this gig), who was heading out to work with Prince. "We all know how the situation with Prince goes," Nash says with a laugh. "So Gordon came back; no hard feelings. A little later, he called me, and said, 'Erykah liked your work and your personality. You want to come out and be her monitor guy?'"

While Nash started out with Badu when she was using personal monitors, the piercings



in both ears means that she's back on wedges. During a typical band show, Badu will get kick, snare, Rhodes, backing vocals, drum machine and her own vocals in the downstage monitors. Side-fills get a full band mix, which Nash explains is where she gets her stage vibe.

Just like Williams, Nash had no idea what was going to happen during The Cannabinoids' set, so making sure that the band had good monitor mixes was a bit of a challenge. Turns out that most of the producers wanted everything, except for Rob Free, who wanted his own tracks and a little of Badu's vocals, and Picnic, who wanted himself, Badu and RC Williams.

Nash's history with Badu and her candor made her monitor mix a bit easier. "I've been with her so long that I know what she's looking for," he says. "If it seems like there's a problem, I'll go stand by the side-fills and she'll give me the yea or nay. If it's really bad, in the middle of a song, she'll say, 'Kenny.' I have to stay on my toes."

Nash works off a PM5D and mixes to L-Acoustics 115XT Hi-Qs, as well as two ARCS and two SB218s per side. Jah Borne, who was running a pair of drum machines (MPC 2000XL and Akai MPD32), got a single 15-inch the first night and then complained to Nash about his monitor rig. "The second night I gave him two double 18s," Nash says with a laugh. "He played a lot of the 808 stuff and lot of the lower kick drum stuff, so I had to beef up his mix a little bit."

With three shows under their belt (The Cannabinoids played The Palladium in Los Angeles on September 5), both Williams and Nash are feeling a bit more confident. "We will definitely know everybody is playing," Williams admits with a laugh. "There weren't any train wrecks during these first three shows, but there were some interesting times. I really think there's something special here that's only going to get better the more we all play together." III

David John Farinella is a San Francisco-based writer.



Hall in San Francisco and September 4 at the Paramount Theatre in Oakland across the Bay—the tour rented gear from Sound on Stage. The only thing Nash brought was Badu's Shure KSM9 microphone and her Theremin. For the P.A. system, SOS supplied 20 boxes of L-Acoustics V-DOSC, eight SB218 subs, six ARCS and four JBL MS 28 front-fill speakers. The sound company also supplied a pair of Yamaha PM5-DRH desks for FOH and monitors.

The 5Ds became crucial tools for both Williams and Nash as the two didn't figure out until that first soundcheck was who was going to play which instrument. "When you have a bass guitar and a guitar, you know that one is going to pro-

SOUNDCHECK

Lady Antebellum

by Carolyn Maniaci

Lady Antebellum recently finished up an opening slot for the Kenny Chesney 2009 tour, and *Mix* caught up with the group (vocalists Charles Kelley, Hillary Scott and Dave Haywood) at Chicago's Soldier Field.

The Chesney tour supplied Yamaha PM5D boards for the act. The 5Ds were digitally linked into Chesney's Midas XL8 via AES. Lady A's house engineer, Brett "Scoop" Blanden, explains that, after a couple shows running analog out from the 5Ds, they decided to eliminate the AD/DA conversion by running a simple two-cable AES connection. "We've all been really pleased with the result," Blanden says. "Most notably, I think the low-end tightened up; it's a lot more punchy." Monitor engineer Jeff Laughinghouse (also Lady Antebellum's production manager) ran the stage sound on a Yamaha M7.

Blanden, who has been touring with them since the release of *Lady Antebellum*, focuses on filling the room with a full rock sound while keeping vocals upfront and well-blended. A three-piece band backs the three vocalists: lead guitarist Jason "Slim" Gambill, bassist Dennis Edwards, and drummer Matt Billingslea. "I have to try to make the band sound as big as possible with just a few players," Blanden says. Crediting longtime friend and mentor, Steve Melton, with the technique he uses on Gambill's guitar, Blanden puts two different mics on the guitar amp—a Sennheiser MD 421 and an Audio-Technica 4033—pans them hard left/right, and flips the phase



Lady Antebellum's (above) engineer Brett Blanden

on them.

A drummer himself, Blanden takes a thoughtful approach to tone on the drum kit, leaning toward using dynamic mics. He puts Sennheiser 904s on the rack toms, and uses the Sennheiser 902 on the floor tom because its scooped-out low-mids give the tom a good punch. On the kick itself, he likes the Sennheiser 901 coupled with a Shure Beta 58, using the 58 only sparingly to provide just the right amount of boominess. On Edwards' bass, he also keeps the low end under control by using a light touch with the Sennheiser 902 he has on the amp, primarily using an Avalon DI in the mix.

Vocal mics are all Sennheiser 3700 Series wireless. Kelley, in the center vocal position, gets a nice, natural tone using the Neumann KK 105 condenser capsule, which blends well with the Sennheiser e935 capsules used on the other two vocals.

Blanden gets the vocals to meld using another technique inspired by Melton, who was a pioneer in the use of the Cooper Time Cube (when it was made from a coiled garden hose), and Blanden has found a vocal doubler on the Yamaha PM5D console he's using that mimics the Cooper Time Cube's sound.

tour log

Dan Black

Mix talked with engineer Steve Pattison about Black's current tour.



Steve Pattison mixes while Dan Black performs.

What's your setup?

Dan's shows are wide ranging—from large festivals to clubs and fashion events—so taking regular production would be a pain. His sound is a gathering of electronic and organic—lots of electronics, but all played and triggered live by the band. To keep as much consistency from show to show, I implemented Allen & Heath's IDR32 as the brains of the outfit and mounted it into the Plexiglas-illuminated loop station that lives next to the drum kit onstage. All my inputs from the band go straight to the IDR32. Once we wheel it onto the stage, it's just a matter of running out two looms to connect my inputs and three cables for backing vocals. I output five mixes into the house multi (L, R and three wedge mixes), plus two sends for the drummer's mixer and one stereo in-ear mix.

What's the most important part of your mix?

Control. There's so much extraneous stuff happening live and you really need to have a handle on everything or you'll be chasing your tail and tying yourself in knots trying to find what's missing or what's bothering you in the mix.

Where can we find you when you're not on the road?

On my motorcycle heading for the Alps or Spain, or hurtling through a Welsh forest on my mountain bike being chased by my dog Jack.

fix it

Renato Carneiro's "X Plan"

Monitor engineer Renato Carneiro works with Brazilian artists Zuzi di Carmargo, Luciano and Os Mutantes



On the L/R bus of the desk, I build a full mix and then route this send to two channels. In an analog desk, I put a pair of cables on the L/R outs to two free input channels. On a digital board, I use a free EFX machine, bypassed (you can select a multiband compressor on this machine and master your main mix), defining the input of the machine as the L/R send and the outputs as two free input channels paired in stereo. This full mix—through these channels—is then sent to the all the band's in-ears. Then I sum the inputs that each bandmember would like to hear louder in their mixes.

Yamaha PM1D Retires

Ten years after its debut (September 22, 1999, at Carnegie Hall in New York City), the Yamaha PM1D SR digital mixing system is going into retirement. Yamaha Corporation Japan has reached the limit on availability of key components. Therefore, to make sure there will be enough parts for customer service well into the future, the production of this system will cease in December 2009. Current requests for PM1D systems will be fulfilled, and limited quantities will remain available until the existing stock is depleted. A brief white paper will provide customers with Yamaha's concept for its next-generation digital system platform; read it

at yamahaca.com/whitepaper.

According to this white paper, in addition to offering high-quality sound and total reliability, Yamaha is adding other functionality such as configurable component devices for designing specific systems for installations and/or rental jobs; variable system sizes with distributed I/O, DSP and user interfaces; integration of audio and control data in one core wide-bandwidth network; bandwidth and DSP to support extremely high channel counts; extremely low latency; open interfacing with other major audio formats and networks; and redundancy for network, DSP and power supply unit.

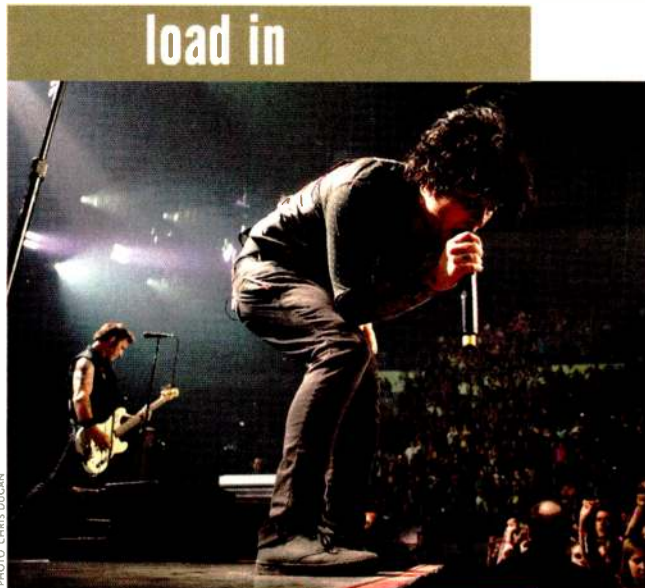


PHOTO: CHRIS DUGAN

Green Day is putting Telefunken M80 mics (vocals and various instruments) through their paces for the band's current tour, reports engineer Chris Dugan.

Linkin Park's European tour saw the band carrying their own board group, stage set and monitor package that comprised Adamson M15 wedges and SX18 stage side-fills delivered by SSE; Livesound B AG and Satis&Fy

AG Werne teamed up to support the band's non-festival dates in Switzerland and Germany...Eco-friendly David Brower Center (Berkeley, CA) features a Meyer Sound high-performance playback system for music and cinema, including VariO loudspeakers...The Blanche M. Touhill Performing Arts Center's (St. Louis) director of audio/video services, James Campbell, selected a DiGiCo SD8 for the new facility...Monitor engineer Chris Wood spec'd Sensaphones 2MAX earphones for Coldplay's summer tour.

road-worthy gear

Cadac Live1 Series

Incorporating many amenities of Cadac's large-scale theater and touring consoles, the Live1 offers a cost-effective choice for FOH or monitoring in smaller 16x4x2, 24x4x2 and 32x4x2 frames. Features include an improved mic preamp design, individual phantom power switching, 4-band EQ with sweepable midrange, plus highpass filter, PFL and mute switching, six pre/post selectable aux sends, four stereo inputs, six mono effects returns, two stereo returns and a full talkback section.

www.cadac-sound.com

AKG Perception Live Series

Expanding its popular Perception mic series, AKG's new Perception Live line of dynamic mics includes the P3 (cardioid) and P5 (supercardioid) handheld vocal mics, and the cardioid P2 and P4 mics for instrument miking. The P2 is intended for extreme low-frequency/high-level sources, such as bass, horns and drums, and handles 157dB SPLs. Designed for onstage use, all Perception Live mics feature rugged metal casings, tough spring steel grilles and scratch resistant stage black finishes.

www.akg.com



Turbosound Ships Powered Flex Array

The new FlexArray TFA-600HDP compact, trapezoidal, digitally self-powered and networkable three-way mid/high enclosure is designed for medium-scale line array or virtual point touring or fixed applications. Featuring a 1-inch neodymium HF driver on a Dendritic™ device, a 6.5-inch high-mid driver on a Polyhorn device and two Turbo-loaded 1-inch LMF drivers, the TFA-600HDP has integrated Class-D amps and a DSP module with network capability. Bass is covered by the TFA-600LDP, a horn-loaded, single 18-inch LF cabinet also designed for flown and ground-stacked applications.

www.turbosound.com



ALL ACCESS

Photos & Text by Steve Jennings



CHICKENFOOT

Rock supergroup Chickenfoot (former Van Halen member Sammy Hagar, vocals/guitar; Joe Satriani, guitar; former Van Halen member Michael Anthony, bass/vocals; and Red Hot Chili Peppers' Chad Smith, drums) is the result of booze-tinged jam sessions held at Hagar's Cabo Wabo Cantina club in Cabo San Lucas, Mexico.

Finding that they all "grooved" together, the four-some headed into Skywalker Studios with producer Andy Johns, resulting in a debut, self-titled album. Fast-forward a few months and the band is touring mid-sized venues to a very raucous audience. *Mix* caught up with the Clair Global-supplied tour at Berkeley, Calif.'s Greek Theatre.



From left: FOH engineer Russ Giroux, systems engineer Jim Ragus and monitor engineer Jim Jorgensen

Front-of-house engineer Russ Giroux is mixing on a Yamaha PM5DRH, clocking with an Apogee Big Ben and using an Apogee Rosetta for A/D conversion. "I am using some of the Version 2 plug-ins as inserts on the vocal channels (276 and 260 comps) and the Waves Renaissance compressor on bass," he adds. "I also use the Waves L1 Ultramaximizer on our LD's in-ear mix.

"Mixing the band is a dream come true. Even though the material was new, it felt familiar and classic from the start. I think the most important aspect of mixing the band is trying to convey the energy these guys are putting out from the stage. Of course, the fact that we have an amazing

band, crew and the Clair i3 rig ensures that we are giving the best-sounding shows possible."

Monitor engineer Jim Jorgensen is also mixing on a Yamaha board—a PM5DRH V. 2.7—with an external Big Ben running at 96k. "There's no external processing; I'm using all onboard gates, comps and effects," he says. The entire band uses Clair Bros SRM wedges (16) with CBA I/O processing, two R4s, and a ShowCo sub per side for side-fill and a Rat Trap 5 system for drums with a ButtKicker. "I'm also using three sets of Sennheiser in-ears for techs and the stage manager—17 mixes in all for a four-piece rock band."



Joe Satriani



Sammy Hager



Satriani and Hager guitar tech Mike Manning

Joe Satriani plays Ibanez JSX-1000s, Chrome JSX 2RA, an acoustic JS A and a Les Paul-style



for slide. Amps include Marshall JVM 210H with 1960B 4x12s with 25-watt Celestions; one head has two 4x12s. His pedalboard (inset) comprises, in order of signal, guitar into Vox Big Bad Wah, Electro-Harmonix POG, Electro-Harmonix Micro POG, Roger Mayer Voodoo Vibe, and Radial JX2 Tone Bone, and then splits off to a Radial JDI out to the sound board. The split continues on the pedalboard to Voodoo Lab Proctavia, Vox prototype Ice Nine, Vox Satchurator, Ibanez FLg Flanger and then to the amp. Two Vox

Time Machines are in the FX loop: one long, one short. All pedals are powered by two Voodoo Labs Pedal Power 2s.

Sammy Hager sings through a standard Shure 58 capsule on a UHF-4 system. "We use Sennheiser 945s for the other three vocals," monitor engineer Jim Jorgensen says. "The pattern on the 945 was pretty tight and it helped FOH with stage volume a bit."

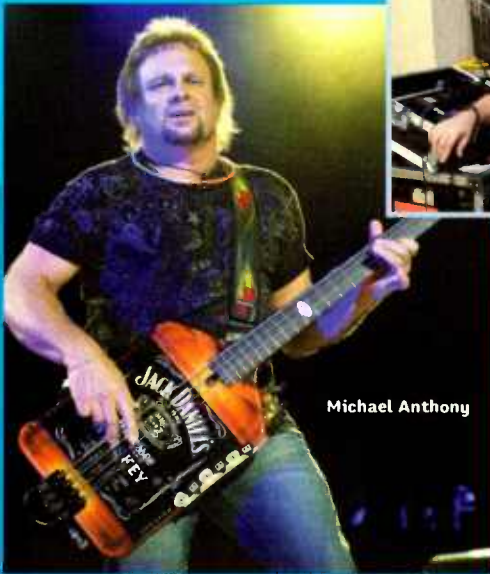
Guitars include Gibson Les Paul, Gibson Explorer and a 1959 National Lap Steel. Amps include Marshall Vintage Moderns with 1960A 4x12s with vintage 30-watt speakers; one head has two 4x12s. Both Hager and Satriani's amps are powered by a Furman AR-PRO power conditioner.



Bass tech/backline crew chief Kevin "Dugie" Dugan (above) says that Michael Anthony is using all Yamaha basses made by Yamaha Custom Shop chief/guitar engineer John Gaudesi. "Basically, an offshoot of the BB3000 Series," he says. "The production commercial model will be available to the public in early 2010. He's been using a new Peavey bass amp, a tube model called the VB-3, with a new 8x10 speaker cabinet (three cabinets live)."



According to Clair Global systems engineer Jim Ragus, they are hanging 12 Clair i9s over six BT 2-18 subs per side. Amps are Lab. Gruppen in the new Clair Stak Racks; front-fills are P2s. "We had great luck with this rig, and Russ used it to make Chickenfoot sound absolutely awesome every single night," Ragus enthuses.



Michael Anthony

Chad Smith



According to drum tech Stephen Ederly (below), "We tried several different mics over the course of the last year and ended up with the following: Audio-Technica AE2500 in the kick port on the front head and a Sennheiser e901 inside the drum on a pad; Telefunken Ela M 80 on snare top head and a Shure SM57 on the bottom; Audio-Technica ATM350 for rack tom, Sennheiser e904 for floor toms, Sennheiser e914s on hi-hat, ride and overheads; and Audio-Technica ATM350 on splash.

"Chad uses two Rat Trap 5s in stereo, a Rat Trap Sub and a ButtKicker with a Crown I-Tech amp. We also set up a stereo ear mix for him, but he preferred the 'live' sound. Chad would frequently trash his drum set at the end of the last encore and the only casualty was one ATM350 that had its cord severed by a flying ride cymbal."



Streisand

At the Vanguard

Rare Performance Showcases an Intimate Sound, New Album

Mix magazine's behind-the-scenes access to Barbra Streisand's performance at the Village Vanguard came from Jim Flynn, whose Jim Flynn Rentals (JFR) provided most of the equipment used to capture the concert. After 15 years in business, serving many of New York City's big-name studios, JFR is also the audio resource for ABC-TV's Good Morning America program and numerous other broadcast/recording events.

—Eds.

In 1961, Barbra Streisand took the stage at the Village Vanguard, Max Gordon's once-eclectic music club in New York City's Greenwich Village that had gone all-jazz four years earlier. It was an audition for Gordon, set up by a mutual friend who also managed to coax Miles Davis and his group to back her. Gordon was reportedly unimpressed. Two years later, Streisand's debut album won two Grammy Awards.

At the time, Streisand was building a reputation in the Village as a rising star on the scene, singing in clubs like The Lion and The Bon Soir. Forty-eight years later, Streisand is now the Number One best-selling female recording artist in history, with 50 Gold, 30 Platinum and 13 multi-Platinum albums, and a slew of Grammy, Emmy, Oscar, Tony and Golden Globe Awards. In recent years, Streisand's concerts have filled arenas, but on a warm evening last September, 120 or so people crammed themselves into the Village Vanguard—now one of New York City's most venerable jazz venues—to hear Streisand celebrate the release of *Love Is the Answer*, her new album of jazz standards and classics.

There to capture this singular event was Jim Flynn, Streisand's executive producer/A&R liaison Jay Landers, and engineer/mixers Dave Reitzas and Isaiah Abolin. Flynn supplied most of the recording gear through his company and had also scouted the club with Abolin for several months leading up to the show, choosing equip-

ment and plotting cable runs. Abolin, whose discography ranges from the two most recent Mars Volta albums to cast recordings of *The Little Mermaid* and *West Side Story*, had been suggested to Landers (also an executive producer and A&R executive for Bette Midler) a couple of months earlier through a mutual friend. Reitzas, whose work on live and studio recordings with Streisand since 1993 has earned 10 Grammy Award nominations—and who is well-known for his work with artists including Madonna, Andrea Bocelli, Celine Dion, Natalie Cole and Ricky Martin—came onboard closer to show time. Two assistant engineers, Derik Lee and Jesse Singer, were also on the crew.

"Old-Time" Microphone

The team recorded to a Digidesign Pro Tools HD3 system, backing everything up to a Tascam X-48 hard disk recorder using a 100-foot 32-channel snake that ran from stage boxes in the club to an All Mobile Video trailer shell that they would use as the remote control room. "We wanted to keep all the cable runs to a minimum to avoid degrading the signal," says Flynn, who prefers to keep cable runs between mic pre's and recording system under two meters. "One main concern was having a home run directly from [Streisand's] microphone to a separate splitter."

Inside the club, Flynn, Abolin and Reitzas conferred on microphone choices. Reitzas

brought with him an Audio-Technica AE5400 handheld condenser mic. "I did the recording for Barbra's 1994, 2000 and 2006 concerts, and the FOH mixer had been using a Sennheiser microphone with a Neumann capsule in it, but I always had a problem with it in terms of rejection, and this gig was going to be in a very small club with her right in there with the musicians," Reitzas explains. "So for this show, I decided to use something else, and the 5400 sounded nice and full, with great presence and good rejection qualities. No leakage at all." Flynn adds that the choice of a wired vocal microphone was deliberate. "It was part of re-creating the 1960s ambience of the club," he says. Streisand actually commented on it from stage during the show, referring to it as an "old-time wired microphone."

Abolin chose eight Millennia HD-3V mic pre's, in part for their sound and because they could be easily stacked, as well as the fact that they could send a split of the signal to the Mackie 1604 mixer that would be used to make a stereo mix to be sent to two channels of the Pro Tools rig and to the video crew's cameras. The All Mobile Video unit was quite cramped, but at least it presented an isolated space where the team could monitor the recording; an earlier plan was to try to record from the club itself, whose sound booth Flynn described as "a closet." "The remote unit was small, so we knew there was no chance of having a real console to sit behind, but



PHOTO: KEVIN MAZUR

Streisand performed for an elite audience that included former president Bill Clinton (pictured right with line producer Elyse Katz, engineer Dave Reitzas and engineer Isaiah Abolin. Jim Flynn (top, right) of Jim Flynn Rentals provided equipment.



at least I would be out of the club and off of headphones," Abolin says.

Reitzas also brought along his Brauner VM1, which was used on the acoustic bass, along with a clipped-on DPA 4061. On drums, a pair of Audio-Technica AT4060s was used for overheads, AE3000s on the toms and an AT4041 for the bottom of the snare. The baby grand was miked with a pair of AKG 414s.

The live nature of the recording and the intimacy of the club's interior meant that the engineers also put a lot of emphasis on audience mics. Reitzas, Abolin and Flynn agreed on a pair each of Schoeps MK 2s and MK 4s, hanging on stereo bars over the seating area. Reitzas also stuck an Audio-Technica PZM boundary microphone to one of the walls. "I'll usually use that on the floor in front of the drum kit, but it worked well bringing more of the audience in," he says.

Processing was fairly minimal. Reitzas brought along four channels of NTI PreQ3 that were used sparingly on the snare, the overhead drum mics and Streisand's microphone. As the show went on, Reitzas added a touch of reverb from a Bricasti M7. "I'd cut it in between songs when she was talking," he says.

The Unexpected Mix

The show was intended to herald Streisand's return to her cabaret roots, but the audio recording and a high-definition video of the event would

serve various purposes, the most immediate of which was to get promotional video clips of the performance to media outlets, including the CBS *Morning Show*, YouTube and AOL music channels. To that end, Flynn had set up a mix room in a suite at the Waldorf Astoria hotel, with a second 16 I/O Pro Tools HD system ready to run, as well as a Big Ben word clock, a Dangerous Music summing box, the Bricasti M7 reverb unit hooked up via AES, and an SSL stereo compressor and GML 8200 parametric EQ on the sum outputs of the Dangerous, with a Benchmark DAC1 for monitoring the mix. Reitzas and Abolin sped up-town in separate cabs to the Waldorf carrying the hard drives and the same Genelec 8050 monitors used in the remote unit. "We had a new Mac Pro with tons of memory for handling plug-ins and the Waves Diamond bundle, which we used to remove some of the noise in the bass and guitar DI boxes," says Abolin. Other plug-ins included Brainworx EQ and Altiverb.

The plan was to mix in the box, which they began doing around midnight. But around 3 a.m., word came that CBS needed the footage sooner than expected. "Like, 'now,'" Reitzas recalls. They realized they would have to go with

the live mix done through the 1604 mixer. However, it now seems, that was where the magic had been waiting all along. "I printed a version [of the live mix] and listened to it against the video, and it was perfect just as it was," says Reitzas, reliving the intensity of sitting in the tightly confined remote truck, intently watching Streisand perform on a small video monitor as his fingers subtly responded on the Mackie's faders. "The process of recording, to me, is always filled with emotion. We're not recording just to do a mix later on. What goes down at that moment should be great when it goes down. Some of the best mixes I've ever done were rough mixes. The reason a rough mix always trumps a regular mix is that it comes right from the heart."

Forty-eight years is a long time between club gigs, but Streisand pulled it off brilliantly, as the recording illustrates. "As fate would have it, when she did that audition four decades ago, she didn't get the gig," says Jay Landers. "So now, as The Beatles say at the end of *Let It Be*, last week she finally passed the audition." ■

Dan Daley is a journalist and author. He lives in Nashville and New York.



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The Miracle on 35th Street



Product Hits From AES 2009

By the Mix Staff

Given the state of the global economy, perhaps the real miracle about the 127th convention of the Audio Engineering Society (held October 9 to 12, 2009) was that it happened at all. Sure, this show was scaled down from past years, with no demo rooms and most exhibitors taking much smaller booth spaces. But the spirit of innovation was alive and well at AES. The aisles were packed with showgoers serious about the art, science—and business—of audio.

And for at least 3,000 lucky ticketholders, the place to be on Saturday night was at API's (www.apiaudio.com) awesome 40th-anniversary bash at the Roseland Ballroom, featuring the Grateful Dead's Bob Weir and New Orleans' Sonny Landreth. Congratulations API on four decades of continuing excellence!

In many ways, this convention seemed much like the delayed post-9/11 AES back in 2001, which sprung back from adversity with a smaller show but with the great vibe of AES shows of old that were held at the Waldorf or Hilton hotels in Midtown. In fact, a common topic of conversation was whether the cavernous Javits Center was perhaps a bit too large for the show, and returning to a ho-



Calrec Aremis console

tel venue might not be such a bad idea. Someday, maybe—but for now, the crew of the 127th AES should be congratulated for a great show. Without their hard work and dedication, this miracle on 35th Street may never have happened.

500 Series Mania

Speaking of API, the company's 500 Series modules have always been popular, but we weren't ready for the avalanche of new products in this

format at AES. In fact, we counted nearly 25 new modules, including the API 527 comp; Chandler's Little Devil EQ and compressor; Foote Control Systems P3500 comp; Geoff Daking's mic pre 500; Electrodyne 511 EQ and 501 preamp; Grace Design's m501 preamp; Great River's 32 EQ; Inward Connection's discrete VC500 comp. MPD preamp and EQ P2 equalizer; John Hardy's Twin Servo 500; Pete's Place BAC (Brad Avenson Compressor); Pendulum Audio's



AKG C 414 XL II

OCL500 comp; Shadow Hills' double-wide stereo compressor; and Radial Engineering, with seven new modules—PowerPre preamp, JDV-LB instrument pre/DI, JDX-LB guitar amp emulator, X-Amp-LB reamping disto, PHZ-LB phase-adjustment tool, EXTC balanced line-to guitar effects level loop and an upgraded version of the popular Komit comp/limiter.

And the 500-module housing race is heating up. Empirical Labs' (www.empiricalabs.com) ultrahigh-quality EL 500 holds two modules in a horizontal 1U rack; SPL's (www.spl-usa.com) RackPack holds four of its high-current-draw SPL modules and four standard API-format modules in one convenient unit; and Radial Engineering's (www.radialeng.com) booth was mobbed with people chaeking out its Workhorse 5000, a combo 8-module 500 Series rack and summing mixer that's packed with I/O and extra features for optimizing signal flow.

Mics Gone Wild!

New mics were everywhere. We counted at least seven new ribbon models alone! AEA's (www.ribbonmics.com) A840 ribbon mic promises less proximity boost than other AEA ribbons and handles a blistering 141dB SPL. The phantom-powered active mic features a 4.7mm pure aluminum ribbon and a captive 9-foot, cloth-covered cable. Audio-Technica (www.audio-technica.com) unveiled its first ribbon mics, the AT4080 and AT4081, with onboard phantom-powered electronics bringing their output to near-condenser levels. Cloud Microphones'

(www.cloudmicrophones.com) \$1,299 JRS-34 is designed by Stephen Sank and named for his father, legendary RCA designer Jon R. Sank who created the classic BK-11 ribbon mic. Independent Audio (www.independentaudio.com) showed the Coles model 4050 stereo mic, which adjusts for a variety of stereo miking angles and can physically separate the capsules for spaced-pair placements. Shure (www.shure.com) generated a lot of interest with its Crowley and Tripp—rebranded El Diablo and Naked Eye ribbon mics, now offered as the \$2,695 KSM353 and the \$1,295 KSM313.

In other mic news, Neumann (www.neumannusa.com) previewed its TLM 102 large-diaphragm condenser with 143dB SPL handling and small form-factor body for tight placements; street pricing is around \$700. Also new are the KMR 81 D digital shotgun and the KK 120 figure-8 capsule—perfect for M/S stereo recording.

AKG's (www.akk.com) C 414 line just keeps getting better. The new C 414 XLS offers the sonic imprint of the C 414 B-ULS, while the C 414 XL II has the presence boost and the spatial reproduction similar to that of the C 12. Both have nine polar patterns, three HP filters and three pads.

Bock Audio's (www.bockaudiodesigns.com) AM 50 omni tube mic updates the vintage M50 design, with a half-inch diaphragm mounted in a sphere offering unique frequency-dependent directional characteristics.

CAD Audio (www.cadmics.com) is now shipping its U.S.-built E100S 1-inch diaphragm condenser with a Quadra-FET™ front end delivering a whisper-quiet 3.7dBA noise floor.

Another large-diaphragm entry, the Josephson C715 (www.josephson.com) offers a range of polar patterns achieved through a mechanical adjustment. A discrete cascode front-end circuit and Lundahl nickel-core output transformer complete the package.

The David Royer-designed MA-101fet mic from Mojave Audio (www.mojaveaudio.com) has interchangeable, 3-micron small-diameter cardioid and omni capsules; low-noise FET electronics; and a full-sized Jensen output transformer.

Wunder Audio's (www.vintageking.com) CM7 FET microphone is a multipattern—cardioid, omni, figure-8—version of the classic, but single-pattern U47 FET. The CM7 FET has a new K47 dual-membrane capsule; retail is \$2,495.

Eigenmike em32 from MH Acoustics (www.mhacoustics.com) is a scalable mic array with 32 capsules embedded into a rigid sphere, with directivity pattern (shape, steering and direction) controllable in real time or stored for post-soundfield processing over FireWire.

JZ Microphones (www.jzmics.com) BT-201 is a small-diaphragm condenser with a variety of interchangeable capsules that were both visually arresting and sonically impressive.

With all those mics in your collection, you may need the Manley (www.manleylabs.com) MicMAID, which lets you connect up to four mics and preamps, match their levels and si-

Mix Certified Hits

Top 20 Products From AES
Choosing a few from hundreds of great debuts was tough, but here are our selections for the Top 20 products from AES.



- ADAM SX Series Monitors
- AKG C 414 XLS/XL II Microphones
- Audient Zen Console
- Audio-Technica AT4080/4081 Ribbon Mics
- BIAS SoundSoap 2
- Cakewalk SONAR Version 8.5
- Dangerous Music BAX Equalizer
- Elysia Museq Equalizer
- Genelec 8260A Monitors
- Grace Design m103 Channel Strip
- iZotope Alloy
- Mackie Onyx-i Series Consoles
- Manley MicMAID
- Neumann TLM 102 Microphone
- Radial Workhorse 5000
- Solid State Logic Duality SE Console
- Sonnox Restore
- Soundtoys Decapitator
- Trident HG3 Monitors
- Waves Vocal Rider Plug-In

lently switch between any combination for instant, simple auditioning of mic/preamp combos—no patching or replugging. Every studio needs one! Shipping begins Q1, 2010.

Monitors

ADAM Audio (www.adamaudio.de) demoed its new SX Series. The new triamped S3X-H updates the popular S3A with dual 7-inch woofers, a 4-inch HexaCone midrange and the new X-ART ribbon tweeter for a 32 to 50k Hz bandwidth.

Genelec (www.genelecusa.com) expands its DSP-driven monitor line with the 8260A, a three-way design incorporating a coaxial mid-high-driver offering smooth on/off-axis response. Loudspeaker Manager software manages crossover filters, driver EQ, driver alignment, room-response correction and distance-compensating delay, and Genelec's AutoCal automated room calibration/system alignment provides accurate response in varying environments.

Legendary speaker designer Harvey Gerst worked with noted amp designer Russ Allee to create the new HG3 powered close-field monitors for Trident Audio Developments ([\[pmiaudio.com\]\(http://pmiaudio.com\)\). The HG3 speakers combine a mid and HF driver in a separate swiveling enclosure set into a ported subwoofer cabinet, with the swiveling action greatly reducing diffraction distortion, while letting you adjust directionality for improved imaging.](http://www.</p>
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Consoles, Large and Small

Last month, Mackie Designs (tmackie.com) created a stir by "leaking" its Onyx 820i mixers with a prototype driver that allows interfacing with Pro Tools M-Powered 8 software. At AES, Mackie announced shipping its entire line of Onyx-i mixers (820i/1220i/1620i/1640i) and that its \$49.95 driver for PT M-Powered 8 is downloadable at the company's site. In addition to a high-quality 24-bit/96kHz FireWire recording interface for use with all major DAWs, Onyx-i mixers offer pro analog features.

Audient's (www.audient.com) Zen analog mixing console combines DAW I/O integration with moving-fader automation, transport control and a sonically pure signal path. Designed in a compact frame, Zen features two inputs per channel, DAW record output on each channel, L/R mix bus, two stereo buses, two mono buses, four aux, two cue sends and a stereo compressor.

SSL (www.solid-state-logic.com) bowed the improved Duality SE console featuring an Ethernet connection between the mixer and DAW host computer. A dual-layer DAW control lets Duality control two DAWs simultaneously with seamless hardware control surface switching. The channel strips' Solo/Cut tiles have been replaced with LCD screens, providing a greater level of information. The analog side of Duality also received 25 individual feature additions.

Calrec's (www.calrecaudio.com) new Artemis console uses the same advanced FPGA core technologies as Bluefin2 and Hydra2, with up to 640-channel processing paths, 128 program buses, 64 IFB/track outputs and 32 auxes, and up to 8,192x8,192 crosspoint routing. Using a combination of OLED displays, touchscreens and light-emitting knobs, the Artemis control surface provides instant visual feedback while enabling you to reconfigure the desk.

Designed to meet the increased demand for slimmed-down user interfaces, the StageTec (www.stagetec.com) Crescendo digital mixing system has a compact footprint, but provides full 40-bit floating-point processing with up to 300 channel paths, 128 summing paths and 96 auxes.

Lawo's (www.lawo.ca) MC'66 console features a completely redundant signal path and support for 500-plus DSP channels and



Genelec 8260A three-way monitor

8,192x8,192 routing crosspoints. The system supports hot-swapping of the router board and supports configurations from 8x8x8 to 48x8x48 faders. Extender frames range from eight to 16 to 24 faders, while stand-alone extenders are available from 16 to 24 faders.

Hardware!

It's been awhile since analog signal processing hardware was a big deal at AES, but hardware is back, big time! Here are just a few. The new m103 channel strip from Grace Design (www.gracedesign.com) offers a preamp, 3-band EQ and optical compressor in a single-rackspace chassis.

Elysia's (www.elysia.com) museq discrete Class-A analog EQ offers optimally matched parameters so you can get the desired results fast and precisely. Each of the two channels has three parametric bands with switchable Q.

Dangerous Music (www.dangerousmusic.com) expands its rackmount mastering suite with the BAX EQ, offering stepped controls for repeatability and identical stereo tracking; broad-Q shelving with a Baxandall character; and high/lowpass 12dB/octave Butterworth filters.

Charter Oak's (www.charteroakacoustics.com) new PEQ-1 stereo program EQ has a range of cool features for putting those finishing touches on a mix, including a 50kHz shelving EQ and other interesting nonsurgical frequency tweakers.

The 2A3 tube EQ from Retro ([—Continued on page 78](http://www.vin-</p>
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Neumann TLM 102 large-diaphragm condenser

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M-48 Live Personal Mixer

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The RSS Personal Mixing System. A breath of fresh air for studio and live performers. Truly professional... Truly personal.

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S-4000D Splitter & Power Distributor

Shown is the M-48SYS 5 System which includes five M-48 Live Personal Mixers including mounting plates, and one S-4000D Splitter and Power Distributor. (Other items sold separately)

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Sony Acid Pro Version 7 DAW

Upgraded Mixing, Enhanced Plug-In Handling, Tempo Bending

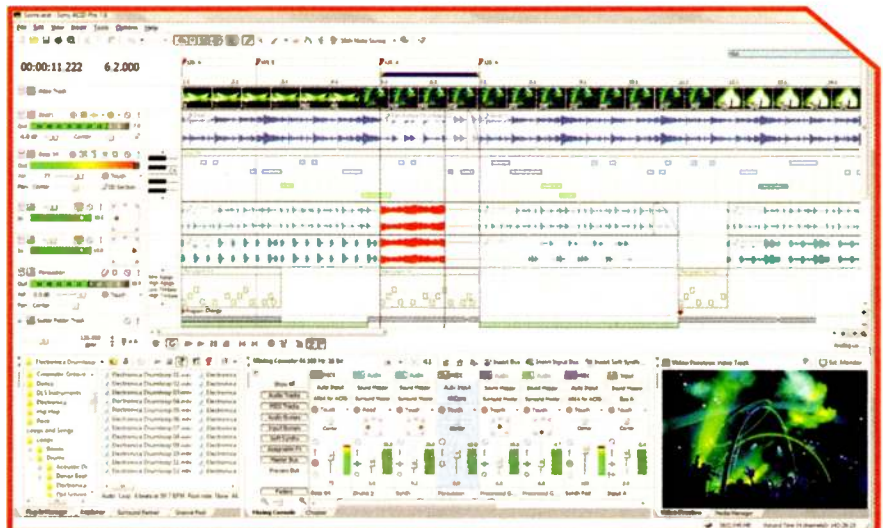
Acid Pro has long served as validation for music producers who work on the PC platform, or at least have a PC integrated somewhere into their studio setup. Someday, this DAW will be available on the Mac, but until such time, PC-based music pros will enjoy some significant workflow advantages.

With Acid Pro Version 7, Sony Creative Software introduces features that take the program several steps closer to being a totally comprehensive, “no-other-DAW-needed” DAW. You’ll still want Pro Tools, Cubase, SONAR or another sequencer program, but the latest round of upgrades makes Acid more efficient, creative and versatile than before.

Let’s Get It On

At the top level, the most welcome news is that Acid Pro V. 7 is Vista-compatible. For those of us who were able to install V. 6 on our systems successfully, but then could only gain access to about two-thirds of the program’s features, this is an important development.

Installing Acid Pro 7 onto my Vista laptop—an HP with dual-core 1.9GHz AMD Athlon processors, 2GB RAM and 32-bit operating system—was easy. The program booted successfully the first time and did not require a re-install of Sony’s Media Manager application (already present from the half-baked Acid Pro 6 install). In addition, a generous bundle of extra software comes along for the ride, including Garritan’s Aria sample-playback engine with hundreds of orchestral, big-band and general MIDI sounds; a pro effects rack from iZotope with myriad effects plug-ins; a Native Instruments guitar combo bundle; and Submersible Music KitCore Drums. More than



Acid Pro 7 is able to manage more CPU-hungry plug-ins than before.

3,000 Acid-ized music loops, 1,000 MIDI files and 90 DLS instruments are also part of the package, adding up to immediate music-making gratification for anyone who may be starting from scratch.

Except for the most subtle adjustments, Acid’s workhorse visual environment remains unchanged in V. 7. As a nonstop user of the program since V. 3, however, I’m hard-pressed to see how the overall look could be seriously altered. The efficiency of Acid’s grid—and the subsequent virtually unlimited creativity it unlocks—is necessarily tied to its grimly serious, but highly malleable, GUI.

Mixing Things Up

In previous versions of Acid, mixing of any sort was a clumsy, counter-intuitive affair. All audio and MIDI channels were added to the project by being stacked vertically on the left side, and that’s where their controls—panning, volume, automation, routing, etc.—stayed. Acid’s new mixing console puts these controls in a much more natural, conventional place. A horizontally arrayed mixer now appears on the bottom of the GUI, letting you view various combinations of tracks at the click of a

button—audio, MIDI, audio buses, input buses, soft synths, assignable FX and more—with the option to simply “show all.” The advantages of a comprehensive, horizontally arrayed mix section are time-tested and obvious, and the speed and efficiency gains that experienced Acid users will feel from this simple addition are extreme. In this program where complex projects could be pulled together quickly, Acid Pro just got a lot faster.

Despite the enhancement, a couple of nagging mixing shortcomings remain, which make Acid incomplete as a final-stop DAW for some users. Mysteriously, the panning for each channel still lacks dual-pan controls, meaning you can only move your signal left or right—a puzzling oversight that continues to dog Acid. As routing and mixing in Acid Pro does not support side-chaining, I had to move a project to Cubase SX3 to make the most of my Blue Cat plug-ins, which offer sophisticated sidechain capabilities.

Plug It In, Plug It In

Once a project is being mixed, the ability to get to plug-ins is critical. Limited in previous versions, Acid Pro’s plug-in manager offers improved implementation of, and access to, VST plug-ins; DirectX and ReWire plug-ins are registered with Windows and are detected automatically.

PRODUCT SUMMARY

COMPANY: Sony Creative Software

WEB: www.sonycreativesoftware.com

PRODUCT: Acid Pro Version 7

PRICE: \$399.95 (box), \$299.95 (download)

PROS: Vista compatibility. Mixing console speeds workflow. Improved plug-in management. Greater CPU efficiency.

CONS: No dual-pan controls. No sidechaining of FX.

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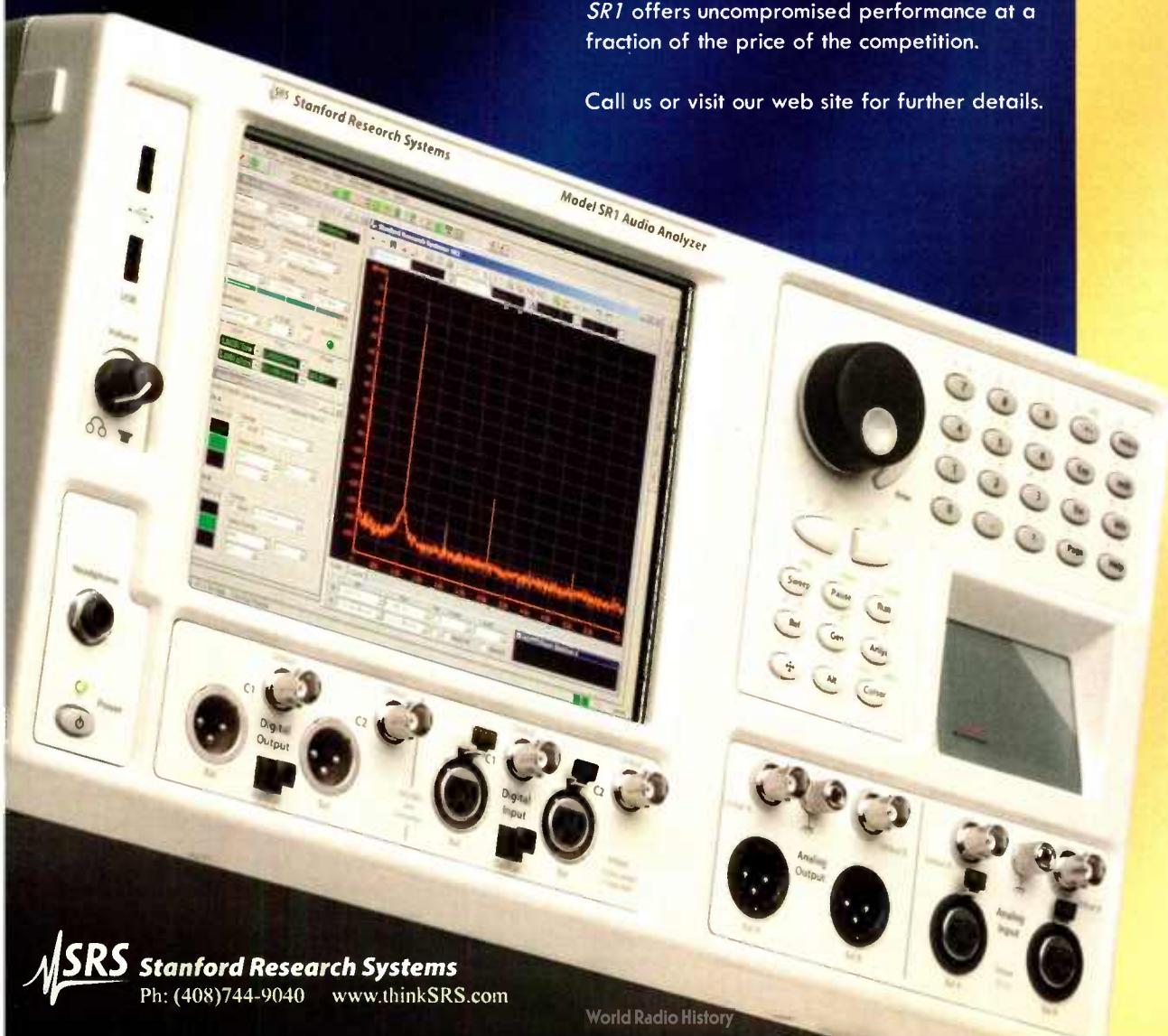
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Now that Acid is outfitted with a dedicated Plug-In Manager window, you will have a much easier path toward adding and using plug-ins. Previously, Acid only allowed you to specify up to six VST host folders (three each for effects and instruments); now you can add an unlimited amount of folders by clicking the new Configure VST icon. This paid off when I wanted to add new bundles of VST effects to my collection without having to wait through the long (and often torturous) rescan of every pre-existing plug-in, as was the case with Acid's old system.

Acid will automatically scan for newly added VST plug-ins on startup, and this usually works smoothly. However, if a newly installed VST synth does not make it into your system after the initial scan (due perhaps to the inaccurate entry of an authorization code), instructing Acid to scan the folder again will not necessarily cause it to stop at the now-missing plug-in—it shoots right past it and pronounces the folder scanned, but your desired plug-in still isn't listed in the Plug-In Manager. In this case, my workaround was to create a new folder, reinstall the plug-in and do another

scan. Typically, this solved the problem.

In spite of this, Acid Pro 7's ability to manage more CPU-hungry plug-ins efficiently seems much improved. I could run many more instantiations of intensive plug-ins such as PSP's MasterComp and Kjaerhus' Golden Audio Channel without choking my system. An effective MIDI Track Freeze function for projects with multiple soft synths contributes to CPU efficiency even further. Again, for fast-moving composers who may have gotten used to arranging in Acid and finishing elsewhere, these workflow boosts may help to change their game radically.

Timing Is Everything

The magic of Acid was founded in its ability to manipulate the time and tempo of audio easily. A logical next step is the new Tempo Curves function, which lets you gradually transition from one tempo to another over the duration of an Acid project. Enhanced beat-mapping for

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Acid Pro 7 includes Garrigan's Aria sample-playback engine.

tracks with tempo changes is a boon for DJs and remixers who have to work with songs that have multiple tempos.

Recording into Acid was improved dramatically in V. 6, and with V. 7 my options increase further. Input buses let you record from external devices with effects, use external effects processors with tracks and buses, and more. Meanwhile, Real-Time Rendering makes it easier to route audio to external hardware and render Acid projects with external effects embedded in them.

It's Getting Better All the Time

In total, Sony lists 18 significant new features in Acid Pro 7, and depending on how you work and what you do, some or all of them are bound to make a positive difference for you. With this latest version, Acid is closer than ever to being the full-fledged studio HQ that it can be. III

David Weiss is Mix's New York editor.

Sonnox Restore



Advanced algorithms for highly accurate audio restoration.

Designed to be highly intuitive and to provide excellent graphical feedback, the Sonnox Restore suite includes a DeClicker, a DeBuzzer and a DeNoiser capable of performing audio restoration of the highest quality. The three plug-ins' novel and innovative features enable fast and accurate repairs for a variety of impaired audio, making Sonnox Restore an ideal solution for many post-production facilities.

Some of the suite's key features include: a unique dialogue mode and exclude box on the DeClicker, Comb and Parametric filters on the DeBuzzer and a high-resolution FFT with adjustable bias curve on the DeNoiser.

Sonnox Restore is available for Pro Tools (RTAS), Audio Units and VST workstations.

Find out more at www.sonnoxplugins.com/restore

www.sonnoxplugins.com

**Oxford
Plugins**

Roland Systems Group M-48 Personal Mixer

Powerful, Scalable Individual Monitoring for Studio or Live

Whether in studio or live settings, providing performers with control of their monitor mixes increases productivity while positively affecting the musical outcome. Roland's new M-48 personal mixer makes this possible via a networked system that receives audio and power via simple, single-cable Cat-5e interfacing. The system comprises the compact yet full-featured M-48 mixer and the S-4000D splitter, which allows you to string up to eight M-48s along a network, with up to 24-bit/96kHz resolution. You can integrate additional S-4000Ds and M-48s to create larger systems supporting up to 256 mixers. These two components ride on the backbone of the S-4000 (\$7,995) digital snake, which is essential to the M-48's operation. The mixers can be set up stand-alone by using a PC and the free S-4000RCS software, or partnered with the RSS V-Mixer, in which case the PC is not needed.

The M-48's feature set is deep, including 8+8 banked rotary encoders with panning, solo, 3-band EQ, an auxiliary input and built-in ambient mic with separate volume controls. There are also a record out and dual headphone outs (1/8- and 1/4-inch) with basic EQ and limiting. The two line outputs are fed by the aux bus or headphone outs, and include an adjustable lowpass filter. Other extras include a 5-segment stereo output meter and a built-in reverb that you can apply to any group.

Let's Mix!

I was able to test the system by itself (without the V-Mixer) in a medium-sized live venue. Setting up the individual mixers was easy: The

included mount fits securely on a standard mic stand and features a removable headphone hanger and accessory tray. The test venue already had the S-4000D in place feeding a Yamaha PM3500 at front of house. After updating the digital snake's firmware, connection was as simple as plugging the S-4000D into the snake's REAC output and then running Cat-5e to all of the mixers. The Cat-5e connections are on sturdy barrel connectors, negating concerns over failure after many setup/tear-downs.

Upon opening the S-4000RCS software on a PC laptop connected to the system via RS-232, the system immediately recognized each of the five M-48 mixers—all which have a unique ID—on the network. After that, it was simple to rename the individual mixers to reflect the performer using it and then design some custom mixes. This is one of the best parts of the system because the world is your oyster. You can be as complex or as simple as you'd like. Each M-48 gets all of the same 40 source channels as inputs. In the software, you can then assign these 40 sources to the 16 stereo groups for each M-48 individually. After assigning sources, you can then dial in the levels and pans as needed.

The M-48 is actually a 40-channel by 16 stereo group by dual stereo output mixer, so all of the submixing to the individual groups is done as custom mixes inside each M-48.

The system sounds great and throughput is rocket-fast: The FPGA architecture makes latency a non-issue. While limited, the reverb is usable and a nice extra. The proof in the pudding was the reaction of the

players in the band. Instead of settling for a mix from monitor land, the musicians could get exactly what they wanted in their wedges or in-ears. The guitarist commented that he could play easier and with more detail because he could hear exactly what he needed to perform. The bass player said the room sounded better because of reduced "trash" in the wedges that in the past would clutter up the stage feeds.

Personal Mixing Nirvana

Roland designed this product to work in a wide range of both studio and live applications. The system is impressive in its design and implementation, easily meeting the needs of stage or installed settings such as a church or recording studio. The only real fault I found was a lack of a channel polarity switch in the software or on the box, which would be nice in an over/under-miking scenario. Also keep in mind that the S-4000 digital snake is an essential part of the network, so figure that into the price. Other than that, the M-48 personal mixer is a beautiful system that sounds excellent, and is full-featured, flexible and scalable. It may just be the answer to your distributed mixing dreams. ■■

Kevin Becka is Mix's technical editor.



Each M-48 on the network can be assigned custom mixes.

PRODUCT SUMMARY

COMPANY: Roland Systems Group
WEB: www.rolandsystemsgroup.com
PRODUCT: M-48 live personal mixer
PRICE: \$6,995 (M-48/S4000D bundle includes five M-48 personal mixers and a S-4000D splitter/power distributor)
MINIMUM SYSTEM REQUIREMENTS: Roland S-4000 digital snake (\$7,995), PC computer (if no V-Mixer is present)

PROS: Setup via PC (software included) or RSS V-Mixer. Easy integration into wedge or in-ear systems.

CONS: No per-channel polarity-flip control on board or in setup software.

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AEA RPQ Ribbon Mic Preamp

Transformerless Dual-Channel Design, Tone Shaping, Massive Gain

Audio Engineering Associates, purveyor of both single- and double-ribbon passive and active microphones, offers the RPQ—a “front-end” preamplifier designed specifically for ribbon mics. Although ribbon mics will work with most pro mic preamps, the RPQ impedance matches the ribbon mic motor’s output signal and addresses the unique set of operational requirements necessary for optimal sonic performance.

The unit has two identical preamp channels, each with an unbalanced 1/4-inch out with up to +74 dB of gain and a balanced XLR out with +80 dB of gain. The balanced output is capable of +28 dBU into 600-ohm loads, and both outputs work at the same time. There are two XLR mic input jacks: One is an AC coupled for +48VDC phantom-powered mics; the second input is direct-coupled for all other mics. The two inputs cannot be used simultaneously and there is no front panel control for switching between them. If you attempt to apply external phantom power, then the nonpowered input will automatically disconnect.

For optimal ribbon mic performance without the deleterious effect of preamp loading, the RPQ has an input impedance of greater than 10k ohms. AEA opted for a direct-coupled J-FET-based design, with no transformers or capacitors in the critical input or output stages—one of the main reasons this preamp’s bandwidth ranges from 1 to 200k Hz.

The main coarse input-gain rotary switch has 12, 4 and/or 5dB steps for setting initial gain from +7 dB up to +55 dB. In addition, an



The Audio Engineering Associates RPQ preamp features a unique Curve Shaper EQ section.

output gain pot adds up to +19 dB, with the balance output amp adding +6 dB more.

Following the preamp section is a shelving equalizer with a fixed 20 dB of low cut and an adjustable corner frequency (-3dB down-point), ranging from 18 to 360 Hz. This filter is necessary to roll out rumble, “p” pops and unwanted proximity effect.

A fixed-Q, semiparametric HF section called a Curve Shaper follows the shelving equalizer. It can add more presence and “air,” extending high-frequency response. The Curve Shaper is useful for ameliorating the effects of distant mic placement or acoustically dry rooms. You can boost up to a whopping +18 dB starting at 2.1 kHz and going up to 26 kHz. The filter’s slope (not Q) varies with frequency and boost amount. The unit finishes with phase (polarity) flip, phantom-power on/off switches and a tiny three-LED “stoplight” output level meter.

At the Testing Grounds

My first test was with a Royer R-121 ribbon mic, which has a notoriously low output level in distant miking applications. I compared the RPQ to another direct-coupled mic preamp, George Massenburg Labs’ GML 8302.

I wanted to record a quiet narrator positioned three feet from the mic into Pro Tools at 24-bit/96kHz. With the RPQ, it required a total of 74 dB of gain. To get close to the same level with the GML, I had to run it flat out at 70 dB, and it was not enough to match level. To A/B the sound quality of these two preamps, I had to raise the GML track’s playback

level in Pro Tools. The sound differences were nil—with three sets of “golden ears” listening, we all declared it a draw.

The RPQ preamp is incredibly open, quiet and airy, with an immense dynamic range. It worked great with a Siemens-badged Neumann U47—you could easily hear this particular mic’s noise floor and its (known) tendency to be sibilant. I used 36 dB of gain to record a medium to soft vocalist about 10 inches away.

The highpass filter worked perfectly, rolling out A/C rumble and proximity on that U47. The Curve Shaper is marvelous. About 15 dB of boost at 10 kHz on the Royer mic sounded euphonically god-like. You can hear all the air around any sound made in the room—it put me in the room with the sound source. I did find the RPQ’s front panel silk-screening could use more hash markings for precise recalls.

The RPQ has no line-level input, but by inserting two in-line XLR attenuator pads (-10 dB) and setting the unit to 7 dB, I patched the mix output from Pro Tools and listened to some of my current mix projects through it. Lower than 10 kHz sounded like brightness that a mastering engineer might do, but raising the corner frequency up to around 12 kHz or above sounded (pardon the pun) brilliantly open! This is the smoothest EQ I’ve ever heard.

Treat Yourself

The AEA RPQ is an all-around super mic preamp. It caters to the requirements of any ribbon mic with its high gain, low noise, gigantic dynamic range and excellent Curve Shaper section. III

Barry Rudolph is an L.A.-based engineer. Visit him at www.barryrudolph.com.

PRODUCT SUMMARY

COMPANY: Audio Engineering Associates

WEB: www.ribbonmics.com

PRODUCT: RPQ

PRICE: \$1,530

PROS: High gain, low noise. Best sound possible from all mics, especially ribbons. Fantastic Curve Shaper filter/EQ section.

CONS: No line inputs. Tiny LED meter. Could use more precise front panel markings.

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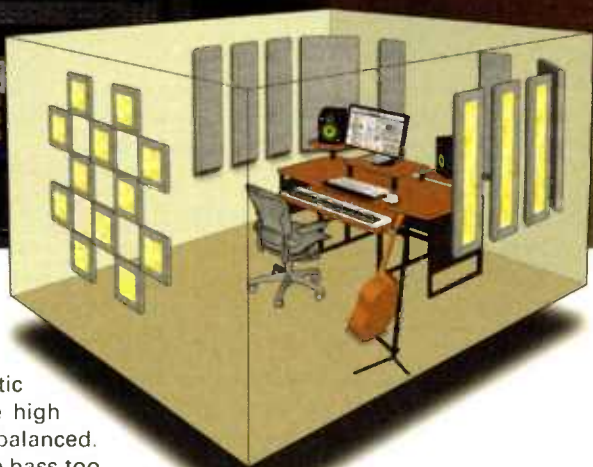
I turned to Primacoustic because I was familiar with their product from being in studios I had worked at. We purchased MaxTraps, FullTraps and Broadway acoustic panels and even though I am a bit of a novice when it comes to construction, I was able to easily install most of the units myself. They have dramatically changed the sound of the room for the better. I've just recently got the last bass trap in place and the panels have controlled the reflections in the room perfectly.

I love mixing in our room now. Mixes translate really well to my home listening room and especially the car. We also have Broadway panels in our vocal booth along with the Cumulus corner traps. They took the honk out of the room without adding that boxy sound you can often get with other room treatment. Listening in the room now is a pleasure and I can work for hours without over fatigue."

~ David Bottrill

3-time Grammy winning Producer/Engineer

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World Radio History

Brainworx bx_dynEQ Plug-In

Unique Mid-Side Dynamic Equalizer Ups the Processing Ante

Unlike typical equalizers, the Brainworx bx_dynEQ applies EQ dynamically, but only when the audio signal exceeds a user-adjustable threshold. Mid-side (M/S) processing, sidechain filtering and compression capabilities add to the power of this unique (TDM, RTAS, AU, VST) plug-in.

Channel This

Bx_dynEQ can process mono, multimono or stereo tracks. The latter can be equalized in either normal stereo or M/S mode. M/S encoding and decoding automatically happen behind the scene, requiring no special setup.

Mono and normal stereo versions provide one audio path filter and one sidechain filter per channel. (Left and right channels share the same filter settings and sidechain.) M/S mode provides four filters for mid and side channels: one for each audio path and one for each channel's sidechain. In M/S mode, the sidechain for either channel can trigger the other channel.

The frequency and Q of each filter are adjustable. Available filter types include low and high shelving, peaking (bell), bandpass, highpass and lowpass filters, and both bass and presence shifters. The bass and presence shifters apply opposite actions (boost and cut) in adjacent bands to shift the program's timbre. Each channel and its sidechain can also be set to flat response.

After you've selected your filters, set bx_dynEQ for either EQ boost or cut. Adjust the attack and release controls for the speeds at which you want equalization to be applied and then nulled as signal first exceeds—and then falls below—your threshold setting, respectively. The plug-in's factor control sets the depth of processing up to the limit (in dB) set by the max gain control.

PRODUCT SUMMARY

COMPANY: Brainworx
WEB: brainworx-music.de
PRODUCT: bx_dynEQ
PRICE: Native, \$420 DVD, \$435 download; TDM, \$720 DVD, \$750 download
SYSTEM REQUIREMENTS: Mac: OS 10.4 or higher, G4/Intel Core Duo, 256MB RAM. PC: Win2000/XP/Vista, 1GHz CPU, 256MB RAM

PROS: Sounds great. M/S processing. Sidechain filters. Huge selection of linkable filters. Low CPU drain.

CONS: Only one band of EQ for each channel's audio path. Can only save four custom presets within plug-in.



Bx_dyn EQ provides independent control sections for mid and side channels.

You can solo the mid or side channel and link one or more of their filter controls, or bypass mid or side processing or the entire plug-in. Separate controls are provided for I/O levels and, for stereo tracks, for L/R balance and width. The GUI includes multisegment I/O meters and EQ graphs that dynamically update to show response. Only four factory presets are included; they can be overwritten. Otherwise, there's no way to save your own presets outside of whatever facilities your DAW provides.

Fine Dyning

The AU plug-in (tested in Digital Performer 5.13) demanded very low CPU power from my 8-core, 2.8MHz Mac Pro running OS 10.5.4. Mastering a mix using the Boom! preset as a starting point, I could easily make the kick drum thump more or less without changing the amount of apparent bottom end on other elements of the mix. I applied a lowpass filter with a 55Hz corner frequency to the mid channel's sidechain and a narrow bandpass filter—centered on 32 Hz—to the

mid channel's audio path with fast attack and release times.

Working with the mid channel again, I could remove most of the lead vocal on a mix by setting a very broad bell-curve cut at 2.45 kHz and dialing in a slightly lower center frequency in the sidechain with a notch filter.

Turning up the width control increased the stereo width of a mix. When this made hard-panned instruments too loud, I made bx_dynEQ act like a wideband compressor by applying cut in the side channel with a flat filter setting. The result was a wide, but tight mix that sounded phenomenal.

On another mix, the bass guitar was too boomy but the kick drum sounded great. I set up a steep lowpass filter at 50 Hz in the sidechain and an attenuating bandpass centered at 193 Hz in the audio path of the mid channel. Using 48ms attack and 31ms release times, bx_dynEQ preserved the kick's timbre while taming the bass guitar's boominess.

Bx_dynEQ is one powerful and great-sounding plug-in that mixing—and especially mastering—engineers will find indispensable. ■■

Mix contributing editor Michael Cooper is the owner of Michael Cooper Recording in Sisters, Ore.

Symphony Users are Talking...



Markus Dravs - Producer, Engineer

Coldplay, Arcade Fire, Bjork

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John Powell - Composer

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Mat Mitchell - Programmer, Engineer

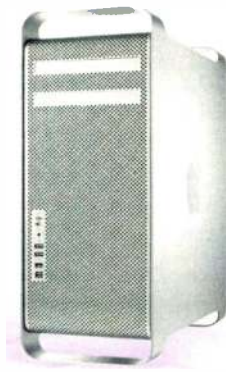
Nine Inch Nails, Tool, Puscifer

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To €€ or Not €€? That Is the Question

Why Bother Teaching Electronics to Audio Recording Students?

Time travel has always been possible—at least in print journalism. In this case, I'm writing about an AES panel discussion that's happening in a few days, although you're reading about it after the event. Moderator Michael Stucker (Indiana University, Jacobs School of Music) titled this workshop "Teaching Electronics to Audio Recording Students—Why Bother?" In addition to myself, the panelists include Walter Sear (Sear Sound), Bill Whitlock (Jensen Transformers), Dale Manquen (MANCO) and Eric Brengle (Swinghouse Studios).

I do believe that audio recording/production students should learn basic electronics. But it's important to bear in mind that class size, range of student interest and allocated credit hours (as well as whether classes are required or elective) will always affect the scope of what "basic" electronics courses can be offered.

Sonic Haberdashery

Engineers have always worn many hats, so familiarity with disciplines such as acoustics, power distribution, electronics, music and even psychology are key, if only to facilitate better communication with specialists in those fields. Of course, time plays a critical role in the choices of courses that students and educators can make—not only in terms of how much time a student has (i.e., a 2- or 4-year program), but also as it relates to the student's temperament. There are exceptions to every rule, but in my experience, the more focused students have put some distance between themselves and high school. What a difference four years can make.

In the program where I teach, the prerequisite math class includes a very basic electronics lab—just enough so that students can mate reality with Ohm's Law. A battery, a resistor, an LED and a multimeter may not be audio, but it's hands-on, and that's essential.

The class I teach is officially titled Studio Maintenance, but in essence it's bare-bones electronics. The textbook, *Teach Yourself Electricity* by Stan Gibilisco, starts with a two-chapter overview of chemistry and physics. Three labs familiarize students with a multimeter, various electronic components and their schematic symbols. By week four, students are stuffing a power supply board for their class project—an active DI that becomes a full-fledged mic preamp in a future class. Along the way, circuits are explained and the Internet is exploited daily.

The Time-Space Discontinuum

Students in the 19 to 29 age group have an attention span of about 20 minutes. Each activity—lab segments and especially lecture time—should fit into this time window. A stopwatch is not necessary; it's all in



the eyelids—an indication that it's time to stand up, grab some lab materials and start touching stuff.

I try to balance the practical with technical aspects, inviting students to bring in their broken stuff (and hope the problems are simple enough to inspire and boost confidence early on). This is not so much "electronics"—it's a crash course in what *not* to fear and what to look for, such as broken wires, cold solder joints, burned components and the ever-elusive blown fuse.

Times 10

Class meets twice a week for 10 weeks—60 hours total—averaging about 60 students per year; it's an elective within a two-year production program. Other technically oriented classes offered by our program include Live Sound (where cable making is part of the hands-on experience) and Acoustics (another elective). When we succeed in teaching receptive students how to learn, 60 hours is enough to launch the more serious ones into orbit. Of those who come just to build the DI, one step into reality and they quickly realize how a few basic skills can expedite the journey from unpaid intern to paid employee.

In five years of teaching, five of my students (8 percent) have emerged as extremely capable, employable and/or self-sufficient, exploiting technical skills that few others have. Of that group, a few have opted into a four-year EE degree program and returned as guest lecturers. (In a classic four-year EE program, several semesters are devoted to math alone, with little hands-on and even less audio-specific class time.)

A similar percentage barely pass my class, yet they learned something; the acquired fine motor skills alone are worth the price of ad-

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mission. Overall, the percentage of students who stay in touch is larger, especially thanks to LinkedIn and Facebook.

Wire Monkey

When mic cables can be had for less than \$20, it might seem almost pointless to learn how to make your own, unless you're stuck at a gig in unfamiliar territory. One of my students realized this at a film shoot. Learning to make cables is a practical investment that pays dividends for life. The key to achieving in any field

is to have high standards—don't settle for sloppy. The key is lots of practice. Wiring a patchbay is the best application to hone one's skills. It's the heart of any studio, large or small, stationary or remote.

Hey You, Almost a Docta!

The Recording Arts program at Indiana University includes four semesters of electronics, allowing for a more detailed exploration of transformers, vacuum tubes, transistors, op amps, impedance and frequency-sensitive com-

AUDIO SCIENCE

Required Courses

Here are some skill/prerequisites recording school grads need to land that first job after school.

- Know how to troubleshoot signal paths.
- Know how to wrap, make and fix a mic cable.
- Have a basic knowledge of electronics: volts, amps, ohms, etc.
- Be able to follow a song: count bars, find the chorus and bridge, etc.
- Know how to do everything in Pro Tools with minimal key/mouse strokes.
- Speed is impressive, but also do it *right*.
- Record anything, anywhere—get as much recording experience as possible.
- Know that you've gotta love it because there are many better ways to make a living.

—Michael Stucker

ponents like capacitors and inductors. Ah, the luxury of a four-year program!

Panel Quotes

Each panelist has his own soapbox and will define or prioritize "basic" in his/her own way. For example, Walter Sear told me, "A hundred years ago, the way into the control room was through the shop. There was no question about engineers and their technical abilities. We were *engineers* by degree. We got interested in electronics in our pre-teen years. I built my first crystal radio when I was 12." My entry was a generation and change later than Sear's but my story is similar. I, too, built a crystal radio, amplifiers and equalizers, and repaired juke boxes and color TVs before taking the two-year EE program at Penn State.

Eric Brengle, a former I.U. student now working in L.A., says, "The electronics portion of an education—whether learned on your own or as part of a university program—bridges the gap between the science and art. I don't know anything about design, nor am I remotely qualified to be a tech, but knowing the basics can only help you as an engineer in the field."

I think that answers the "Why bother?" question. III

Former East Villager Eddie Ciletti teaches electronics and vintage recording technology in the Twin Cities of Minneapolis and Saint Paul, Minn.

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Bruce Sugar

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Engineer / Producer

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violetusa.com

Photo by Nigel Skeet rockandrollphotographer.com
taken at EastWest Studios L.A. eastweststudio.com

AES Product Hits

—Continued from page 63

tage king.com) duplicates the Pultec EQ curves and additional high-boost frequency selections chosen to provide seamless control. Other features include a subsonic filter, four LF cut/boost settings, 10 HF boost settings and three HF cut settings.

Workstation World

It just wouldn't be AES without DAWs. Cakewalk's (cakewalk.com) SONAR Producer

Version 8.5 offers new beat-creation and arrangement tools, a new drum instrument, enhanced audio quantizing and new multistage effect plug-ins for vocals and percussion. Among its VST plug-in compatibility improvements is BitBridgeXR that lets you run 32-bit plugs in 64-bit environments.

This Mac-based restoration suite just keeps getting better. SoundSoap Pro 2, from BIAS (www.bias-inc.com), adds super-intelligent adaptive noise reduction, with four comprehensive restoration tools in a single plug-in.

Sonnox (www.sonnoxplugins.com) new Restore plug-ins (Oxford DeBuzzer, Oxford DeClicker and Oxford DeNoiser) feature advanced algorithms for fast, effective removal of pops, clicks, crackles, scratches, hum, buzzes and extra-



ADAM S3X-H

effects: Equalizer, Exciter, Transient, Dynamics, De-Esser, Exciter and Limiter. More than 150 macro-presets handle specific mix situations.

Waves (www.waves.com) showed a number of new plug-ins, but we were intrigued by Vocal Rider, which automatically matches your vocal level with the rest of the song by busing an instrumental mix into the sidechain. As a plus, it also writes and editable automation track, but definitely had the feel of a veteran studio engineer providing a little gentle “finger-limiting” as the vocal plays.

And In the End

If there was a word that described this AES, it was optimism.

Some exhibitors were saying “what down-



Radial Workhorse 5000

neous background noise. Supported formats include Pro Tools (RTAS), AU and VST platforms.

After analyzing vintage and modern classics from Neve, API, Ampex, EMI, Thermionic Culture and more to create accurate models of high-end studio gear, SoundToys (www.soundtoys.com) created its Decapitator plug-in, which models the saturation or distortion created when driving professional analog studio equipment. SoundToys also released its PanMan plug, which features random, ping-pong, and triggered- and LFO-styled panning.

Alloy from iZotope (www.izotope.com) is a completely configurable and self-contained plug-in suite with six essential sound-shaping

turn?” Others shook their heads at the current state of sales. But no matter what side vendors fell on, the general feel was upbeat about attendance and the future of audio. Hopefully, next year's AES in San Francisco (November 2010) brings more exhibitors and support for this great show that raises the bar for everyone and builds on this sense of community.

Meanwhile, we'll be presenting more products from AES 2009 in *Mix* and at www.mixonline.com, with dozens of videos and highlights just a click away. Also, Euro AES makes a long-awaited return to London, May 20 to 23, 2010, after a 23-year absence. Mark your calendar now! For more, go to www.mixonline.com/ms/aes. III

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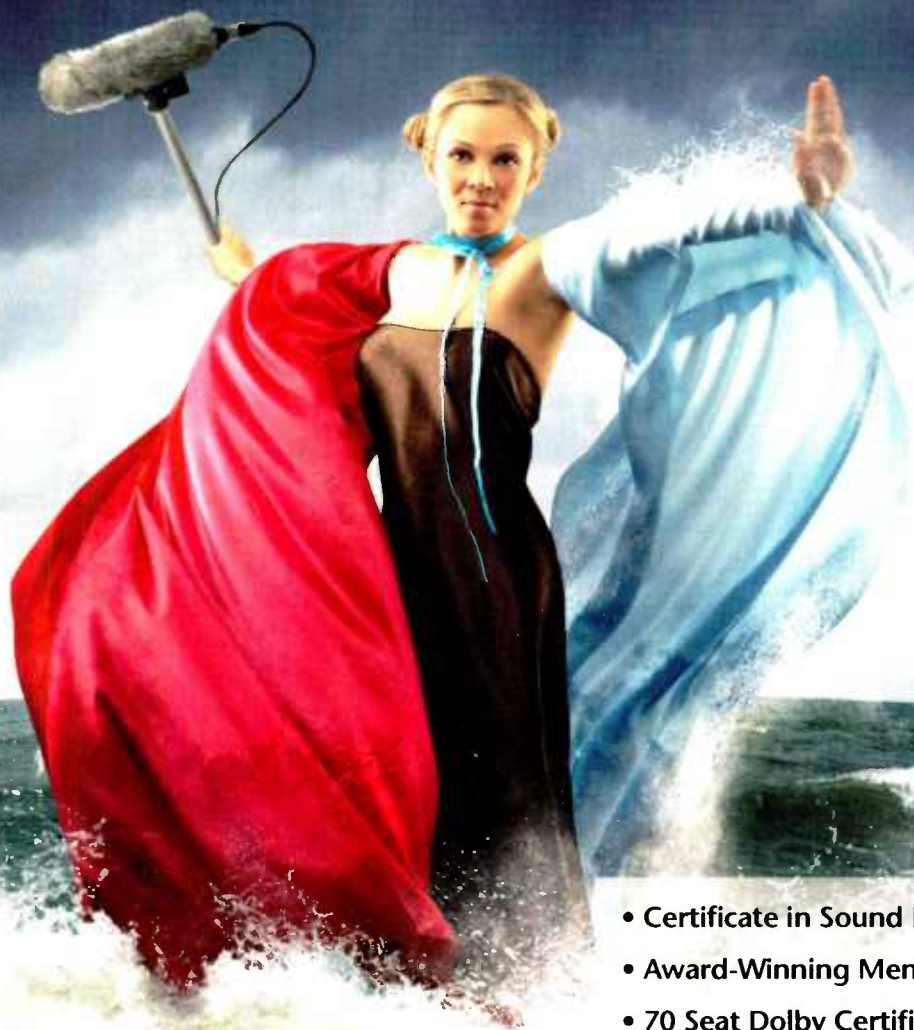
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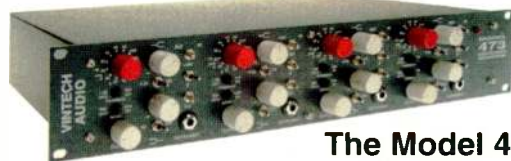
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1. Publication Title: Mix		Filing Date: 9/30/2009
2. Publication Number: 473-8703		
4. Issue of Frequency: Monthly		
5. Number of Issues Published Annually: 12		
6. Annual Subscription Price: Free to Qualified		
7. Complete Mailing Address of Known Office of Publication (Not Printer): Penton Business Media, Inc., 9800 Metcalf Ave., Overland Park, KS 66212-2216	Contact Person: Kris Cunningham	Telephone: 970-203-2719
8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not Printer): Penton Business Media, Inc., 249 West 17th St, Fourth Floor, New York, NY 10011-5390		
9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor - Publisher: Wayne Madden, Penton Business Media, Inc., 9800 Metcalf Ave, Overland Park, KS 66212; Editor: Mike Levine, Penton Business Media, Inc., 11 Mendall Terr., Montclair, NJ 07042; Managing Editor: Sarah Benzuly, Penton Business Media, Inc., 8400 Halls Street, Emeryville, CA 94608		
10. Owner - Full name and complete mailing address: Penton Business Media, Inc., 249 W 17th St, Fourth Floor, New York, NY 10011 - 5390; Penton Business Media Holdings, Inc. (owns 100% of the stock of Penton Business Media, Inc.), 249 W 17th St, Fourth Floor, New York, NY 10011 - 5390		
11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages or Other Securities: None		
12. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates) (Check one) The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes: N/A		
13. Publication Title: Mix	Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
14. Issue Date for Circulation Data: September 2009		
15. Extent and Nature of Circulation		
a. Total Number of Copies (Net press run)	46,011	31,418
b. Legitimate Paid and/or Requested Distribution		
(1) Outside County Paid/Requested Mail Subscriptions stated on PS Form 3541	24,397	20,492
(2) In-County Paid/Requested Mail Subscriptions stated on PS Form 3541	0	0
(3) Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Paid or Requested Distribution Outside USPS	3,739	1,921
(4) Requested Copies Distributed by Other Mail Classes Through the USPS	0	0
c. Total Paid and/or Requested Distribution (Sum of 15b (1), (2), (3), and (4))	28,136	22,413
d. Nonrequested Distribution (By Mail and Outside the Mail)		
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e. Total Nonrequested Distribution (Sum of 15d (1), (2), (3), and (4))	11,580	7,780
f. Total Distribution (Sum of 15c and 15e)	39,716	30,193
g. Copies not Distributed	6,296	1,225
h. Total (Sum of 15f and g)	46,011	31,418
i. Percent Paid and/or Requested Circulation	70.84%	74.23%

16. Publication of Statement of Ownership for a Requester Publication is required and will be printed in the November 2009 issue of this publication.

17. Signature and Title of Editor, Publisher, Business Manager, or Owner
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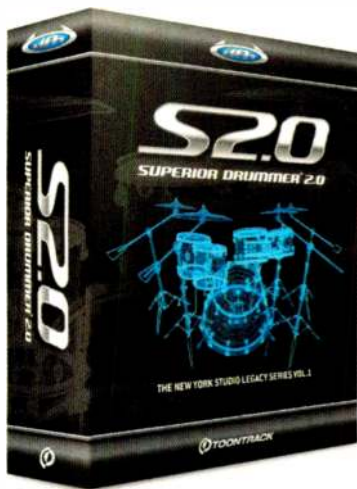


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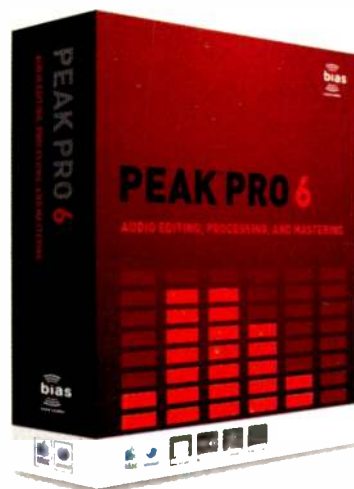
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You've had quite a career: playing, producing, managing. What led you to education? What brought you to IPR in Minnesota?

First of all, my grandmother was a choral director for Presbyterian churches in Grand Rapids, Michigan, and was quite the teacher. My father is a professor in Valencia, California, and I found that by striving to do good work all my life, I seem to spend as much time teaching and passing information on in the creative workplace as I do in education.

I was born in Minneapolis. In 2006, I was contacted by an executive search company and asked if I would be interested in applying for a president or Dean's position at a four-year music college in St. Paul. At this point, I hadn't been in Minneapolis since the mid-'90s, when I would come to check on acts that were being produced by Jimmy Jam and Terry Lewis for MCA Records. My first reaction was I had never heard of the school before, and it's too cold.

What was your view of pro audio education when you walked into IPR?

The first thing that interested me was the fact that Steve Hodge was chair of the Audio Production and Engineering program. After meeting Lance Sabin, the co-founder, and Brian Jacoby, the campus director, and other administration and instructors, it felt more like a professional co-op of talented people than it did an “institute.” And the students acted and performed like professionals. I found there was a great potential for growing, and a vibe that was a mix of professional experience, academic knowledge and real-world application.

We've talked before about the importance of a total education across all media and entertain-

ment business disciplines. What does a student need to know today?

Every damn thing he can get his hands on! The brain is not compartmentalized. It functions just like a hard drive, or a better example would be a large sponge. And with technology as king, the environment in a delicate balance and mankind still not able to curb its hunter/gatherer instincts into some form of peaceful coexistence, today's student is in a hell of a fix if he doesn't learn as much as possible, not only about his chosen endeavor, but how the world works.

Tell us about Ideawerks, the program that provides media training and equipment to kids through Minneapolis' park system.

Ideawerks is a multimedia arts, recording technology and public achievement after-school program. It was developed by myself and a hard-working ad-hoc committee of volunteers who are friends of IPR and past colleagues of Jackie Lee Robinson, who was one of the original co-founders of the Institute and the namesake of the nonprofit Jackie Lee Robinson Foundation.

The original idea was to institute this youth program in a single park in Minneapolis. After creating the program—policy guidelines, parent and participant handbooks, registration forms, curriculum, syllabi, teaching plans, use of Public Achievement Principals, equipment lists and proposed locations—I presented our after-school program and five-year partnership contract to the Minneapolis Park and Recreation Board. It was unanimously approved for inclusion in recreation centers in the Minneapolis Park System. On June 15, 2009, Ideawerks started its 12-week summer program. The program functions all year round, based on 10-week semesters that parallel the Minneapolis Public School System schedule.

What is the school's involvement?

IPR's involvement is two-fold. First of all, IPR has donated iMac computers, mobile workstations, a Digidesign Control|24 control surface, Mac G5 towers and various software. Graduates, friends and input from current instructors at IPR helped formulate the program's curriculum, which is a customized version of what is taught every day at IPR to college students.



The second part is the support it gives to the Jackie Lee Robinson Foundation and the Ideawerks program to increase its influence and outreach to help youth aged 12 to 17 in the greater Minneapolis community, which for me is an honorable homecoming—to be able to help children in the city where I was born.

Have you lined up wider industry support?

We have Digidesign, M-Audio and Avid as donors of software and hardware. Sennheiser has donated all of the professional microphones and headphones, with a lifetime warranty. A local Minneapolis company, Allied Audio, has provided us with microphone stands and cables. Ableton has provided us with multiple copies of Ableton Live software, and we are also very lucky to have just received support and equipment from Euphonix. The program has also garnered its first scholarship from the Page Education Foundation in Minneapolis, which will be given to a student chosen from the Ideawerks program to attend IPR.

Why is it important for educators to become involved in their communities?

Because if they don't, it means they only exist in their heads and are of no consequence to the community at large. We all must live in the real world. ■■■

Tom Kenny is Mix's editorial director.

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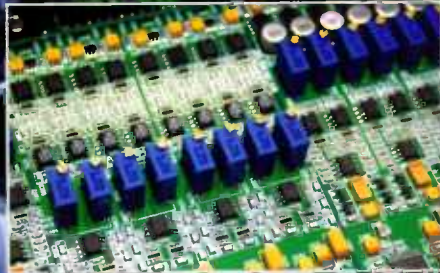
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