

Composer Trevor Morris \* Desktop Controllers \* AES Hits \* Pink Live

November 2013 \ \ mixonline.com \ \ \$6.99



# MIX

MUSIC PRODUCTION • ELECTRONIC SOUND • SOUND FOR PICTURE

## AUDIO EDUCATION

### 2013 DIRECTORY

### NOTES FROM SCHOOL

# MENTOR U

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*The inaugural class and staff at Blackbird Academy in Studio 42, mixing it up with Peter Coleman, Jacquie King, Ken Scott, Martina McBride, Dan Auerbach, Nathan Chapman, Dann Huff, Bob Ohlsson, John McBride, Vance Powell, Justin Niebank*

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## The all inclusive 72 mic input system at a special introductory price.

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Further new features include an expanded Aux Panel, increased Dynamic functions such as a Duck option and expander for the Gate, a De-esser and two types of Knee for the Compressor. There are also new FX types with multitap, ping pong and stereo delay, with different delay times for left and right. A warmth button is provided on each channel for analogue emulation and two types of EQ have been added (Classic and Precision).

Plus, the SD9 now features Sets (previously only available on SD7T), which has been enhanced to allow for 'Set Spill' allowing the creation of Sets with easy changing of the console layout to display members of that Set.

And if that wasn't enough, to coincide with the Supercharged launch, DiGiCo is offering the Rack-Pack, a 72 mic input system at an introductory total system price.

**SD-9 Supercharged Rack Pack. Only \$28,450. Shipping Now.**

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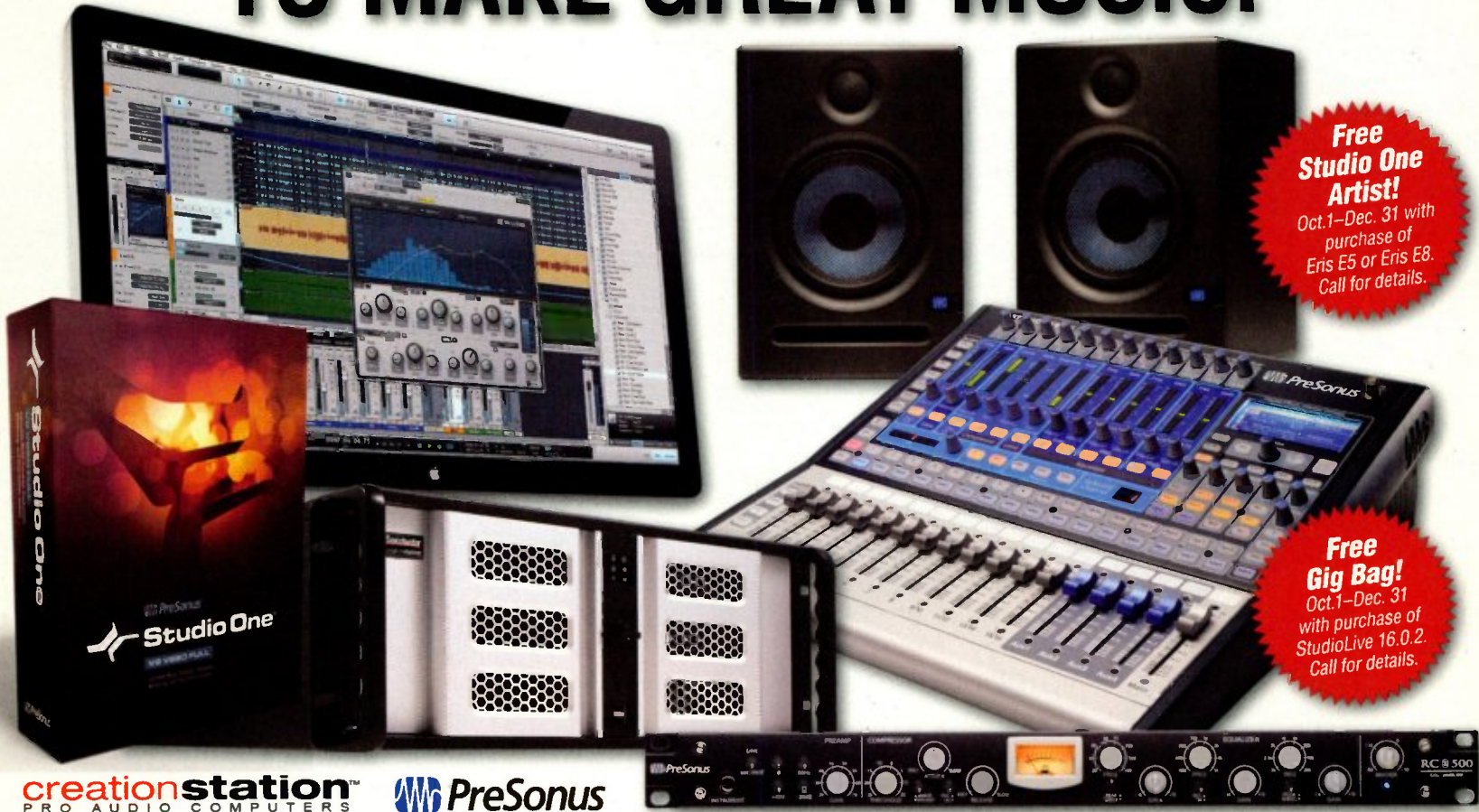
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**On the Cover:** The inaugural class at the  
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Blackbird Studio D. **Photo:** John Partipilo.

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# From the Editor

## AUDIO EDUCATION TODAY

**I**t has been a rough couple of years for a lot of people in secondary education, with one headline after another announcing simultaneous class closures and fee hikes at state-run systems, cutbacks at community colleges, stricter entry requirements and higher tuition/costs at many private universities, and a looming student debt crisis that some are predicting will match the bad-mortgage-fueled meltdown of the past five years. Earlier this year, the *Atlantic Monthly* ran a story titled "Is College Worth It?"

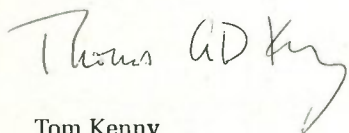
It's a problem facing many professions and trades across the country. There are predictions that within a few decades, the U.S. won't have enough doctors, and that we are already facing a severe shortage of high-level engineers to fuel the next round of innovation in biotech, nanotech or even transportation. When you couple these trends (and headlines) with the dire job market that millennials keep reading about every day, it's no surprise that educators are scrambling to adapt.

Over the past 15 years, there has been a huge increase in the number of U.S. recording schools, from community colleges in California expanding their facilities through county bond measures, to for-profit programs that grew rapidly, though not exclusively, on the backs of federal financial aid that flowed freely until the crash of 2008. With more schools wooing more students in a market with little job growth, and an overall economy in free-fall, a downturn was bound to happen. It's no secret that many recording schools are now being challenged by declining enrollment; many are meeting those challenges head-on by expanding into new markets, while others are establishing online programs. Still others are committing to brand-new facilities, most notably Berklee, which has put up tens of millions of dollars to build a new school in Valencia, Spain, and completely overhaul its recording facilities/dorm space in downtown Boston.

Being that the audio industry is based on a trade, or a craft, there have always been lots of options to learn. Even as more and more recording schools opened, the trend toward alternate educational paths, many of them studio- or mentor-based, has expanded. Sheffield Audio Video has been doing it well for a long time in D.C.-Maryland with its Institute. Recording Connection launched a model a few years back that links individual recording studios with potential students. Bruce Swedien began hosting weeklong workshops in his Ocala, Fla., home studio. Ryan Hewitt recently debuted a series of weekend master classes under the moniker Studio Prodigy. Mix With the Masters hosts a series of weeklong seminars in France featuring top U.S. engineers. And The Blackbird Academy, featured on this month's cover, is attempting to take the concept to a whole new level.

Some, not all, of the big schools will bounce back. And the state schools and private schools will soldier on. Education has become a big, big business, prone to economic cycles same as other industries.

Still, it's nice to know that there are alternatives. And that our industry still values a mentor.



Tom Kenny  
Editor

# MIX

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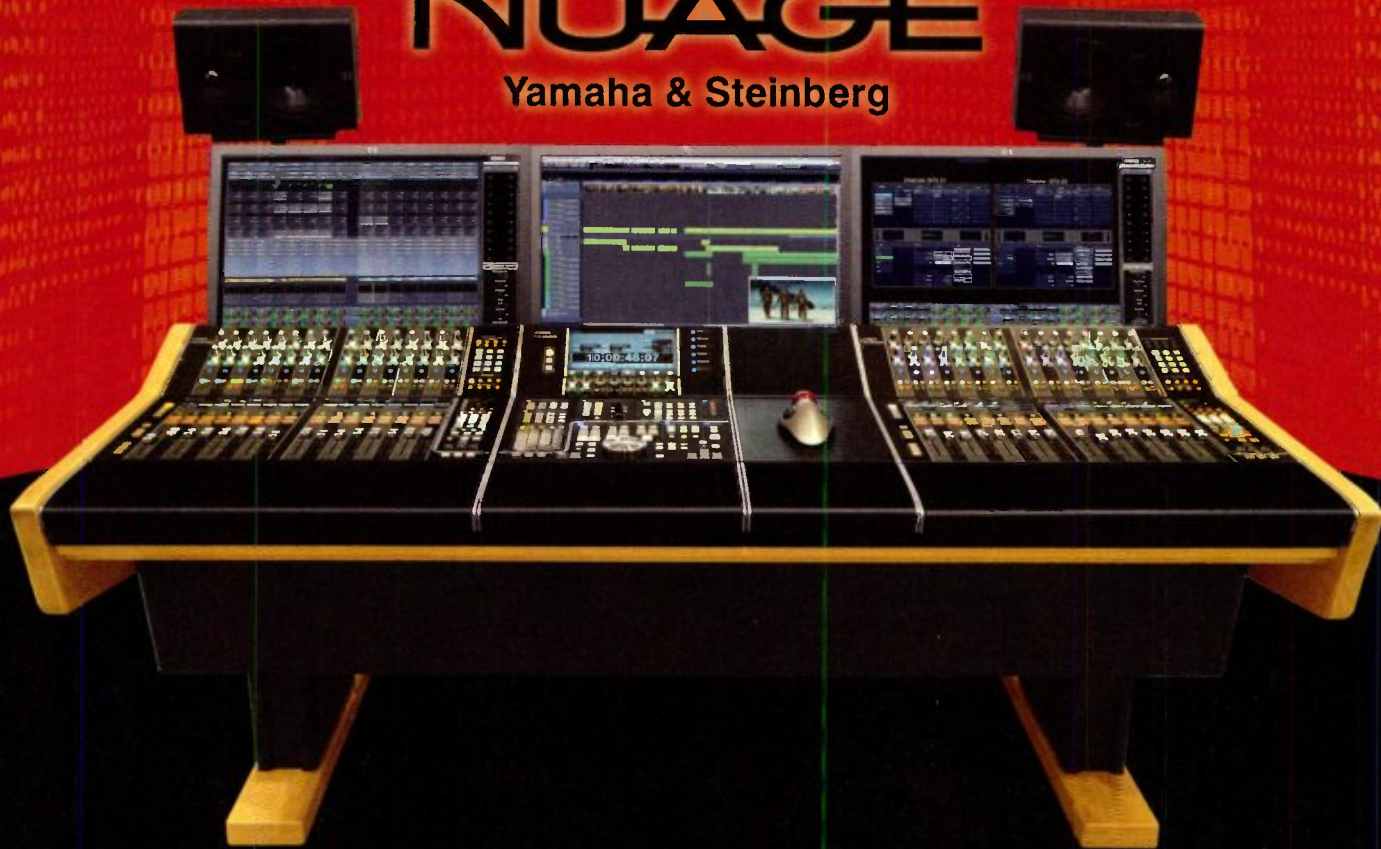
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## AES 2013: SMALL AND ENERGIZED

The weather couldn't have been better for mid-October in New York City, which might help explain the buoyant mood among both exhibitors and visitors at AES 2013. Though the annual AES convention remains relatively small, the aisles were densely packed and the energy seemed more vibrant than it has in years. While booths and product launches are the main focus, exhibitors are trying new things, old things and having some fun. Audio-Technica provided a three-camera live stream of various sessions from the likes of Jimmy Douglass and Frank Wells, while Focusrite pulled in Chris Lord-Alge to showcase RedNet and partnered with Ocean Way and others in a killer demo room. But our favorite was end-of-day at the Millennia Media booth, where owner and winemaker John LaGrou was pouring his Grenache as guest winemaker Leslie Ann Jones poured the 2012 Cole Ridge Sauvignon Blanc from her very first barrel.

Meanwhile, there were plenty of product introductions, with a few of the hits here and much more to follow online and in coming issues.

### CONSOLES/CONTROLLERS



API THE BOX

API opened the show with a 10:30 press conference announcing THE BOX (see review, page 68). THE BOX boasts four mic/line input channels, two of which come with their famed 550A equalizer, two extra empty 500 series slots, two assignable 527 compressors, and 16 summing channels for mixing in The Box when you're mixing outside the box.

Avid had consistent crowds around the S6, a modular, EuCon-compatible control surface born on the foundation of the ICON and System 5 product families. The multipoint touchscreen quickly accesses plug-ins, large track counts, surround panning and more; also top-lit status knobs and high-resolution OLEDs.

Tree Audio offers The Roots 8- and 16-channel 2-bus mixing consoles. Input channels use a vacuum tube-based signal path for mic, line or direct inputs, and provide EQ and limiter on every input channel.



SSL Live console

For live sound visitors, one of the most highly anticipated debuts came from SSL. Their Live mixing system can be configured with a variety of I/O options, including AES/EBU, MADI and the Analogue Stagebox, which features SSL's SuperAnalogue mic preamps. A centrally located, multi-gesture touchscreen provides fast access to EQ, dynamics, mute groups, VCAs and routing functions for 192 (!) audio paths.

And though it has been shown throughout the year, the Nuage Integrated Audio Production System made a splash at its AES debut. Nuage is a Dante-enabled, networkable recording system and controller from Yamaha and Steinberg. It comprises hardware work surface components, a sleek inter-

face, comprehensive visual feedback, networkable audio interface units, and a software-based digital audio workstation.

### MICS AND MONITORS

AEA introduced its first active ribbon, the N22, a phantom-powered ribbon which features the same Big Ribbon technology found in other AEA microphones.



Neumann TLM 107

The new multipattern Neumann TLM107, listed at \$1,699, features a transformerless design and the D-01 capsule. The mic's pad, roll-off and patterns are backlit via LED and set with a joystick found on the back of the microphone.

Coles Microphones bowed the 4030L lollipop ribbon mic. It features a wide frequency response and comes in a foam-lined case with an adjustable universal mic stand mount.

The Schoeps V4 U, small-diaphragm microphone offers a stylish design and a 33mm, beveled capsule collar producing a steady increase of directivity at high frequencies. The capsule can be swiveled front to back and comes with a static mic stand mount.

Meanwhile, Big Monitors are back!



Genelec 1237A

Genelec showed off its relatively new near-field M Series, then turned attention to the 1237A and 1238A monitors, which offer a new "smart" design, adding DSP and AutoCal technology to the 1237 and 1238 mid-field monitors.

The ATC SCM110ASL Pro features twin, full SL spec 9-inch/234mm bass drivers, 5mm soft dome tweeter and ATC's 75mm Super Dome mid-driver. The onboard 350-watt Tri-amp pack LF contour control, clip indication, and a six-year warranty.

And while they debuted at NAMM earlier in the year, the JBL M2 master reference monitor made its AES debut at both the Harman truck and in listening sessions at Ann Mincieli's Jungle City Studios.



Waves J37 Tape Saturation Plug-in

### PROCESSING

The Waves J37 Tape Saturation Plug-in was modeled after Abbey Road's iconic tape machine. Features include user-adjustable controls such as Tape Speed, Bias, Noise, Saturation, and Wow and Flutter. It follows The King's Mic, REDD and RS56 in the ongoing collaboration between manufacturer and studio. No

doubt there will be more to come.

Joemeek introduced three new 500 series modules, each with an MSRP of \$299. The meC Compressor recreates the classic sound of photocell compres-





Joemeek meQ Compressor

sion. The meQ Meequalizer features four bands with adjustable Q on the mid bands and a switch for shelf or bell curves on the LF and HF bands. The preQ Preamplifier provides up to 60 dB of gain, plus switches for pad and polarity invert.

Fresh off the assembly line from **Dangerous Music** is the Dangerous Compressor, a 2-channel bus compressor employing internal sidechain circuitry with Bass Cut and Sibilance Boost contours, auto/manual attack and release, and Smart Dyn Dual Slope Detection, which automatically limits peaks while maintaining average compression characteristics.

**Charter Oak's** K500 EQ features three bands with a bell and shelf selection switch on high and low bands, 12dB of cut and boost in 2dB steps, -24dB Cut Selection on each band for corrective wide bandwidth cut or corrective notch filter, and a high and lowpass filter.

**Prism Sound** showed the Titan professional USB audio interface with MDIO expansion. It features four mic preamps, two DI inputs, plenty of I/O on the back and twin headphone outputs with independent gain controls.



Prism Sound Titan

**Dan Lavry** showed the LK Solo latency killer for desktop use, and the new DA-N5 D/A converter.

The **Maselec** MLA-4 Compressor /Expander is based around the MLA-3 multiband compressor. It features expansion on all bands, with ratios from 6:1 compression to 1:2 expansion.

**Ronin Applied Sciences** debuted three products handmade in the U.S., all featuring serious construction and massive power supplies. The Archangel mic preamp could be the world's first mic preamp that achieves amplification through totally passive means.

**Acme Audio** showed an upgraded Opticom XLA-2 featuring high-speed cadmium-selenide (CdSe) photocells, all-tube circuitry, and military-style point-to-point wiring. The upgrade comprises a push-pull knob that adds a gain stage allowing users to drive the front end.

**Sonnox** bowed the Codec Toolbox, a \$49.99 plug-in for encoding music for the Web. Released as a partnership with Fraunhofer, the toolbox comprises two applications, the Toolbox plug-in for real-time auditions and the Toolbox manager for encoding offline and adding metadata.

The **iZotope** Nectar 2 vocal processor features a large range of controls including harmony generation, a plate reverb, delay, saturation, a de-esser, compressor, gate, EQ and limiter.



Radial Engineering USB Pro

#### AND MORE!

**Radial Engineering** USB Pro DI is a high performance 24-bit/96kHz stereo direct box featuring driver-free installation for Mac OS X, Windows XP, Vista and Windows 7. Other features include a built-in headphone amplifier for monitoring and balanced Lo-Z outputs with switchable isolation.

**Antelope Audio's** Orion 32 is a sleek single-rackspace interface that provides 32 channels of high quality, low latency AD/DA. Antelope's 64-bit AFC (Acoustically Focused Clocking), four word clock outputs, one word clock input and I/O on eight D-Sub connectors, including 1x fiber-optic MADI, 2x fiber-optic ADAT, 1x S/PDIF and USB connectivity.



THUNDERBOLT

Lynx Studio Technology LT-TB

**Lynx Studio Technology** showed its LT-TB, 2-port Thunderbolt expansion card that supports daisy-chaining Aurora and Hilo converters, and any other certified Thunderbolt device on both Apple and Windows computers.

**Drawmer** MC 2.1 monitor controller controls up to three pairs of speakers and a subwoofer. I/O includes a talkback input, four XLR inputs, two RCA inputs, a mini-jack, six XLR outputs, a mono XLR output for the subwoofer and two headphone outputs.

The **MUTECH** MC-3+ Smart Clock is an ultra-low jitter digital audio master clock and USB interface based on their 1G-Clock technology. Features include the generation of Word Clocks, Super Clocks, AES3 + S/P-DIF blanks simultaneously.

**Magma** unveiled the Roben Series of Thunderbolt PCIe Expansion Chassis. Each model connects to a host computer via Thunderbolt, and features three PCIe slots and a high-capacity power supply.

The **Triad-Orbit** Advanced Microphone Stand System features a modular approach making it easy to mount microphones in a stable system that's easily articulated. Also in the booth were GB-3 Grav Bags Ballast Bags, which can be grouped in 10-pound configurations via Velcro, or used separately on the legs of the stand.

And finally, we can't forget about physical recorders!

New from **Sony** is the PCMD100, a portable, compact, high-res recorder with onboard stereo X-Y mics. 32GB of internal flash memory and an SD-XC card slot. It can record in a variety of formats, including linear PCM (up to 192kHz sample rate), DSD and MP3.

**Zoom** displayed its H6 Handy Recorder, a handheld unit capable of recording up to six tracks simultaneously. The H6 includes detachable X/Y and M/S mic pair "heads," which can be swapped for optional shotgun or XLR/TRS attachments.



Scott Carroll, Senior VP & Program Director of Take1 Insurance

## Webcast On Live Event Safety on Wednesday, November 13

Asserting that the live event production industry can no longer take a passive approach to life safety, Take1 Insurance (take1insurance.com), the leading insurance provider to the entertainment industry, is teaming up with the Event Safety Alliance (ESA) to host "A 60-Minute Introduction to Producing Safer Live Events," the industry's first such Webcast. It takes place on Wednesday, November 13, 2013 at 2 p.m. Eastern Standard Time and is open to anyone involved in the business of producing and staging live events.

"The time for discussion is over and the time to take action is at hand," says Scott Carroll, Executive Vice President & Program Director of Take1 Insurance. "For years we have emphasized the need for live event producers to take the time to prepare for the unimaginable and now, thanks to the leadership position taken by Jim Digby and the Event Safety Alliance, the industry can utilize the ESA's Event Safety Guide to prepare complete emergency action plans that include having the right insurance coverage in place." Register for the Webcast at [eventsafetyalliance.org](http://eventsafetyalliance.org).



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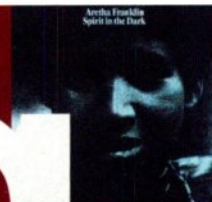
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# MUSIC



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Chuck Lightning and Nate Wonder

## WONDER & LIGHTNING

Meet the Duo Behind Janelle Monáe and Deep Cotton

By Blair Jackson

**W**hat's in a name? Are the two guys at the other end of my interview phone call Nathaniel Irvin III and Charles Joseph II? Nate "Rocket" Wonder and Chuck Lightning? Deep Cotton? Wonder & Lightning? Control Z? The Wondaland Arts Society?

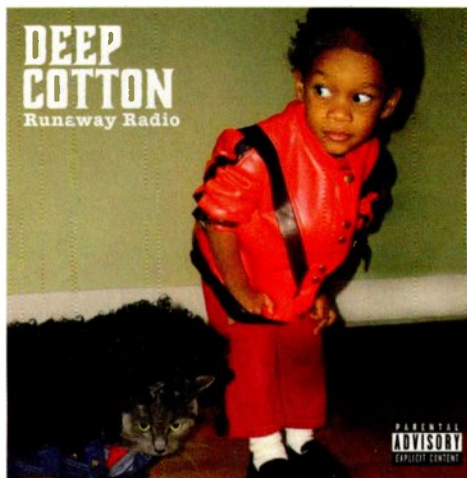
They turn up under all those names, and no doubt others, in their capacities as producers, songwriters, arrangers, singers, musicians and engineers on some of the most intriguing albums coming out of Atlanta in recent years. They are the driving creative force behind the

stylish and mesmerizing R&B/pop singer-songwriter Janelle Monáe, whose three eclectic, very high-concept albums—*Metropolis Suite I (The Chase)*, *The ArchAndroid* and the fall 2013 release *The Electric Lady*—are wonderfully adventurous and beautifully produced (if thematically a bit opaque and bizarre). Now, on the heels of that latest Monáe album, comes *Runaway Radio*, Deep Cotton's "Fixtape" EP (designed to fix the ills of the planet, they say), and Wonder and Lightning—as we'll call them—are again blurring musical categories and smashing boundaries with a lively four-song set that brings to

mind everything from Sly Stone to Talking Heads to '60s garage rock to '90s surf-punk.

At this point, no one should be surprised when Wonder and Lightning describe the title track of their EP as Clash-meets-Funkadelic or note that the groovelicious dance track "We're Far Enough from Heaven Now We Can Freak Out" was inspired by a 1966 Rolling Stones performance of "Satisfaction" on *The Ed Sullivan Show*, LSD pioneers Ken Kesey and his Merry Pranksters, and revolutionary Detroit rockers the MC5, among others. These guys are voracious music and culture fans who will employ





any style, any time, if it feels right. That's why on Monáe's *The Electric Lady*, there are thumping funk and R&B numbers, orchestral interludes, a ballad that sounds like it could have been pulled off a '50s pop record, propulsive Stevie Wonder-ish synth lines and even a taste of what is sometimes called "exotica"—'50s/'60s easy listening music with a Latin or some other odd twist.

Where does that last influence come from? "Oh, we love that stuff," Wonder says. "We listened a whole lot to this one album by a guy named John-Jacque Perrey. Nobody even knows about this guy. [Perrey was an early Moog musician, and also a favorite of the Beastie Boys.] But we've always liked that kind of music. We like [Henry] Mancini and stuff that has that vibe—*The Pink Panther*. And we like orchestral music, too: [film composer] Bernard Hermann..."

Lightning adds, "We want to give people that experience of hearing symphonic music and remind them that this level of music still exists and it's still very, very important and it can really affect you. It reminds me of later-era Frank Zappa, when he was composing music to be played by orchestras. We want to compose music like that."

Wonder, Lightning and Monáe are all part of a loose, highly collaborative Atlanta collective (Monáe calls it a "tribe") known as the Wondaland Arts Society, which includes musicians, producers, visual artists, writers and assorted creative types and intellectuals. It's quite the salon, headquartered in a large brick building that includes Wondaland Studios and a host of unusual rooms and spaces decorated with everything from grass flooring to a wall of clocks to odd sculptures and art objects. Musicians such as drummer Pete Alexander, guitarist Kellindo Parker

and Wonder's multitalented younger brother, Roman GianArthur (Irvin), aren't well-known outside of Wondaland productions, but these cats—and the scads of string and horn players and singers who help out on their projects—are all versatile and deeply talented. Monáe's album also features striking performances by a handful of fellow eccentrics—Prince, Erykah Badu, Esperanza Spalding, Solange and Miguel.

The studio itself "has guitars all over the walls and lots of vintage keyboards and other instruments all over the place," Wonder says. "We love old stuff, even though sometimes you have to send it out to get fixed, or we have to fix it ourselves. We've got ARPs and Moogs and Junos and Clavs, Prophets—all these great old instruments we have set up so it's easy to move from one to the next and try stuff out."

Wonder and Lightning are constantly experimenting when they record, combining old and new sounds in interesting ways and drawing from myriad inspirations as both producers and musicians. They cite Stevie Wonder as one of their primary influences and note that they have studied his albums and "really tried to understand his process and how he got the sounds he did," Wonder says. "We've also gotten to know Stevie—in fact we worked with him a couple of days ago—so we've been able to ask him a million questions about how he did this or that."

"Of modern producers," Lightning adds, "Jon Brion [Of Montreal, Best Coast, etc.] is someone we've learned a lot from. His understanding of the studio and his ability to bring in vintage sounds is amazing." Another, perhaps unexpected, influence—Brian Eno.

Both *The Electric Lady* and *Runaway Radio* were mixed by Chris Carmouche on an SSL console at Stankonia Studios (OutKast's Atlanta facility). Says Wonder, "We've heard a lot of music over there so we really know what the room sounds like. When it comes to mixing, you want a space you know the nuances of and feel comfortable in. It seems like we're always recording and mixing, always changing things a little, coming up with new ideas."

"We've actually added things to arrangements at the mastering phase," Lightning notes. And Wonder adds, "I'd like to release another version of the album next week!" ■

## SARAH JAROSZ 'BUILD ME UP FROM BONES'

**F**or their third album together, roots artist/songwriter Sarah Jarosz and engineer/producer/label exec Gary Paczosa cut all of the tracks in Paczosa's personal studio in Nashville. Jarosz, who was still in college at the New England Conservatory while she was making the new album, would head down to the studio during school holidays, either to record live with her trio (Jarosz, cellist Nathaniel Smith and fiddler Alex Hargreaves) or to develop musical ideas with Paczosa on her own.



"Sometimes we'd start with just her and an instrument—whether that was a mandolin, guitar or banjo," Paczosa says. "We'd keep running through a song until we had a tempo and key that felt good and we were ready to cut a pass with her playing and singing a scratch vocal." Then, more instruments would be added, including parts by guest musicians such as Jerry Douglas and Darrell Scott.

"A lot of times, once we got a band on it, the feel of the track or the energy changed, so then we'd go back and cut a new vocal," Paczosa explains. "Sometimes the scratch vocal holds up, but often she would want another shot at it with so many other exciting things on the track."

Jarosz's voice was captured with a Blue Bottle mic, into a Mastering Lab pre, GML compressor and just a touch of Retro Sta-Level, before going into Cubase. "I also always put up a garbage mic next to the Blue Bottle or below it, and that would change on every song," Paczosa says. "Even if I don't blend in [the garbage mic], I'd still use it as one of the sends into effects, just to make her voice a little grittier. She's a pure, sweet singer, but we added a bit of an edge."—Barbara Schultz





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## WILD CHILD WITH BEN KWELLER

Musician and producer Ben Kweller says one of the big draws to working with Austin-based indie-folk band Wild Child is their unique instrumentation. "I've always been such a rock guitar guy," he says, "but this band makes as big a sound as anyone without even touching a guitar."

Wild Child is led by violinist/vocalist Kelsey Wilson and singer/uke player Alexander Beggins; both are very strong songwriters and musicians, and the unique arrangements they've developed with Kweller are at once quirky and beautifully evocative.

After a couple of weeks of pre-production, Kweller and engineer Steve Mazur started tracking with just Wilson and Beggins at Austin Signal ([www.austinsignal.com](http://www.austinsignal.com)).

"Everything begins with the two of them," Kweller says. "We set up their mics, no headphones, no click, and we got these amazing takes—



Photo: Todd V. Wallgren

just live vocals and ukulele straight to an Ampex 440 1-inch, 8-track. We used my C37a on Kelsey's voice, which Mazur set right in-between omni and cardioid. For Alex's voice we used a Lucas CS1, and for his uke, my old SM 69. We dumped the raw duets into Pro Tools and established downbeats and created clicks for each song. Then we brought the band in and built up the tracks. It was so refreshing because the lead vocals were done first, and the end result still has that one of a kind, natural cadence that Alex and Kelsey have." —Barbara Schultz

## COOL SPIN CBGB: ORIGINAL MOTION PICTURE SOUNDTRACK OMNIVORE RECORDINGS



This is one of those reviews that could just be a track list. There are so many fantastic songs on the soundtrack to CBGB, the new movie about the legendary birthplace of New York punk. Talking Heads' "Life During Wartime," the MC5's "Kick Out the

Jams," Richard Hell & The Voidoids' "Blank Generation," The Stooges' "I Wanna Be Your Dog"—it's quite a list. The tracks are also nicely sequenced and mastered so they hang together as an album, though the originals were obviously recorded in various locations with different engineers, studios, gear, etc. This stellar collection hits almost all the right notes, with a couple of glaring exceptions: For some reason, the producers weren't able to include any Patti Smith or any actual Ramones records. There's one Joey Ramone solo song: "I Got Knocked Down," a tune from *Don't Worry About Me* (2002) that sadly relates to the singer's final illness, long after the events portrayed in the film. So, in other words, this album is not perfect, but it is great. —Barbara Schultz

Soundtrack producers: Brad Rosenberger and Cheryl Pawelski. Mastering: Reuben Cohen and Gavin Lurssen/Lurssen Mastering (L.A.).



## JON BATISTE & STAY HUMAN, 'SOCIAL MUSIC'

A gifted, restless musician with boundless artistic ambition, Jon Batiste is never content with one take, one approach or one genre. His latest, *Social Music*, offers listeners beautiful, inventive new ways into jazz, R&B, gospel and soul.

Batiste and band, with their producer Jeff Jones, "The Jedi Master," also took a novel approach to recording the new songs. "I had to figure out a format that would facilitate his creative direction. He's like Prince in that he just keeps recording continually. He's nonlinear, but he's always brilliant."

Jones (Wynton Marsalis, Norah Jones, Alicia Keys, etc.) and his team of engineers took what he describes as a cinematic approach to combining recordings that were made in a variety of home and commercial settings—instead of trying to force a kitchen session to sound like it was made in an ideal acoustical environment, he used different room sounds deliberately to shrink or broaden, or change the listener's perspective.

"We'd be choosing pieces from different versions of the same song, and intercutting different versions of the song that came from different studios," he explains. "So there's a lot of time taken in post on something like this, combing through all the material. After 'Jazz Man Speaks,' for example, it goes into a something he did in his computer in GarageBand and then flips into something from an MP3, into 96k 32-bit, and you hear the whole thing open up. It's like a camera view coming into full-resolution."

Jones also arranged some live sessions, where the band performed before an audience, and he recorded using multiple devices and methods to give more of those "angles" to work with when it came time to mix. The goal, Jones says, was "to devise a system that facilitates an artist's vision when the artist's vision incorporates all known formats, at all known sampling rates."

"Jones is a visionary," Batiste says. "He created a beautiful environment for us. He understands the vision I wanted to create and brought the project to the next level." —Barbara Schultz





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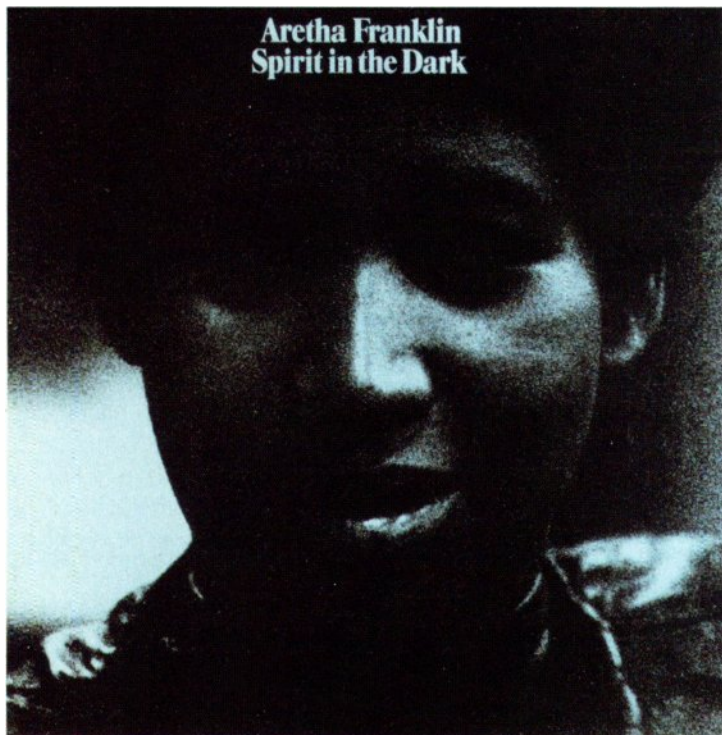
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# Classic Tracks

By Barbara Schultz



## “DON'T PLAY THAT SONG (YOU LIED)”

Aretha Franklin

It was all because of fishing,” says engineer/producer Howard Albert about the genesis of the legendary alliance between Atlantic Records and Criteria Studios. It seems that two of the production powerhouses behind Ahmet Ertegun’s Atlantic label—Jerry Wexler and Tom Dowd—loved fishing off the coast of South Florida so much that they sought a creative home in Miami.

“We all used to fish together,” Albert says. “As a matter of fact, Ron and I are sitting talking to you on our boat right now.”

“We’re tied to the dock, though, so it’s okay,” says Howard’s brother and studio partner, Ron Albert.

The Albert brothers have been finishing each other’s sentences, and projects, since the 1960s when they both began working for Mack Emerman at Criteria.

“I started in 1969,” Howard recalls. “I was in Vietnam, and Ron, who’s four years younger than me, was already working at Criteria. I got him a job when I left to go into the service. I was a studio musician, and there was an opening, so I sent Ron over there to be the tape librarian. They asked him if he could type, and he said, ‘Yes,’ but he couldn’t so he went

home and asked our mother, ‘Can you teach me to type?’ He got the job, and progressed from there.”

When Howard returned home, he joined Ron and fellow staffer Chuck Kirkpatrick at the studio. It wasn’t long until Emerman’s engineers found themselves in the ultimate right place at the right time.

“Before Atlantic came down, all we had in the way of business was local stuff: jingles, radio spots, local talent,” recalls Kirkpatrick. “We had people like Arthur Godfrey and [Jackie] Gleason coming to work on their albums or finish projects occasionally, but the big day was the day Tom Dowd and Jerry Wexler came down. They both wanted to be able to work in Miami, so of course they needed a studio, and we were the first place they came to.”

Atlantic’s association with Criteria resulted in scores of stellar recordings, including Brook Benton’s smash “Rainy Night in Georgia,” Derek and the Dominoes’ classic “Layla,” and this month’s Classic Track, Aretha Franklin’s 1970 hit “Don’t Play That Song (You Lied).”

When Franklin, her band and producers Jerry Wexler, Arif Mardin and Tom Dowd arrived in Florida in the spring of 1969 to start work on the album *Spirit in the Dark*, the young artist had already been crowned Queen of Soul. Her Number Ones before that point included “I Never Loved a Man (The Way I Love You),” “Baby I Love You,” “Chain of Fools,” “Think” and, of course, her signature song, “Respect.”

It can only be because Franklin had so many even bigger hits that a superb track like “Don’t Play That Song” could have dropped out of heavy oldies rotation the way it has. The song, which had been a Number 2 R&B hit for Ben E. King in 1962, spent five weeks at the top of the R&B charts in 1970 after Franklin covered it. The arrangement is vintage Aretha—made-to-order for a soul singer who’s always worn her church-singing background very proudly. It starts with a gospel-blues piano intro, and then session aces the Dixie Flyers come in and the track starts to rock. Listen to this tune again if you haven’t heard it in a while, and see if the word “perfect” doesn’t come to mind.

*Spirit in the Dark* sessions took place on four different dates between May 1969 and March 1970, when “Don’t Play That Song” was cut. That signature piano intro was performed live by Franklin on the Baldwin grand in Criteria’s Studio B, where she and the Dixie Flyers crowded into the main tracking room. Franklin cut all of her vocals live, as well, seated at that piano.

“It was a bit of a challenge because Aretha was playing the grand piano live with the band as well as singing the song live with the band,” Ron says. “So it was our job to get as much separation and sound quality as possible, because all of her vocals were keepers. She may have overdubbed a line here and there, but Aretha Franklin never sang a bad note in her life.”

Both of the Albert brothers, plus Kirkpatrick and engineer Lewis Hahn, worked on the *Spirit in the Dark* sessions, but not necessarily all at once. “Criteria was a team,” Howard explains. “It wasn’t always the same



people on a session, and we didn't switch every day; it just depended on what everyone was doing. We all filled in for everybody."

Because the engineers were somewhat interchangeable on projects, the team knew their go-to miking schemes. "We miked Aretha similarly to what we did on the Layla sessions," Ron says. "We'd close the lid on the piano and cover it with moving quilts, and close-mike the piano with two [AKG C] 414s."

"And we always got pizza from Marcella's," Howard says. "That was also part of the piano sound—the pizza box on top of the piano."

The Alberts believe they used a Neumann U 87 on Franklin's vocals, but agree it might have been a U 67. Also in the piano and vocal chains would have been compression/limiting via—they're pretty sure—Teletronix LA-2As.

"And probably Pultec [EQ]," Howard says. "We had a lot of them."

They also had a lot of musicians in an approximately 30x40-foot studio. Different musicians played on various tracks on *Spirit in the Dark*; the Dixie Flyers played on five songs, the Muscle Shoals Rhythm Section appear on four, and there were several guests as well. But Howard says that for the entire album, the grand piano was in the left-back corner of the room, so that Franklin's left hand was closest to the wall.

On "Don't Play That Song," bassist Tommy McClure was in front of the piano, in between the piano and Sammy Creason's drum booth. Across the room from the kit, in another booth were background singers Almeda Latimore, Brenda Bryant and Margaret Branch—all singing into another U 87.

Also on the session were keyboard players Jim Dickinson and Mike Utley (the B3 in the center of the tracking room belonged to Howard) and guitarist Charlie Freeman, whose amp sat near McClure's at the back of the studio, near the drum booth.

A little later in his career, Howard became one of the first recording engineers in the U.S. to close-mike every piece of the kit, but that wasn't the norm yet; they simply used a pair of U 47 overheads, an Altec 633 saltshaker mic on kick and a KM 84 on snare.

"That KM 84 mic was one of the original ones from Germany, and they did not have pads," Ron notes. "You had to unscrew the capsule and slip on a little pad, and then screw the capsule back.

"Keep in mind that in a 16-track world, we rarely had more than two or three tracks for drums," Ron continues. "You had a left and a right, and possibly a kick-drum third track. So we had to get the drum sounds correct between the cymbals, the toms, the snare—everything had to be correct, because we only had the ability to effectively change the levels with EQ after the fact."

The engineers tracked Franklin and band to an MCI JH16 machine—one of Emerman's many early-generation designs from his friend, and MCI founder, Jeep Harned.

"Again, in the world of 16-track, which we were in for a long time, we recorded at 15 ips a lot for R&B so we'd get a bigger bottom end and not worry about the noise level," Ron says. "We printed a lot of those tapes at 15 ips, and the MCI machines had a sound that was very unique when we saturated a bit extra."

Harned also created the custom consoles in Criteria. The board in the B room was developed to do double-duty in the studio and on the road. It had a center section that could actually be removed from the rest of the chassis, installed in a truck, and used to mix remote dates.

Another unique characteristic of Criteria B was the control room lay-



Engineer Chuck Kirkpatrick at Criteria Studios in 1970.

out. The Harned-designed console was installed perpendicular to the window into the tracking room. A separate producer's desk, also perpendicular to the board, allowed producers Dowd and Wexler to look straight into the studio, while the engineers faced the producers' profiles, and beyond them, a wall with soffited Altec Lansing 9844 monitors.

"I remember those speakers well because I actually have them!" Howard says. "They're in my home theater system. I love them—two 12s and a horn."

"That was an amazing sound system, and part of the reason they sounded so good was they were mounted in a cement-block wall; there was no window in that wall," Ron points out. "The wall was rigid, and when you cranked them up, the room hummed. The bass was amazing."

Howard is pleased to have such a memorable souvenir from his days at Criteria, but the real takeaway for all the engineers was the life-changing experience of working with world-class artists like Franklin, under Dowd's wing.

"We learned everything from Tom Dowd. He was our mentor. He treated us well, and he taught us everything we know," Howard says.

"The beauty of Tom was he never tried to dictate anything," says Kirkpatrick. "He assumed that I, or anyone else he worked with, knew what they were doing, and he would let us set the mics and get the sounds.

"The only time I remember him sort of jumping on me—and I think this was on an Aretha mix—was when I was putting a rough mix up and he came over and took all the faders with one arm and slapped them all down to zero. He said, 'When you mix, I want to see 70 percent modulation of the drums on the left, and I want to see 70 percent modulation of the bass on the right.'

"He wanted to see 70 percent on the meters of nothing but bass and drums, and whatever was left, that's what you can do with guitars and vocals, but he had to hear those drums and bass way out front. That was such a big part of Atlantic's R&B sound."

Kirkpatrick left Criteria in 1972 to pursue his own music career but eventually returned to engineering. Today he's on staff at music house Avacom (Coral Gables, Fla.), which specializes in production for radio and TV spots.

The Albert brothers are still working side by side in Miami, where they own and operate AudioVision Studios, and obviously still enjoy their nautical pursuits.

All of those legendary Atlantic producers are gone now, but the Queen of Soul still reigns: an 18-time Grammy winner, she's number one on *Rolling Stone* magazine's list of the 100 Greatest Singers of all time and a Kennedy Center Honors recipient with 20 Number One singles to her credit.

"I wish I could spend one day in a time warp back in one of those sessions," Kirkpatrick says. "I could appreciate it so much more now." ■



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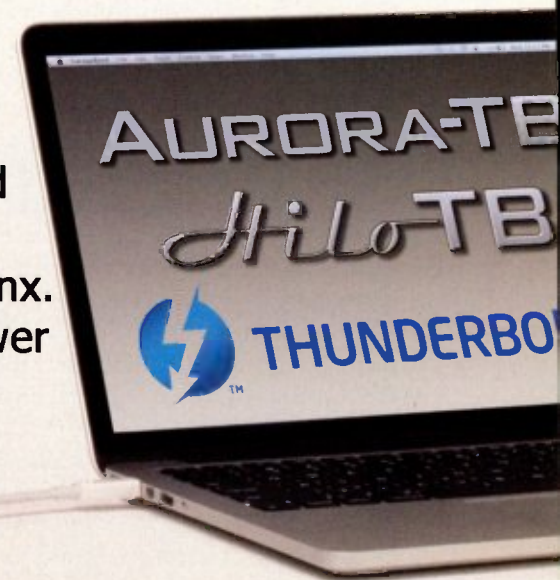
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Photo: Steve Jennings

## PINK

The Truth About Audio for Pink's World Tour By Blair Jackson

**P**ink is currently embarked on the final 2013 leg of her marathon sold-out "The Truth About Love Tour," which this year alone has taken her all over the U.S. (hitting some cities twice), Europe and Australia. The extravaganza, some of which has a hip circus vibe, features a five-piece band, two backing singers, seven dancers and very complex production involving multiple screens, glittering sets, wardrobe changes, choreographed dance routines, a small B-stage for acoustic numbers and plenty of aerial excitement which finds Pink somehow—miraculously—singing while hurtling on bungees, turning on a orb cage, somersaulting through space over the crowd and even suspended upside down.

Madonna, Lady Gaga and Katy Perry have got nothin' on Pink!

The sound gear the tour has been hauling around the world was furnished by JPJ Audio of Sydney, Australia, and is dominated by an L-Acoustics K1 system, which the tour's original FOH engineer, Chris Madden, first encountered on Pink's 2010 European tour. (L-Acoustics is a French company.) Each side of the main arrays comprise 14 large-format K1 loudspeakers (each containing two 15-inch woofers, four 6.5-inch cone drivers and three 3-inch compression drivers) and six of the smaller KARA loudspeakers, used for downfill. Another half-dozen KARA speakers hang in a small array between the two sides, to cover front audience, and more

are placed below the main stage in front, again to cover as much of the front audience as possible. The back array is also KARAs. Aiding side coverage are arrays of multiple KUDO speakers. Additionally, for low frequency reinforcement, each side of the main arrays is augmented by eight K1-SBs, and dozens of SB-28s placed around stage level and under the ramps leading to the stage. Driving the system are eight-dozen LA8 amplified controllers.

"I think the system is absolutely superb," comments FOH mixer Dave Bracey, who replaced Madden for the final 10-week stretch in the U.S. and Canada this fall. "The System Tech, Ulf Oeckel, is one of the best I've ever worked with. He's doing a great job facilitating my mix





Photo: Steve Jennings

From left: Horst Hartmann and Jon Lewis (monitors), Dave Bracey (FOH), and Ulf Oeckl (system tech).

to the P.A., so what's coming out of the board is accurate. I'm finding it very easy to mix through the P.A."

Though Bracey, who is based in Bristol, England, has enjoyed a long and impressive career mixing FOH for the likes of The Cure, Robbie Williams, Massive Attack and Bjork, he admits to some trepidation about coming onboard such a large-scale tour in mid-stream. "It should be daunting," he comments, "but I had some prep time at home. DiGiCo sent an SD7 to my house and I had multitracks of the show, as well as the first edit of the DVD they shot in Melbourne, so I probably spent about 10 days familiarizing myself. I needed to do that because there were going to be no production rehearsals, it's a complicated show, and the rest of them are up to tour speed. There was no time for me to get in that deep investigative work you normally do during production rehearsals. I had to come in at a high standard."

Bracey has been mixing on SD7s for the past five years, and was delighted the Pink tour allowed him to use that board, rather than the one his predecessor carried. During his prep period, "I dialed the console in, set presets for the songs,

set effects, got sounds and tried to discover what works in what song and what might cause a problem during the course of the show. I was very happy sitting there at home with my Focal headphones on, wondering and hoping how well I could morph this into a live show integrated through a live P.A. system."

When Bracey and I spoke, just three shows into the late fall tour, he admitted he was still learning the ropes to an extent, and that Pink was still adapting to his mixing style. "I have a habit of not watching the

show when I mix," he says, "but I do have a video feed going into the little screen on my console, so it's always in my field of vision, which is good for some of the walking-offstage cues and disappearing-down-through-trap-doors cues, which weren't exactly obvious. I didn't get any of those wrong last night; the first night I did. Three shows in, and I'm very happy."

And although the mixer says he has brought some outboard effects, "at the moment I'm pleased to be all internal." He notes that his reverb moves are pre-programmed and automated.

Pity the poor monitor mixer who has to not only handle the live band, singers and dancers, but has a lead singer who is almost constantly in motion—above the stage and on it—and regularly switches between a handheld mic and a headset. Actually, it *used* to be a single monitor mixer—Horst Hartmann, who's been on the last couple of Pink tours. But beginning last April, a second monitor engineer—another Brit, named Jon Lewis, who has worked with everyone from AD/DC to Paul McCartney—came on board just to handle Pink's needs during the course of the show. Hartmann, who worked for years with The Scorpions and others in native Germany, now handles monitoring for Pink's band and dancers, and he was also instrumental in setting up the Pink's monitor setup.

For a console, Hartmann says, "I started with a good old [Yamaha] PM1D, because I still like it and it does the job, and because it has enough outputs—a lot of these modern consoles have enough inputs, but not really enough outputs. After we decided to have two monitor engineers, we just added another surface to it, and

I had two DSP systems anyway—one was a redundant system—so now we're using it like two consoles, but we share the inputs." About 70 are used for the band alone, plus talkback/comm mics and a few discreet Pro Tools tracks, so there are about 100 inputs total.

"I still know how to use an analog console," he adds with a laugh, "so I'm actually able to push faders and press buttons, old school, which I do on the Yamaha, because it doesn't really give you the tools to program a whole show. You can program scenes, but not a whole show. So I run the show manually more or less, like an analog console. Still, I do like to have everything saved so when I do something wrong I can go back to my favorite mix."

The entire band—guitar, bass, drums, keys and a combo keys/guitar player/singer—is on Jerry Harvey JH16 in-ears, while the dancers use wedges (Clair 12AMs) and sidefill as they gallivant about the stage.

Jon Lewis says of Pink, "Everybody thinks her vocals have to be on track [i.e. prerecorded], that she couldn't possibly sing while she's being catapulted around, but she sings every note, every word. It's very impressive to have that lung capacity while you're being thrown about or dancing nonstop."

Pink's main handheld mic is a Sennheiser 2000 Series with a custom "Rockheiser" 5235 capsule. Her headset features a detachable supercardioid Sennheiser mic and a connecting prototype custom ear-piece which, unlike Harveys, has a single driver, which Lewis says is "less fatiguing to over long periods of time, and still sounds really good."

"Because of the locations she is during the show—whether it's in the air, on a B-stage or bungee'd or running around or tumbling—she won't wear two in-ears," Lewis adds. "It's one-in and one-out and then wedges around to give her more of a vibe—she doesn't like the isolation of a two-ear mix." There are a couple of high-flying exceptions where she does don a second in-ear. All in all it's a lot for Lewis to manage—he sends his own reverbs and vocal effects to Pink's in-ear—and for Bracey to keep track of at FOH.

But after nearly a full year on the road, even with changing audio personnel, Pink's tour is still running like a finely tuned machine. Don't be surprised if this phenomenally successful show manages to carry over into 2014, too. ■

## more online



Read more from Pink FOH mixer Dave Bracey and monitor mixers Horst Hartmann and Jon Lewis. [mixonline.com/112013/](http://mixonline.com/112013/)





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## AROUND THE WORLD WITH BLACK SABBATH

Metal legend Black Sabbath has been on the road since April, playing arenas and amphitheaters. Veteran engineer Greg Price (pictured) and monitor engineer Myles Hale both use Avid VENUE D-Show and Profile consoles, with P.A. and monitors provided by Clair Global. Local sound companies augment the touring gear and staffing in every town. At press time, for example, the band was in Brazil, where Gabisom provided support.

Price says certain pieces of gear play an essential role in managing Black Sabbath's massive, anthemic rock sound. "[Until this tour], we used the same vocal wedges for Ozzy [Osbourne] for many years. One of the focus points for Ozzy and his wedges is raw gain before feedback," he says. "Anyone that has been on one of the 16 Ozzfests with me knows the sheer sound pressure level from Ozzy's vocal wedges is remarkable. We changed his 'ring of death' vocal wedges, after years of success, to Clair Global's CM22s. From the first day of rehearsals, Ozzy asked Myles to turn the

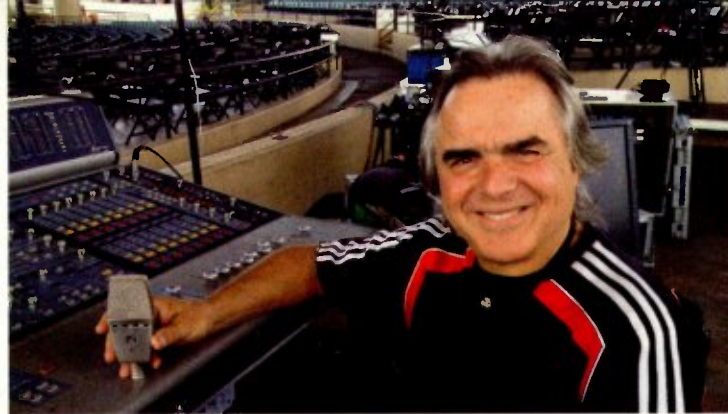


Photo: Jonathan Pines

wedges down. We have had zero feedback, which has been very important for recording shows for the upcoming Live Black Sabbath DVD."

Osbourne sings into a Shure wireless 58A microphone; the mic package on this tour also includes models from Sennheiser, Audio-Technica and sE Electronics. "The sE T2 (pictured above) and VooDoo VRI are game-changers for my mix," Price says. "The T2 on Tony Iommi's guitar brings his onstage sound to me at FOH; I want that really punchy mid-range for guitar. The VooDoo is the bomb on bass guitar cabinets."

"My crew members, Clair Global, and the people in the engineering community help me achieve my goals every show day," Price adds. "And Black Sabbath makes it very easy to have a ton of fun."—Barbara Schultz

## THE RUBENS' U.S. TOUR



Photo: Cybelle Malinowski

Australian rock band The Rubens (Sam, Elliott, and Zaac Margin, and Scott Baldwin) have been in the U.S. this fall, touring in support of Grouplove, their label mates on Warner Bros. They've played a combination of rock and acoustic clubs, which their engineer, Clint Stagoll, says has opened up the band to playing the

songs on their eponymous debut album in new ways.

"The rock venues have been exactly what you'd expect, but the acoustic venues have been interesting—a theater/dinner show-type feel with a lot of mono P.A.s," Stagoll says. "I would say it's been a huge success for the band, and we feel it's definitely something we'd like to do again."

In Australia, The Rubens travel with more of their own gear, including Stagoll's preferred Avid Profile console, but on this tour, Stagoll carries backline and a mic package. "It's the same mics I carry with me everywhere—mostly pretty standard fare except for my vocal mics. I use the Earthworks SR40V. It's a hypercardioid condenser that doesn't behave like most condenser mics, where the high end can get a little brittle. The SR40V remains quite flat—so much so that it reproduces the voice honestly, allowing for not only cutting of some frequencies, but [also] pushing some in. With Sam [Margin, lead singer], I tend to highpass up to 125 Hz, scoop out a bit of 400 Hz and push in some 8k for a bit of shimmer, and that's it. It also impresses me that there's not as much spill as you'd expect in a condenser, and what spill you do get sounds quite musical."

—Barbara Schultz

## BRMC PUSHES FORWARD



Photo: Todd Berkowitz

Black Rebel Motorcycle Club—guitarist/singer/songwriter Peter Hayes, bassist/singer/songwriter Robert Levon Been and drummer/songwriter Leah Shapiro—has been on the road

in the U.S. and Europe for most of 2013 touring in support of its March release, *Specter At The Feast*. The band's sixth studio album in 15 years was its first self-produced effort and served as a catharsis for the painful loss of Michael Been—Robert Been's father, and BRMC's primary collaborator. Michael Been died suddenly in August 2010 in Belgium while on tour with BRMC as the band's front-of-house engineer.

Current FOH engineer Allen Strand has worked with BRMC for 10 years, beginning at monitors before being asked to step into Michael Been's role on tour. "When we lost Michael, it hit us all real hard," Strand says. "It was a bittersweet promotion. There's no rule-book on mixing Black Rebel for me. A lot of it's just mixing by feel. I use the band and the P.A. as my instrument for the night." BRMC is currently carrying microphones and backline, and Strand sees a variety of house-provided consoles and P.A. systems each night. "My main vocal mics are Heil PR 35s," Strand says. "They like to be relaxed with their vocals but with their loud stage [volume] I've got to get every little bit I can out of them. I can normally leave [EQ settings] flat, but sometimes I've got to cut some low end out. This band doesn't always like their vocals out front. I want to hear the vocals, because their lyrics are just as important to me as their playing. The main thing is to make the crowd happy. It makes you feel that much better."—Matt Gallagher



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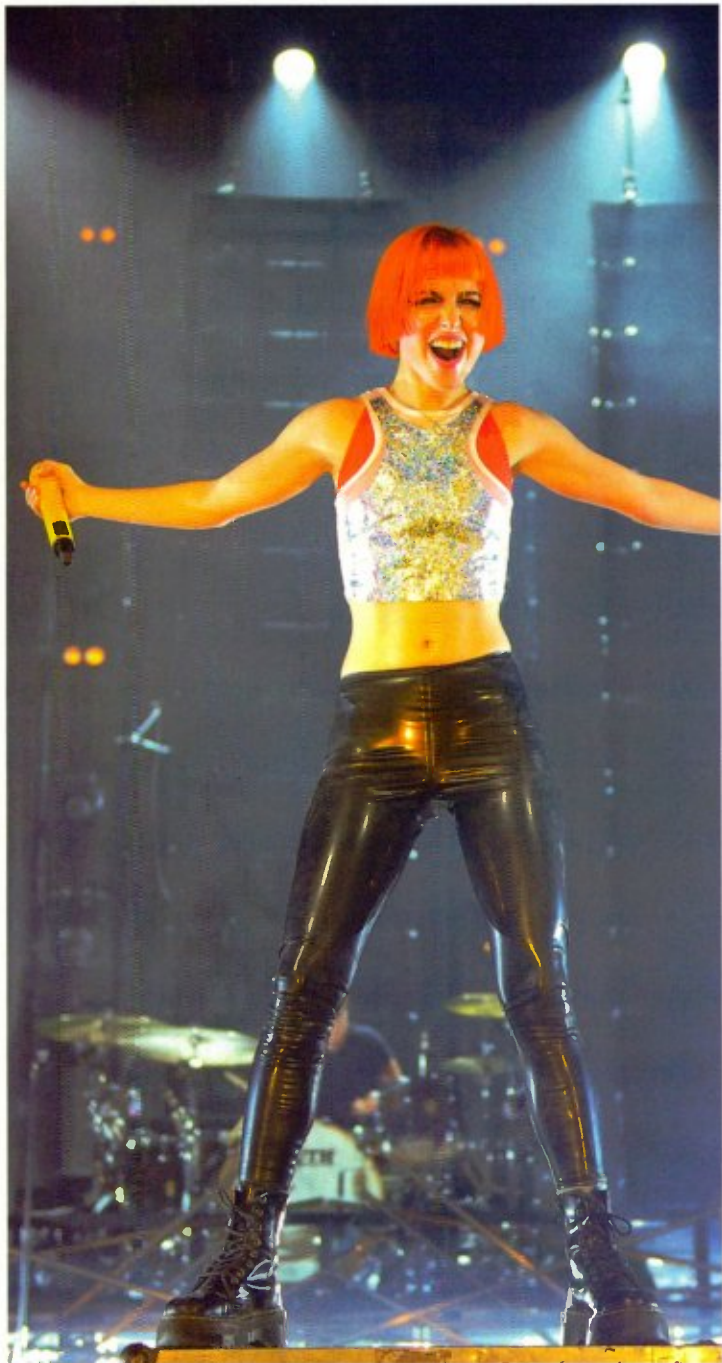
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## PARAMORE: THE SELF-TITLED TOUR



Paramore (Hayley Williams, vocals/piano, pictured; Taylor York, guitar, pictured; Jeremy Davis, bass, pictured; Aaron Gillespie, drums; Jon Howard, guitars and keys; and Justin York, rhythm guitar) performed in mid-October at the SAP Center in San Jose, Calif.



"I've been using the Avid Profile with Paramore since I started with them in 2009," says **monitor engineer Travis Bing**. "It's extremely intuitive to get around on, sounds great, and I love having the ability to run the Waves plug-ins. We just upgraded our IEM system from Sennheiser G2s to their 2000 Series IEMs (inset, top). They sound warmer in the lows and crystal clear on the top end. Plus, the stereo image is wider."



"We've been using the SE Voodoo VRt Ribbon mics (see inset photo, above) on a variety of guitar scenarios, and it is an incredible-sounding mic," says FOH Engineer Eddie Mapp. "We have one on Taylor York's clean amp as well as one on Jon's distorted cabinet. It's a really powerful-sounding ribbon that is smooth up top and delivers plenty of low-low-mid punch."



"We are flying 14 Clair i55 with 14 i5Bs per side, with the i5Bs driven independently as subs instead of the typical low-end extension," says system tech Ben Rothstein. "We are also flying eight BT-218 subs per side, and 12 i3s for side-hangs. On the ground, we have four additional BT-218s and four i3s for front-fills. Travis uses three Clair iDLs and two BT-218s per side as side-fills. He also uses two CM-22 wedges and a BT-118 drum sub."





"The DPA 2011C is a twin-diaphragm condenser mic (see inset, below) recommended on snare drum by DPA consultant **Kim Nedertorp**," Mapp explains. "It's been phenomenal-sounding every night and really gives you all of the natural drum tone to shape as needed in the mix. Snare bottom along with hi-hat and each cymbal has a DPA 4099 underneath, which keeps things clean and simple on stage and eliminates excess ambience out front. On the dynamic side we have the Nickel version of the Audix D6 for each of the four toms, as well as the outer kick mic. The frequency response of the mic helps me get a huge drum sound, especially for rock drums."

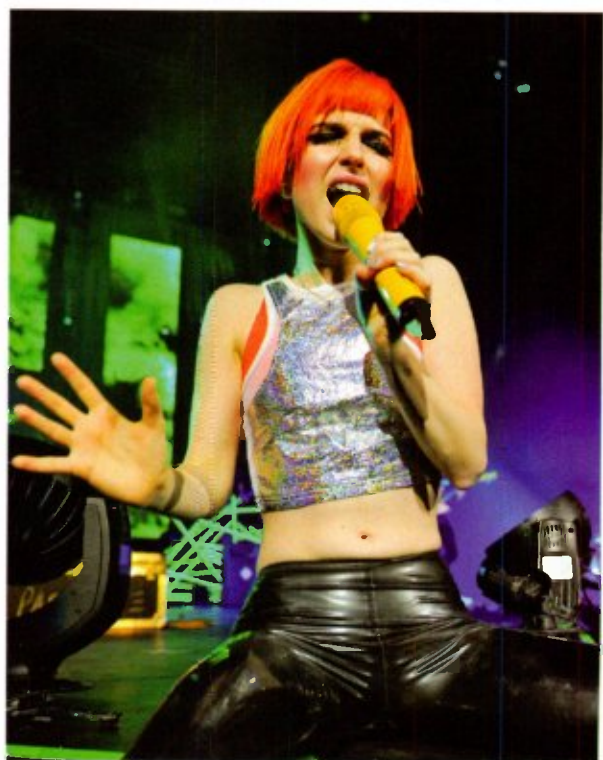
"Nate Warshowsky, our drum tech, introduced us to a new product, the SnareWeight and 70s pads," adds monitor engineer Bing. "He is always looking for ways to eliminate that elusive ring-out of the snare without completely choking the tone out of it. He came across the SnareWeight, which uses its solid mass and leather pad insert that successfully eliminates that ring yet maintains all the tonal qualities that you want in your snare."



"I've been using a variety of the Midas digital consoles from the Pro9, Pro6 and now a Pro2c as well as other digital desks; audio quality is my main priority," says **FOH Engineer Eddie Mapp**, at left, with Clair Global **system tech Ben Rothstein**. "It sounds amazing, feels/reacts great and carries a sonic depth or weight that really complements what I'm trying to achieve in my mix."

"My FOH rack (inset) contains a DN9650 network bridge, which converts 64 AES50 channels to MADI," he continues. "That is sent through fiber to a JoeCo BBR-MADI recorder for archiving each show on a 2TB and 6TB Glyph GT-062e drive. Next is a Meyer 616AES Galileo for system alignment, which is connected through an AirPort Extreme to a Mac Mini running the Compass software, as well as walk-in music and Smart 7."

Bass player Jeremy Davis



"For her vocal mic, Hayley has always used a Sennheiser 935, usually taped with colored electrical tape," Bing says. "Now that she's on a wireless 2K series 935, colored electrical tape just looks bad on a wireless mic. Sennheiser had it custom-painted yellow for us, as well as a hardwire 935 for her onstage backup. For in-ear monitors, all Paramore band members and stage crew are using Ultimate Ears UE11s."



# On the Cover

By Tom Kenny

## THE BLACKBIRD ACADEMY

A New Type of School With an Old-School Mission



Photo: John Partipilo

**S**tudios have held classes for nearly as long as there have been studios. In a previous generation, studios were the classroom and engineers and techs were the teachers. For decades, across the country, countless recording studios have hosted nighttime classes, equipment certification programs and weeklong workshops within their control rooms and out in the field. The one thing they all seem to have in common is a desire to bring the studio back

to the classroom, to re-establish the mentor-assistant/master-apprentice relationship.

But no facility has committed itself to mentor-based, studio-driven education quite like Blackbird Studio in Nashville, at least not that we've seen. The inaugural class opened The Blackbird Academy on September 30, 2013, and six months later they will enter the recording industry "fully prepared to make a hit record," says Blackbird Studio owner and Academy founder John McBride.

"I have had an incredible education since we started Blackbird Studio in 2002," McBride says. "I was able to learn from the best—people like Phil Ramone, Andy Johns, George Massenburg, Elliot Scheiner, Dann Huff, Dr. Luke and so many more. I learned more in the first two years being around great engineers and producers than I would have learned on my own in a decade. I never stop learning, and I knew that I couldn't keep this incredible opportunity to myself. I knew it was time to give back.



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"The older I get, the more mentoring becomes not just something I want to do, but something I have to do," he continues. "Martina [McBride] and I have always talked about starting a school, and we finally found the right time and the perfect people—people who share our vision to build the perfect audio school."

Yes, it's different for John McBride. His business partner and wife is a rock star, and he has A-list talent on speed dial. His studio is among the best in the world and consistently filled with hitmakers. And his gear collection is unrivaled, period. In the first four weeks, visiting lecturers/mentors have included, among others, Tim McGraw, Fray drummer Ben Wysocki, famed Motown engineer Bob Ohlsson, engineer Brian Malouf, and the head of Blue Note, producer Don Was.

But that doesn't guarantee that McBride can run a school, or fill the 30 seats each quarter. Education is a different animal than the studio business, with different expectations. He knows that. He's the son of a Wichita State professor. He has been talking about starting a recording school since before he opened Blackbird.

### A SCHOOL FROM SCRATCH

The first four employees of The Blackbird Academy were hired in March 2013, and nine months later school started. The first class in the Academy's Live Sound program, limited to 20 students, begins in January 2014. That's fast by any standard. There are licenses to obtain, catalogs to publish, instructional materials to create, promotional

efforts to launch, prospective students to reach, and, of course, a classroom—and a concert stage—to build.

Blackbird is a busy, working nine-studio complex. The students spend full days in Studios A, B and I with their Neve 8078, API Legacy and digital consoles respectively, while the days spent in the classroom focus on theory, application, recording, critical listening, and fundamental concepts. Says McBride, "We are spending a lot of time on etiquette in the studio and on the road, as we feel this is a critical aspect to a successful career."

McBride owned a building next door, and in March he and Kevin Becka, co-director of education, began laying out the floor plan for a classroom and offices. On a whim, Becka contacted Katie Couric's production team to see if they would be interested in a profile of the new school. That turned in to a connection with noted designers Bob and Cortney Novogratz, who helped with an Extreme Classroom Makeover and a spot on Couric's morning show. Blackbirds fly across the back wall, an API 1608 sits at the teacher's desk, and each student has a workstation that is the envy of many professionals.

"We designed a unique space that is really a working studio with 30 high-end digital audio workstations, two isolation booths and an API 1608 console," Becka explains. "Each seat features Apple Logic Pro, Pro Tools and a Universal Audio Apollo interface with every UAD-2 plug-in the company offers. But it wasn't about the isolated student experience at these stations; rather, it was how we could tie them all together. We

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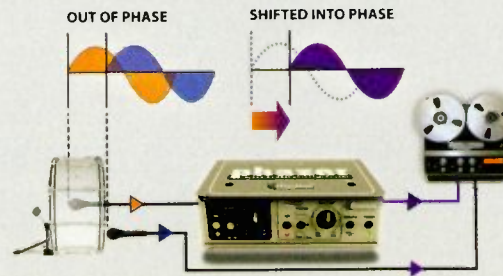


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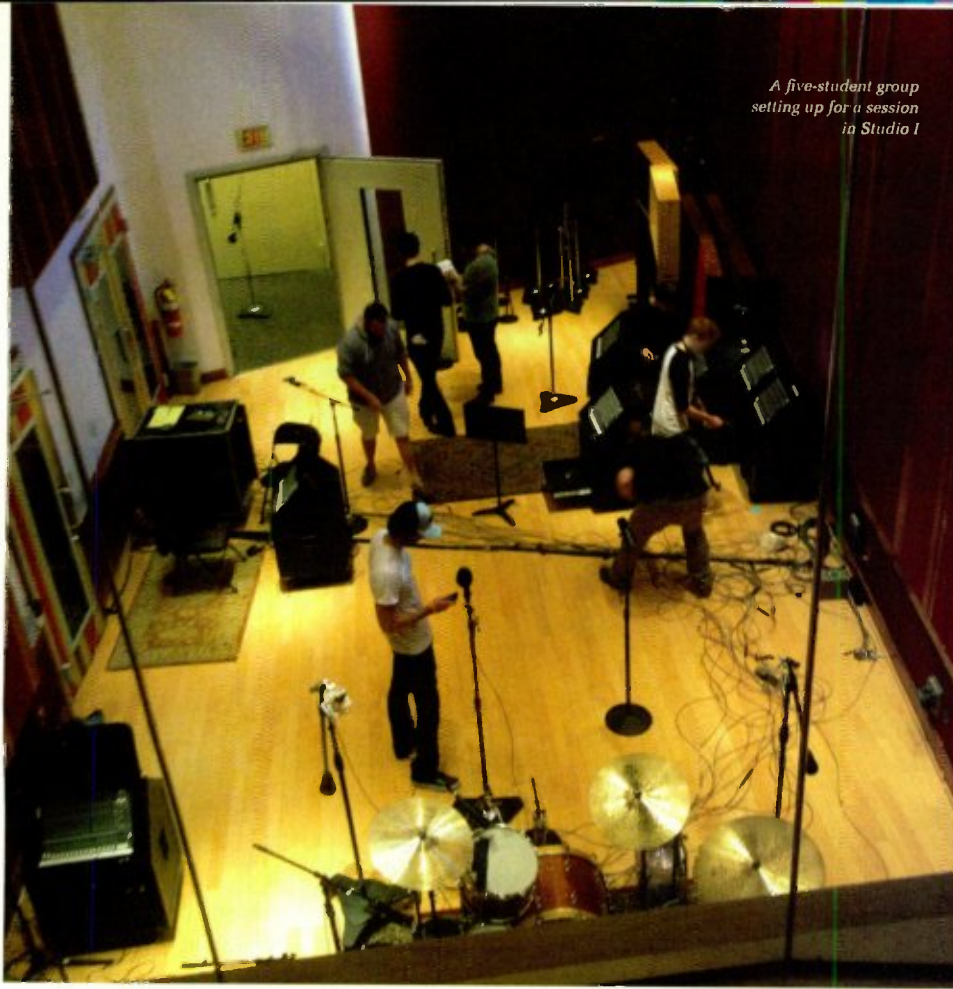


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A five-student group setting up for a session in Studio 1



started with three 65-inch flat-panel TVs, each pushing six video sources to the students. We have cameras in each of the iso rooms, above the console, and in the back of the room. Students can view the teacher's computer, the main DAW computer's screen from our machine room, or AirPlay off the teacher's iPad or laptop.

"On the audio side," he continues, "Blackbird technical staff, including Nick Shasserre and Richard Ealey, along with Michael Rhodes from SkinnyFish Studio Services, put together a patchable network where we can send eight channels of audio to each student's workstation, plus get two channels back for playback over our wall-mounted Dynaudio main monitors. This allows the classroom to host sessions where 30 Pro Tools stations can record simultaneously, after which each student can mix locally at their stations, then send it back to the instructor who can push it to the monitors for all to hear."

Continued on p. 71

# Professionals...



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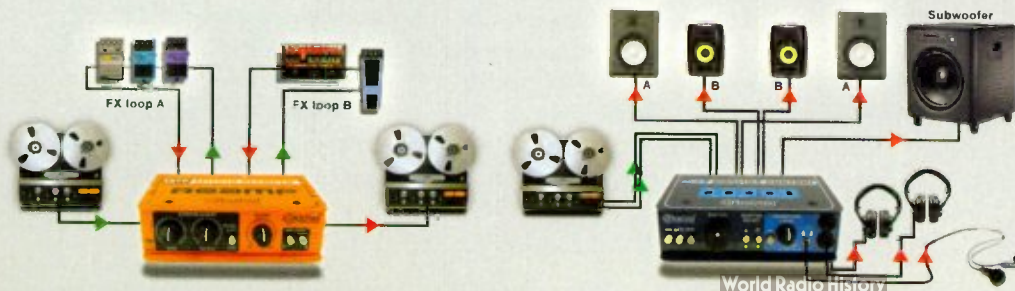


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# ALEJANDRO FERNANDEZ



In early October, Mexican singing sensation Alejandro Fernandez's latest album, *Confidencias*, leaped out of the box to Number One on *Billboard's* Latin Pop charts, capping the biggest-selling week of Fernandez's two-decade-plus career as a solo artist. It probably helped that this new offering consists largely of classic songs well-known in Latin America, and that eminent guests help out on three tracks—Christina Aguilera (“Hoy Tengo Ganas de Ti,” a hit download and video); Fernandez's famous father, singer Vicente Fernandez (“Me Olvide de Vivir”); and Rod Stewart, of

## PHIL RAMONE'S LAST HURRAH IS AN INTERNATIONAL HIT

BY BLAIR JACKSON

all people (an English-and-Spanish duet big band version of “Nobody Knows You When You're Down and Out”). Fernandez's roots are in the Mexican *ranchera* tradition, but *Confidencias* is a pop work through and through, and with this album, the ruggedly handsome and versatile vocalist may have found a direction for the next phase of his career.

Part of what makes *Confidencias* of interest to *Mix* readers is the album's impeccable American pedigree. It was recorded in Los Angeles—at Glenwood Place, EastWest and G Studio Digital—with the late Phil Ramone producing (one of his final projects), engineer Ed Cherney handling the instrumental tracking, and Frank Filipetti mixing at his Living Room studio in Nyack, N.Y., an hour north of Manhattan. The core band was made up of some of L.A.'s finest session players, including guitarist Dean Parks, bassist Kevin Axt, keyboardist Jim Cox and drummer Gregg Field. The sometimes lush arrangements are by some of the best in the business, too, including Jorge Calandrelli, Gordon Goodwin, Rob Mounsey and Doug Katsaros, with considerable input from Ramone, himself an impeccable authority on arrangement.

The musicians who convened with Ramone and Cherney in the SSL 9K-equipped Studio A at Glenwood Place in Burbank in July 2012 were among the “regulars” Ramone tapped when he'd work on the West Coast. For instance, drummer Field had worked with Ramone on more than 30 projects since meeting the producer during Frank Sinatra's *Duets* album in 1993, and the two became close through the years—“When he'd come out to L.A. to work, he'd usually stay at my home [in Studio City],” Field says. “We had what we called ‘the Phil Ramone suite,’ where he had some clothes and he knew he was always welcome.

“I have a studio that was built by Studio Bau:ton in 2000, and Phil used that on many projects, including the Alejandro Fernandez album. That's where we did all of the vocals and all the editing. It's attached to my home, but it's got its own parking and it is its own structure, so Phil literally just had to walk down the stairs and he was there. It was the main Concord Records studio from 2000 to 2008,” says Field, who, besides being a first-call drummer, has worked in production and busi-



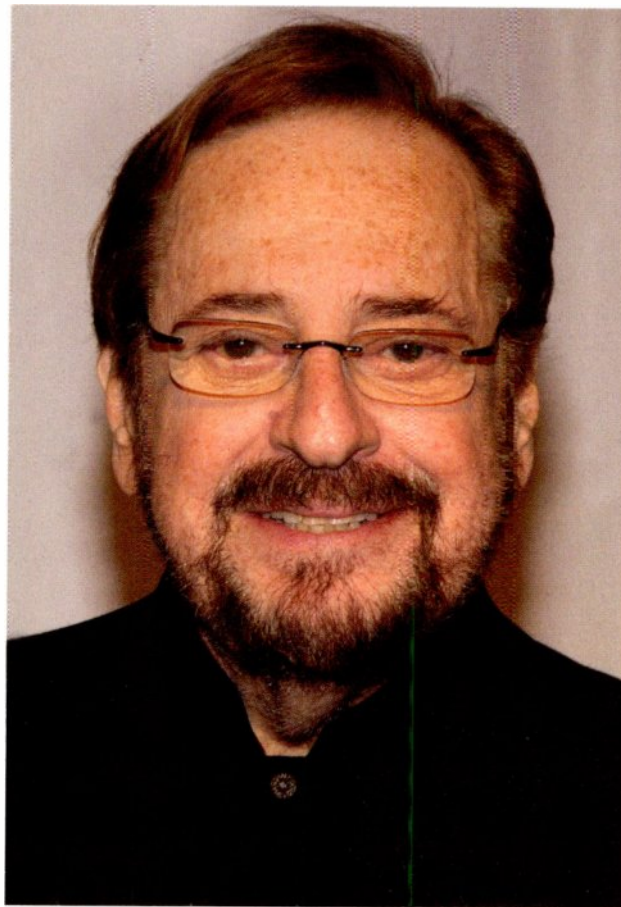
ness development for the Concord Music Group for many years.

Engineer Cherney had recorded all the musicians in the core band but, amazingly enough, had never worked with Ramone, a friend of his for more than a quarter-century. "I was always thinking, 'What am I, chopped liver?'" Cherney says with a laugh. "But Phil had his guys out here he usually worked with, like Al Schmitt. But one day he called me and we ended up doing two records almost simultaneously—Alejandro's and one by Matthew Morrison, which we also tracked at Glenwood, immediately after Alejandro's."

Even though Cherney has worked with some of the biggest acts in the world and is one of the most respected engineers in L.A., he admits that he was "really nervous" about working with Ramone. "I wondered, 'What if I'm not good enough?' So I did a lot of planning for the sessions. I was there four hours early, figuring how to set it up so it would be perfect for Phil, so the sightlines were right and all the mics were right. We started running the songs down, and the musicians were so good it was easy to get sounds on them—easy to get a balance, easy to get a great recording. You get a microphone close to any of these guys and they sound great. It was a piece of cake. Still I was nervous, but pretty early on, Phil whispered in my ear, 'It sounds great.' Usually you don't hear about something unless there's a problem, so that made me feel really good, and we ended up having the best time."

Cherney describes the live tracking sessions as "very straightforward." Fields' drums were miked with an Audio-Technica ATM23HE on top of the snare and a Sennheiser 441 underneath, AT25s on toms, a B&K 4011 on hi-hat, Coles ribbons for the overheads, and for the drum room, a single Neumann U 87 in omni "EQ'd and compressed within an inch of its life," Cherney says. "For the piano I used a couple of [AKG] C12As in X/Y with a FET 47 on the low end. Electric guitar had a Royer 121 on the amps, and I used a combo of Neumann U 67 and KM 84s on acoustic guitar, dobro, lap steel, mando, etc." Cherney says the bulk of the instrumental overdubs were done immediately after the live group tracking for a given song was completed.

Fernandez laid down scratch vocals for some tunes, "which really helped us focus on what we needed to do [as a band]," Field notes. But on some songs during the basic tracking, Fernandez's vocal director, Áureo Baqueiro, sang with the band. Baqueiro was also on hand to help produce the later vocal sessions at G Studio Digital, which were engineered by Jorge Velasco, a native Spanish-speaker from Colombia who had worked as Cherney's assistant on the tracking dates at Glenwood Place.



Phil Ramone

but used more spots—Royer 121s on trumpets and 'bones, U 67s on woodwinds and French horns. For some of the arrangements, we did strings and horns at the same time, and others we did separately." Studio One's control room is equipped with classic Neve 8078 console.

Next, the Pro Tools sessions went to Frank Filipetti, who mixes completely in the box these days, on an Avid D-Command, using plug-ins exclusively, rather than traditional outboard gear. "For the most part I got a finished record [from Cherney and Ramone], and I just needed to mix it. There were a couple of things that came in late, like Rod's vocal, but that was no problem."

What sort of reverbs did Filipetti use on Fernandez's all-important lead vocals? "I used a variety of different ones I have set up, and then I matched them to each track. I used a lot of the UAD EMT 140 and the EMT 250. I also used several different Lexicon [plug-ins]—the hall, the plate and the chamber program. I'll use the EMT 250 to handle the shorter 'verbs, and then the longer ones will be either the 140 or one of the Lexicon chambers. Then I'll probably mix in a little of the either [UAD] Echoplex or the [Sound Toys] EchoBoy, depending on what sort of sound I'm looking for."

Speaking more generally of Fernandez's vocals, Filipetti says, "I was really knocked out when I first got the vocals. He's able to do that thing that very few singers can do, which is turn on a dime, from full-out to whisper-quiet, and still make it all feel real. That's a unique talent that few pop singers of today understand."

According to Field, the vocal chain for Fernandez consisted of a U 67, a Millennium mic pre "and something Al Schmitt turned me onto years ago, a Studer [D19] Mic Valve [preamp]." The board in Field's studio is an Avid D-Command. The guest vocals by Aguilera, Stewart and Fernandez (Sr.) were done separately in other studios and sent in later.

After the vocals were completed, the action moved to EastWest's historic Studio One, for orchestra, brass and reed overdubs. Cherney says he was slightly apprehensive going into the EastWest sessions, too: "Phil has done so many orchestral sessions; it's one of the things he did best. But it's a great room with a superb mic closet, and when you have arrangers like Jorge Calandrelli—and in the afternoon it might be Gordon Goodwin, who did the more jazzy horn things—it's hard to mess up.

"For the strings, we had [three] Neumann M 50s on a Decca Tree. Spot mics were C12s on violins, U 67s on violas, KM 86s on celli and FET 47s on basses. For horns I also used the Decca Tree with M 50s,



When it came to mixing in the orchestral elements, Filipetti says he used about a 50-50 blend of recordings from the Decca Tree arrays and the spot mics. He comments, "When you're listening to an orchestra, it's really great to listen to it from the Tree. But when you start sparkling up the guitars and the drums and doing all that stuff you do in the final mix, the tree can start to sound a little amorphous. It's wonderful for the classical approach, but we were going for a more pop approach, so it was nice to have the spots available. By the way...so often as a mixer I end up spending half of my time fixing instead of mixing. It was such a joy to get Ed's tracks and honestly just mix."

For everyone who worked on *Confidencias*, the album's success has been somewhat bittersweet. After all, Ramone is not around to enjoy its popularity.

"We all miss him so much," says Field, who says he used to speak with Ramone "almost daily for the past 10 years. Besides being a great guy, he imparted so much knowledge to all of us who had the opportunity to work with him. He was always the calm



Gregg Field

ing to Paris to work with Patricia Kaas.' That's what the last 20 years of my life has been like with Phil. It's going to be a long, long time before there's anyone like him again." ■

voice in the studio, and he also could lighten the mood if things were getting tense—which they never did on Alejandro's record. He was very efficient yet also very relaxed. His attitude was: 'Let's have fun and make a great record.'

"This was a love-fest," Cherney offers. "It was fun; they're not always fun. Phil had the exuberance of a child—that sense of wonder. When something good was happening, his face would light up like an 8-year-old on Christmas morning. He never lost that."

"I think all of us who were involved with this record are very proud of it," adds Filipetti, who worked with Ramone on more projects than he can count. "I never knew what we were going to do next or where we might go. I'd get a call from him: 'Okay, we're going to Argentina in two weeks to work on a Fito Páez record.' 'Okay, we're going to Modena, Italy to work with Pavarotti.' 'Now we're go-

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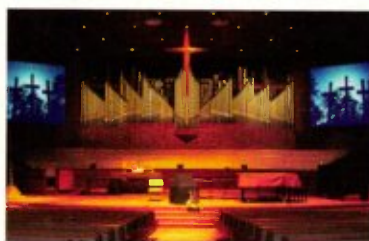
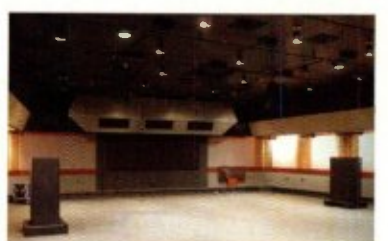
Pictured: Kelly Hansen, Foreigner lead vocalist with the HH transmitter.

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# TREVOR MORRIS

## RISING

### MUSIC, TECH AND A NEW SANTA MONICA FACILITY

BY TOM KENNY

Trevor Morris knows and feels music, and always has, from high school days in London, Ontario, that included being commissioned to write a piece for the Pope's visit, through today as he is working long days preparing for a second season scoring the popular *Vikings* (History Channel) and a month from the debut of a new *Dracula* drama for NBC. He's scored *The Borgias*, *The Tudors* (for which he received an Emmy) and *Pillars of the Earth* for TV, and hit big in film with the success of this year's *Olympus Has Fallen*. He also writes videogame scores, the latest being *Dragon Age: Inquisition* from EA/Bioware, due out next year.

But Trevor Morris really knows music technology. He graduated from the prestigious Music Industry Arts program at Fanshawe College in his hometown, then moved to Sounds Interchange and the heart of Toronto's busy production/engineering community, before getting the writing bug again and scoring TV and radio spots. In 2000 he headed to Los Angeles, to focus on scoring for television and film, only to find himself right back in tech.

Granted, it was high-tech. And cutting-edge. And for some pretty damn fine composers. Morris caught on early as an assistant to Oscar-winning James Newton Howard, running the RADAR recorder and supporting the Euphonix CS3000 writing/mix room as it evolved quite quickly into a modern production environment, with emphasis on traditional orchestral recording, sample-based creations/augmentations and interconnectivity to aid in workflow and delivery. From there he moved to Oscar-winning Hans Zimmer's then-Media Ventures, now Remote Control Productions, where, he says, he "received his Ph.D."

"I didn't realize at the time how much my technical skills would benefit me in the composing world," Morris says. "My brain is wired



both ways, and I'm glad for that. Hans was among the first guys in Hollywood who didn't write on pencil and paper and used the computer as an instrument. He was a pioneer in a lot of ways for orchestral sampling. He did his own library of sampled instruments before anyone else. When he found out about my technical skills, he hired me on the spot."

For five years Morris was Zimmer's right-hand tech and an up-and-coming composer in his own right. After developing some solid credits at Remote Control, he set out on his own. He had always had a writing room at home and could afford to book studios all over town, and that's what he did for a short while—until he decided to build out a red-brick building in Santa Monica, five minutes from his home.

"I had been working in spare bedrooms my whole life," Morris says. "But everything back in Toronto was facility-based, so it's what I knew. Always a few writers, producers, composers...you were never alone. I moved to L.A. and was alone

for a short while, then I went to work for Hans, where it is very community-driven. A lot of buildings, studios and people all around. So after I started working at home again, I woke up one morning and thought, 'You know what? I need a community, even if it's a small community. I need space, and I want a mix room.' So I set out to build my dream studio: a mix stage, my room, three small rooms for composers or assistants. But the desire for a proper mix room spawned this whole idea."

#### THE WRITING ROOM

While the System 5-based mix stage is the flagship, the heart of the facility is Morris' writing room, with its wraparound control center featuring vintage synths (including his original Roland 760), modern controllers, racks of outboard gear, a Euphonix MC Artist controller with 100mm faders ("I perform on those faders"), Cubase for writing and Pro Tools for recording, and three PMC IB2 monitors across the front with M&K satellites for the surrounds. An iPad running Lemur sits front and center, beneath the three displays. And there's a rare Yamaha S6 baby grand set to his left, always miked and ready with a Schoeps CMC6/Mk IV and Apollo stereo ribbon.



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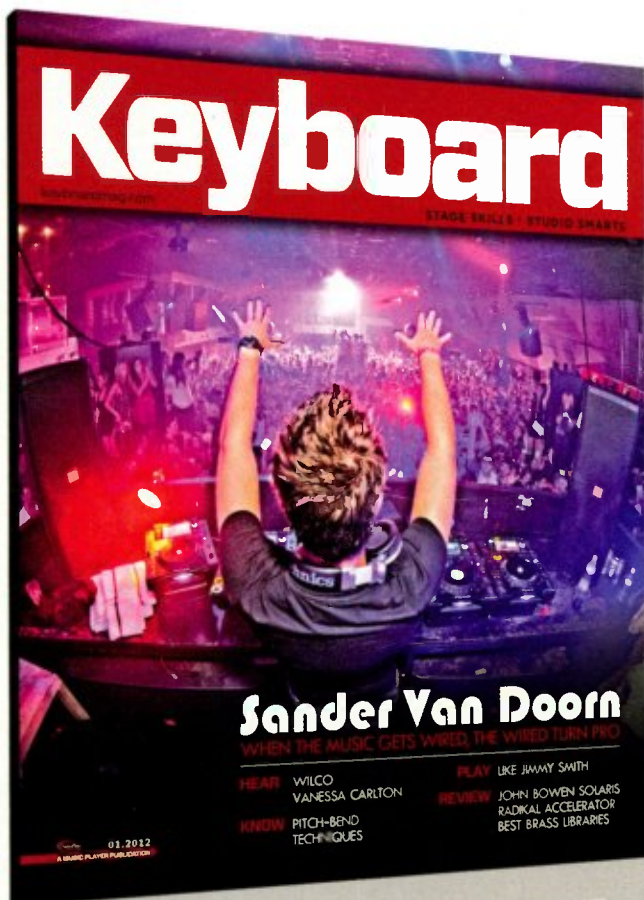
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Everything he needs to create a virtual score is literally within reach, though he inevitably reaches for his outboard reverbs and effects. The tech-geek comes out as he rattles off specific combinations: “The Bricasti M7 is one of the cleanest reverbs ever made—stereo on piano...The Lexicon PCM96 is great as a 2-in, 5-out unit for stereo samples—I have two for the 5.1...The Grace M201 with their A/D converter is one of the best combos I’ve ever heard—we use that with the Schoeps mics on piano...The Millennia stereo pre is perfect for the Apollo mic to get some distance on the piano...And the API 500 EQ that I grew up on—you put that across the SSL stereo bus when I was growing up, and it’s great for adding sparkle over the piano, 2 dB at 16k. And I just love hardware reverbs. The tail is perfectly in tune, no dithering. They take multiple sample libraries and bring them into the same environment. They bring the glue.”

While composing, Morris says that he is always mixing, considering it the same as responding to the dynamics in a score. When you tell a violin player to crescendo, he says, that’s a mix move. When he is performing a sampled violin, he is mixing against the cello. Still, once he is close, he saves to the network, where it is picked up by his house engineer, Phil McGowan, whom Morris says has become something of a co-producer on a lot of his work.

#### THE MIX ROOM

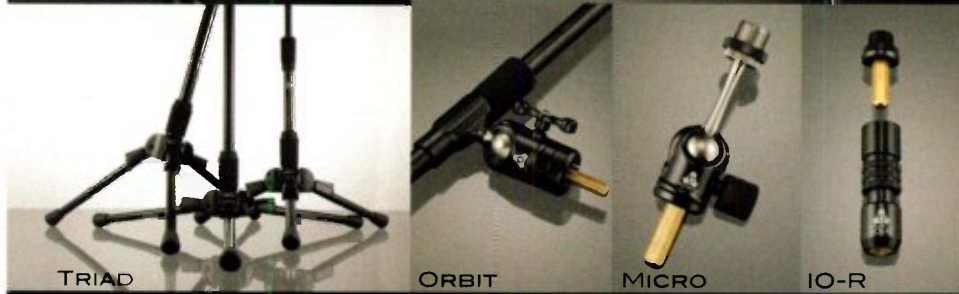
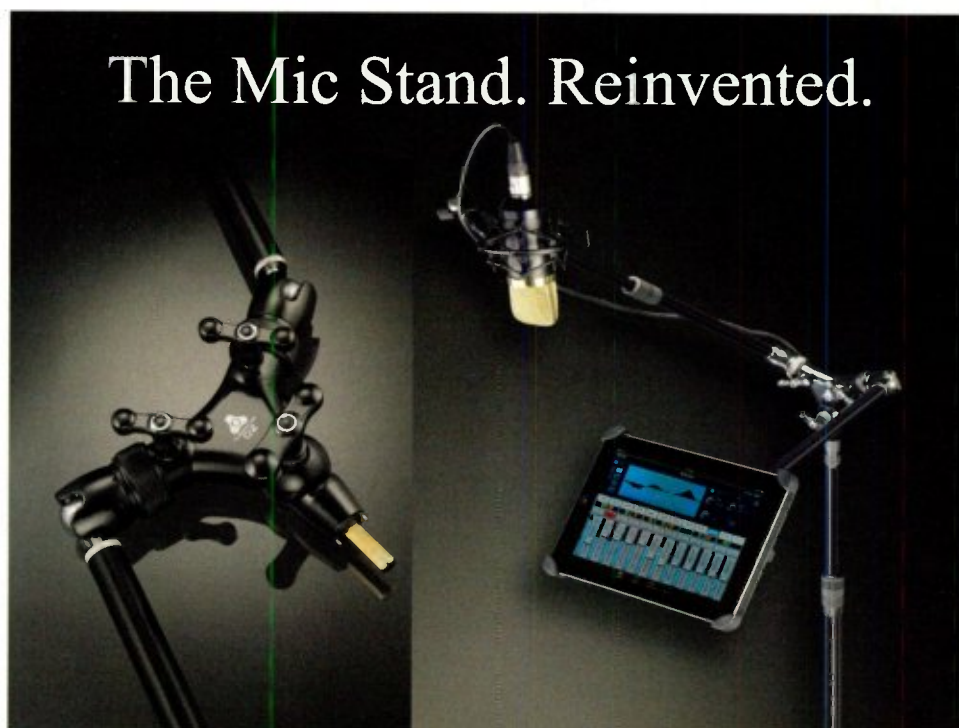
The Avid System 5 mix stage features identical PMC 1B2/M&K monitoring and was designed with a living room feel in mind, including bookshelves, a coffee table and a couch; no producer’s desk. Solo instruments are often overdubbed right in the room. It’s comfortable enough that directors regularly stop by.

From Morris’ writing room, everything flows into dual Pro Tools|HDX systems, nicknamed Orchestra Rig and Print Rig. The Orchestra Rig handles all source material, including live orchestra, choir, synth bass, guitar, samples, etc., and feeds the System 5, with sends and returns to Pro Tools for plug-ins and reverbs and whatnot. That in turn is mixed in surround, stem format, to the Print Rig, which runs video and serves as the recorder. To the post-production houses, they deliver a final 5.1 mix, a final stereo crashdown, then, depending on the project, between 8 to 12 surround stems—5.1 strings, 5.0 choir and the like.

“Building a mix room that was both accurate and balanced for critical mixing, while simultaneously being an inspiring environment for playbacks, was key for both Trevor and myself,” McGowan says. “It’s always a challenge to design and tune a midsize room with mid-field monitoring that will translate properly to the large theatrical dub stages that we frequently deliver to. A combination of custom diffusion, absorption and bass trapping in concert with the monitor calibrating set on our XTA processors results in a mix studio that translates very well to every dub we have delivered to. It’s an honest-sounding room and will truly let you know when something is wrong with your mix.”

The combination of technical chops and a natural, self-taught musical ability has served Morris well. He speaks both languages fluently. Morris is living the L.A. dream that he set out for, and now he has a place to call home. ■

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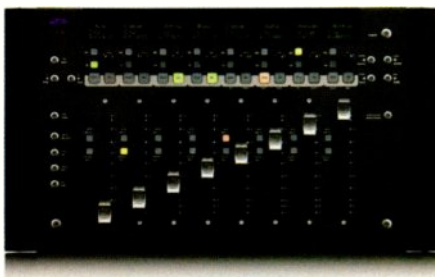


# DESKTOP CONTROLLERS

## DAW MANIPULATION IN COMPACT FORM

by THE MIX EDITORS

For desktop audio producers, developing speed translates directly to income. Using keyboard shortcuts will quicken your workflow, but a good controller will complete the picture, bringing real faders, solo/mute buttons, rotary encoders and more to your setup. For this feature, we rounded up a group of desktop units that offer a range of features—some of which are expected, along with some new technology, like the Raven Pro Audio MTi, a complete touchscreen solution for DAW control. What you won't see here are units that are too big for desktop use and MIDI/USB keyboard controllers; the controllers presented here have integrated hardware, knobs and faders.



### AVID ARTIST MIX

[www.avid.com](http://www.avid.com)

The Avid Artist Mix control surface (\$1,400) controls multiple Mac OS X and Windows 7 applications and workstations, offering Ethernet connectivity for

high-speed, high-resolution control, and supporting the EuCon, HUI and Mackie Control protocols. Measuring 16.8×9.5×1.2 inches (W×D×H) and weighing 4.8 pounds, it offers a slim, compact design for easy studio integration and portability. Artist Mix features, rotary encoders and eight high-resolution OLED displays (128×64 pixels). The Artist Mix's eight touch-sensitive rotary encoders provide direct control over panning and gain. Knob set selector keys allow users to quickly assign the rotary encoders to control plug-ins, EQs, panning, signal routing, and more. Users can either control the same parameter across all tracks, or assign all knobs to one track for easy editing of multiple parameters at once. Eight touch-sensitive motorized ALPS 100mm faders are designed to offer accurate and smooth mixing; touching a fader will automatically select the corresponding track. Eight high-resolution 128×64 pixel OLED displays provide track name/number, detailed metering (from mono to 5.1 surround data), parameter name/value currently being modified by its corresponding rotary encoder, current automation mode, and more.

Avid's Artist Control v2 (\$1,666.95) is 20×9.5×1.2 inches (W×H×D), weighs 5.5 pounds, and also features the high-speed EuCon Ethernet protocol. It combines four touch-sensitive motorized faders, eight touch-sensitive rotary encoders, 12 assignable soft keys, transport controls, jog/shuttle/zoom wheel and a customizable touchscreen interface (800×480 pixels) that displays all of a project's top-level information, including

track names/numbers, metering (from mono to 5.1 surround data), fader/pan values, automation mode, and more. It also lets you quickly access all plug-in and EQ parameters, set up macro commands for any function (or sequence of functions), and more. Studio Monitor Express software provides professional monitoring (from stereo up to 5.1 surround) as well as complete talkback controls via any CoreAudio-compliant interface. Application Change and Workstation Change functions let users easily cycle through applications and switch between multiple workstations.

### ICON DIGITAL QCON PRO CONTROLLER

[www.icondigitalusa.com](http://www.icondigitalusa.com)

QCon Pro from Icon Digital (\$829.99) is a USB-MIDI Controller that weighs in at 15.7 pounds, crafted in a sturdy aluminum and metal casing and features template labels for all the popular DAWs. Features include eight touch sensitive motorized faders, eight encoders, a backlit LCD display, jog wheel, and illuminated buttons for each channel and transport operations. QCon Pro supports Windows XP, Vista, Windows 7 and Mac OS X offering HUI control for Cubase, Nuendo, Logic Pro, Samplitude and Ableton Live and Pro Tools. There is also an 8-fader QCon Expander available (\$679.99). Three units can be cascaded, adding up to 32 channels of motorized fader control to your DAW.



### NEKTAR PANORAMA P1 CONTROL SURFACE

[www.nektartech.com](http://www.nektartech.com)

The Nektar Panorama P1 is a dedicated hardware controller for Reason, Cubase, and Nuendo, offering access to each function in each DAW—from mixer to channel strip to transport controls, dynamics, EQ, inserts, sends, and instruments—via a custom communication protocol. It can also function as a MIDI controller. The P1 offers advanced mapping and QWERTY macros that allow any function that is initiated from a computer keyboard to be completed with one keystroke. A large color TFT display shows which functions are in use and what the settings are in real time. It also offers sophisticated mapping for popular VST plug-ins and Reason's instruments and rack extensions, and an assignable footswitch socket.





### SLATE PRO AUDIO RAVEN MTI

[www.slateproaudio.com](http://www.slateproaudio.com)

The RAVEN MTI's Multi-touch Audio Production Console (\$2,499) furnishes a multi-touch control surface for Pro Tools 10 and 11 using a standard DVI cable and a USB 2 connection. It is Mac OS X compatible, with PC compatibility planned in a future release. The RAVEN programming team developed the RAVEN Protocol, which connects to a DAW instantly via the industry standard NeyFi protocol found in current versions of all major DAWs. RAVEN MTI provides complete access to faders, pans, mutes, solos, sends, automation, and plug-in inserts; the company states that compatibility for all major DAWs is forthcoming. RAVEN MTI's virtual control surface, called NanoGlide, runs user-customizable RAVEN software, and a 27-inch touchscreen display with a backlit LCD and resolution of 1,920x1,080 pixels. RAVEN's NanoGlide control surface captures subtle mix moves with total accuracy, while the customizable RAVEN Toolbar at the bottom of the screen provides instant access to important DAW software functions, such as Transport, Edit/Mix window selector, Record Looping, Click, Create Group, and Undo. The Raven NAV PAD reads gestures to perform Scrub/Shuttle, Waveform Zoom, Track Zoom, and Track Banking. The RAVEN Mixer

enables complete control over routing, bussing, soloing, automation, channel assignments, plug-in parameter editing, faders and panning.

### SOLID STATE LOGIC MATRIX2

[www.solid-state-logic.com](http://www.solid-state-logic.com)

At the 135th AES Convention, Solid State Logic launched Matrix2 (shipping in December 2013; \$23,999 MSRP), an update of the SSL Matrix console hybrid production platform introduced in 2008, with analog summing, streamlined integration of boutique analog outboard mic pre's and processing via its software controlled analog patch system, and advanced DAW control surface. In Matrix2 the integrated software controlled patching of analog channel inserts has been upgraded. Hardware device inserts can now be loaded directly from the console hardware controls, with an intuitive new interface that facilitates loading individual processors, A/B comparison of different processors and building processor chains. The Matrix remote browser software has also been redesigned to provide a new drag and drop style interface for loading processors and building chains. Matrix2 adds a Fader Linking system, which allows two or more faders to be grouped to facilitate stereo or 5.1 channel control



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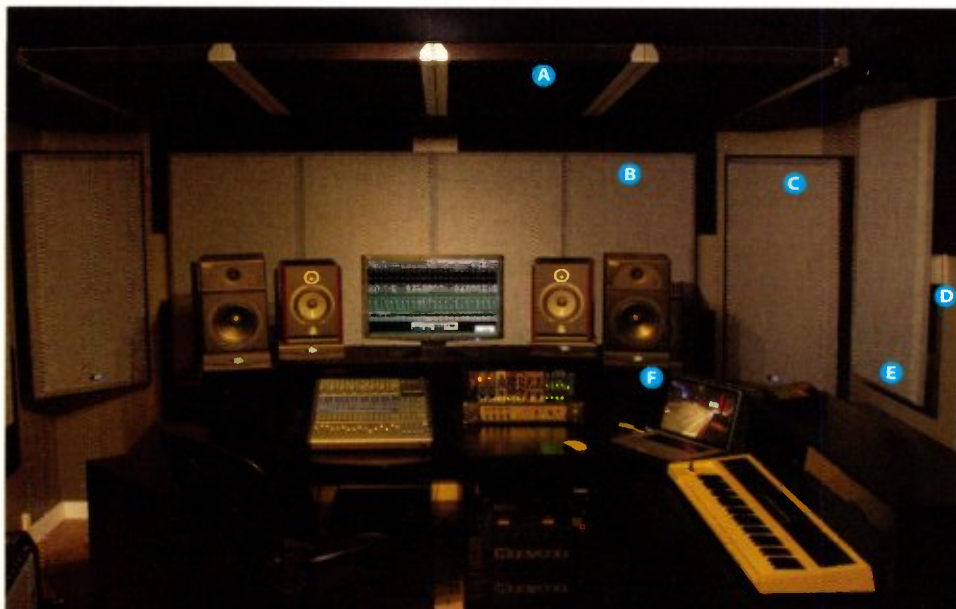
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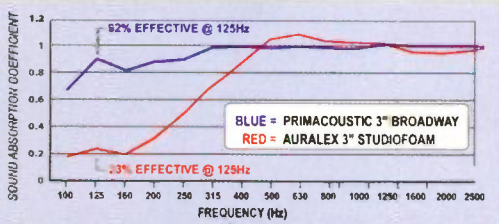
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or subgroup style mixing, and the A-FADA summing system to enable the analog faders of Matrix2 to be driven by automation data from a user's DAW, and channel automation to be performed entirely in the analog signal path. The previously optional 5.1 output card will now be included as standard pre-fitted in all units. Plus, Matrix2 includes new DAW templates for PreSonus Studio One and Ableton Live.

The Solid State Logic Nucleus (\$5,150 estimated street price) combines a 16-fader control surface with SSL analog technology in a single desktop unit. It features two banks of controllers. Each channel section has motorized 100mm faders, each with an encoder, a digital scribble strip, and several programmable soft buttons in line. A master section includes transport controls, a comprehensive monitor/control room function, and additional soft buttons. It supports both HUI and MCU via Ethernet, as well as standard MIDI over USB. The Nucleus also has a built-in 4-port USB 2 hub and an SD card slot for storing your settings.



## STEINBERG CMC SERIES CONTROLLERS

[www.steinberg.net](http://www.steinberg.net)

Steinberg's CMC Series is made up of six compact USB-powered controllers—the CMC-TP, CMC-CH, CMC-AI, CMC-QC, CMC-PD (all \$199.99 MSRP) and CMC-FD (\$249.99 MSRP)—that can be individually

combined to form a custom-made Cubase control desk. The modules are designed to speed up the recording, editing and mixing workflow and are optimized for beat creation, transport control, editing and multitrack mixing. Each unit features a dedicated set of illuminated rotary encoders, high-resolution touch faders or pads, each designed for hands-on control of a specific section in Cubase, integrating with Cubase's icons and color scheme.

Steinberg's CC121 Advanced Integration Controller (\$549) offers integrated tactile control of Steinberg's Cubase range of production systems. Its silver Advanced Integration Controller Knob gives you "point and control" support, with control over any visual Cubase parameter, internal FX setting or VSTi parameter using mouse pointer selection. The 100mm touch sensitive motorized fader provides full tactile control of the channel or group volume fader, while dedicated controls for Cubase channel settings include solo, mute, record arm, automation (read/write), pan, VSTi editor and "e" settings button. A Cubase EQ section includes 12 rotary EQ encoders and a bypass/mode button. ■



# se·lec·tion [ sə'lekSHən ]

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# EDUCATION 2013 NEWS AND NOTES

## Southwestern College's Center for Recording Arts & Technology Adds Focusrite RedNet System



Professor Jay Henry

Begun in May 2008, under the direction of Professor Jay Henry, a two-time Grammy Award nominee for his engineering and production skills, the Recording Arts and Technology program at Southwestern College in Chula Vista, Calif., prepares students for careers in the entertainment industries of music, television and film, using state-of-the-art music studios and

labs for a hands-on learning experience that emphasizes fundamental recording technique and knowledge. Henry recently directed the purchase of two Focusrite RedNet 5 HD interfaces for his Pro Tools|HD systems coupled with three RedNet 2 16-channel analog I/O interfaces for his main recording and satellite mixing rooms.

RedNet is Focusrite's flagship range of modular Ethernet-networked audio interfaces that harnesses the power of Audinate's Dante digital audio networking system to bring studio quality sound to any modern audio application. RedNet 5 connects a RedNet system to Pro Tools|HD

via a standard DigiLink or Mini DigiLink cable. Up to six units can be connected to one Pro Tools|HD system, supporting up to 192 channels at 96 kHz or 96 channels at 192 kHz. Pro Tools|HD Native and Pro Tools|HD are also supported. RedNet 5 is interoperable with other Pro Tools interfaces and features extremely low latency. RedNet 2 adds 16 analog channels in and out to a RedNet network and can be located anywhere an Ethernet cable can be run. Featuring Focusrite's precision 24-bit AD/DA conversion for superb audio performance, it delivers 119 dB dynamic range at sample rates up to 192 kHz. The rear panel includes standard DB-25 connectors for analog patchbay or breakout cable interfacing.

Once these units are installed, the two studios at the core of the Recording Arts and Technology program will be able to be completely networked, allowing seamless access to audio between rooms and giving students and faculty a high degree of flexibility in how those facilities are used.

"We've kept this program at the cutting edge since it began, and we've been waiting for a networked solution like RedNet to come along for a while," explains Henry, whose professional and personal affinity for Focusrite products goes way back through his relationship with long-time colleague and current Focusrite Novation Inc. President Phil Wagner. "Phil and I go way back, and we understand how you need to both address the cutting edge of technology and also make sure that the sound is always the first consideration. I get that with the Focusrite RedNet system—we get seamless connectivity and the built-in Dante networking, and of course great sound at the same time. It's going to be a great benefit for our students and teachers here too, as RedNet represents the future for recording and interconnectivity.

"The best thing sonically about RedNet is the detail and width of the stereo image," Henry adds, "which is a direct result of RedNet's next-generation AD/DA design and premium analog circuitry. RedNet sounds more open; it's like taking the roof off your mix."



Photo: Mercedes Herrain

Berklee Valencia Studio  
K Live Room

## Berklee Valencia

Opened in August 2012, Berklee College of Music's first European campus—the futuristic Valencia Complex—was designed by Walters-Storyk Design Group. WSDG's entire international team of designers, acousticians and system integration specialists collaborated on the technical and acoustic

designs for the sprawling 18,000-square-foot East Technical Wing. The complex features five recording studios and multiple production/classroom/tech support environments. The 1,360-square-foot Studio A includes an 860-square-foot live room with high ceilings, variable acoustic surfaces for diverse recording configurations, two iso-overdub booths and a 500-square-foot control room to support classroom lessons. The studio is equipped with a 48-channel Avid System 5 digital console, Genelec 5.1 surround-sound monitoring and separate midfield speakers for stereo mixing, Pro Tools HD3, 24 channels of digital I/O, Grace Design mic preamps, and an extensive collection of outboard gear.

## Middle Tennessee State University (MTSU) Studios D and E



Photo: Len Johnson

MTSU Studios D and E

MTSU, offering one of the most comprehensive recording programs of its kind in the world, reopened Studios D and E in August 2013. The identical rooms were redesigned by Carl Tatz Design using a custom application of the new Carl Tatz

Signature Series family of control room acoustic modules by Auralex. It features a CTD PhantomFocus System using Genelec 1037C active monitors. Key equipment includes an SSL AWS 924 console, Pro Tools 10 HDX with 24 I/O, Empirical Labs EL8-X Stereo Distressor, Drawmer DS201 dual gates, API Lunchbox, two AKG C414B mics, two Neumann TLM 103 mics, and four Shure SM57 mics.



## Tecnológico de Monterrey University (Mexico City and Monterrey Campuses)



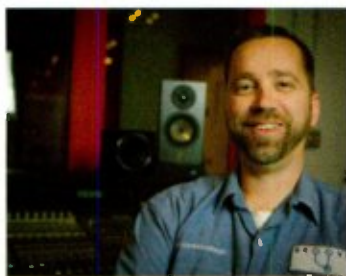
Monterrey campus Film Mixing Room

Photo (Monterrey): Sofia Alona

Designed by Horacio Malvicino of the Malvicino Design Group, Tecnológico de Monterrey University, Mexico City campus, opened on February 20, 2013. The state-of-the-art educational facility houses two large audio control rooms that share a studio, and four production control rooms that share two studios and four iso booths.

Variable acoustics with customized ceiling treatments provide adjustable reverberation time in all three studios. The studios also feature customized Helmholtz-type resonators and absorption panels. All console furniture and racks are custom-designed and fabricated. Key equipment includes an SSL AWS 948 console, Ocean Way HR-3 Studio Monitors designed by Allen Sides (Audio CR A), API 512 mic/line pre and Manley Massive Passive EQ.

Opened in December 2012, Tecnológico de Monterrey University, Monterrey campus is the first educational facility in Mexico to have a state-of-the-art film mixing facility. Designed by Malvicino, it features two large audio control rooms that share a large studio. It has a THX-certified film mixing facility with 30 seats. Variable acoustics with customized ceiling treatments provide adjustable reverberation time in both studios. All console furniture racks were custom-designed and fabricated by Malvicino Design Group. Key equipment includes an SSL AWS 948 console, a dual-operator ICON D-Control console, four Avid HD-3 Pro Tools systems, and QSC Digital Cinema Speakers.



Groove U founder and director Dwight Heckelman

### Groove U

Twenty-year music veteran Dwight Heckelman looked to the burgeoning music scene in Columbus, Ohio, as the new home for Groove U, a one-of-a-kind, two-year music industry career program. Established in 2010, the program is found-

ed on the principles that the music industry is creatively engaged, apprenticeship-based, and most of all, relationship-driven.

Students learn the fundamentals of the music industry, and then specialize in areas such as audio production, live sound, music business, music video production and interactive development.

Groove U is housed in a former elementary school building in the heart of the city's Short North Arts District. After undergoing a \$1.2 million transformation, doors to the 30,000-square-foot campus officially opened in August 2012. The state-of-the-art facility now boasts two recording studios, 10 production suites, classrooms, a video suite, a career development center and a performance space. For more information, visit [grooveu.net](http://grooveu.net).

## WAM Celebrates 10 Years



WAM founder Terri Winston

In an industry where women make up less than 5 percent of the workforce, Women's Audio Mission (WAM; [www.womensaudiomission.org](http://www.womensaudiomission.org)), a nonprofit organization dedicated to the advancement of women in music production and the recording arts, is working for change.

Now in its 10th year, the San Francisco-based organization has reached more than 4,500 women and girls who otherwise may not have access to high-quality training for a job in the recording industry. Through in-person classes, online training materials, a nationally recognized youth program, and a recording studio run entirely by women, WAM is steadily making gains toward closing the gender gap.

"It is critical in our media-driven culture to prepare more women for audio technology careers," says founder Terri Winston. "We are incredibly excited to be planning an expansion for the organization so that we can serve even more students in a larger facility and increase our program offerings. Our members are well-prepared to enter a wide variety of careers throughout the industry and are quite literally changing the face of sound."



Mixer Michael Brauer during one of his week-long mixing seminars at Studio La Fabrique.

### Mix With The Masters Seminars

The Mix With The Masters seminars weeklong courses take place at the state-of-the-art Studio La Fabrique in the south of France, where A-list engineers, mixers and producers—including Tchad Blake, Chris Lord-Alge, Manny Marroquin, Jack Joseph Puig, Tony Maserati, Joe Chiccarelli, Andrew Scheps, Joe Barresi and Michael Brauer—help participants improve their music production skills. The next Mix With The Masters seminar, featuring Brauer (The Rolling Stones, Bob Dylan, Paul McCartney, Coldplay, My Morning Jacket), will take place November 29 through December 5, 2013.

Participants learn technical and practical information on how to create great mixes, handle gear, run sessions, work with artists and manage a career. For more information, visit [mixwiththemasters.com](http://mixwiththemasters.com).



A student in the MIDI lab at Five Towns College

### Five Towns College

The Audio Recording Technology concentration at Five Towns College in Dix Hills, N.Y., provides students with the tools needed to succeed as professional engineers and producers of all styles of music. Famed architect and acoustician

John Storyk, co-founder of Walters-Storyk Design Group, designed the college's four state-of-the-art studios. Studio A is a professional audio recording and mixing facility featuring the SSL 9000J 72-channel console. Studio B is equipped with a Pro Tools HD 2 system and an Otari MTR-90 24-track tape machine. Studio C features a Neve Genesys console using a Pro Tools HD3 system, as well as a variety of outboard equipment. Students obtain additional experience through internships provided by the college's Career Services Department. For more information, visit [ftc.edu](http://ftc.edu).





# EDUCATION GUIDE 2013

In each issue, we profile established and up-and-coming producers, engineers and the like, but they didn't just "fall" into their job. Each one of them followed a required course curriculum, garnering knowledge at each step of the way. And so, the editors at *Mix* are happy to present our long-standing "Audio Education Directory." Whether looking to start their career in the recording/post/live sound industry or researching for a certificate course to boost your knowledge, this must-read directory is geared for you. Listed alphabetically by state, you'll find the school closest to you to get you on your way.

## > ARIZONA

**ARIZONA MUSIC PROJECT**  
260 E Comstock Dr., Ste  
Chandler, AZ 8522  
602/819-8700  
azmusicproject.com



### CONSERVATORY OF RECORDING ARTS & SCIENCES

2300 East Broadway Rd.  
Tempe, Arizona 85282  
866/343-0749  
audiorecordingschool.com

Degree/Certification Offered: Master Recording Program II (MRP II)

The Conservatory of Recording Arts and Sciences (CRAS) is the premier audio recording, engineering and production school. If you're looking for an education that can give you the knowledge and skills to record and "live-mix" music, design game sounds and movie soundtracks, then CRAS is the place for you. CRAS graduates are certified in a broad range of technologies encompassing all aspects of the recording process, giving them a significant advantage in the workplace. At CRAS, we don't offer online courses because we know that a hands-on recording education is needed to develop a student's self-confidence and overall mastery. Our certification process means students gain full competence in the basic operation of the hardware and software systems they will use after graduation. Learn the art of audio recording, quickly and without a mountain of debt. If you love sound, make it your career, and BE CRAS!

**MESA COMMUNITY COLLEGE**  
1833 W. Southern Ave.  
Mesa, AZ 85202  
480/461-7575 (Music Office)  
480/461-7450 (Keith Heffner,  
program director)  
mesacc.edu/programs/

### audio-production-technologies

Degree/Certification Offered: Associate of Science in Audio Production Technologies, Certificate of Completion in Audio Production Technologies, Certificate of Completion in Sound Design.

**SCOTTSDALE COMMUNITY COLLEGE**  
Department of Music  
9000 East Chaparral Rd.  
Scottsdale, AZ 85256  
480/423-6333  
scottsdalecc.edu/academics/departments/fine-arts/music  
Degree/Certification Offered: A.A.

### STUDIOCAT PRODUCTIONS

Jamison Weddle, multi-Platinum award-winning engineer  
Address given upon request  
Central Phoenix, AZ 85015  
602/332-4506  
studiocatproductions.com  
Degree/Certification Offered: Certification.

### UNIVERSITY OF ARIZONA

School of Music  
Tucson, AZ  
520/621-1341  
arts.arizona.edu/studio/default.html

## > CALIFORNIA

### ACADEMY OF ART UNIVERSITY

79 New Montgomery Street, 4th Floor  
San Francisco, CA 94105-3410  
800.544.2787 | 415/274-2200  
academyart.edu

### THE ART INSTITUTE OF CALIFORNIA - INLAND EMPIRE, A CAMPUS OF ARGOSY UNIVERSITY

674 E. Brier Dr.  
San Bernardino, CA 2408  
800/353-0812 | 909/915-2100  
artinstitutes.edu/inlandempire  
Degree/Certification Offered: Bachelor of Science in Audio Production.

### THE ART INSTITUTE OF CALIFORNIA - LOS ANGELES, A CAMPUS OF ARGOSY UNIVERSITY

2900 31st St.  
Santa Monica, CA 90405-3035  
888/646-4610 | 310/752-4700  
artinstitutes.edu/losangeles  
Degree/Certification Offered: Bachelor of Science in Audio Production.

### THE ART INSTITUTE OF CALIFORNIA - SAN DIEGO, A CAMPUS OF ARGOSY UNIVERSITY

7650 Mission Valley Rd.  
San Diego, CA 92108-4423  
866/275-2422 | 858/589-1200  
artinstitutes.edu/sandiego  
Degree/Certification Offered: Bachelor of Science in Audio Production.

### THE ART INSTITUTE OF CALIFORNIA - SAN FRANCISCO, A CAMPUS OF ARGOSY UNIVERSITY

1170 Market St.  
San Francisco, CA 94102  
888/493-3261 | 415/865-0198  
artinstitutes.edu/san-francisco  
Degree/Certification Offered: Bachelor of Science in Audio Production.

### AUDIO INSTITUTE OF AMERICA

PO Box 15427  
San Francisco, CA 94115  
415/752-0701  
audioinstitute.com  
Degree/Certification Offered: Degree in Sound Engineering and Music Production.

### AUDIOGRAPH INTERNATIONAL

2103 Main St.  
Santa Monica, CA 90405  
310/994-1678  
audiographintl.com  
Degree/Certification Offered: Pro Tools Operator Certificate for Music and Post in English and Spanish; Pro Tools Expert Certificate for Music and Post in English and Spanish.

### CALIFORNIA POLYTECHNIC STATE UNIVERSITY MUSIC DEPARTMENT

1 Grand Ave.  
San Luis Obispo, CA 93407-0326  
805/756-2406  
calpoly.edu/~mu/  
Degree/Certification Offered: Bachelor of Arts in Music.

### CALIFORNIA STATE UNIVERSITY, CHICO

Department of Music  
400 West First St.  
Chico, CA 95929-805  
530/898-5152  
csuchico.edu/mus/programs/undergraduate/ba\_industry\_tech\_record\_art.shtml  
Degree/Certification Offered: BA in Music Industry and Technology, option in Recording Arts.

### CALIFORNIA STATE UNIVERSITY DOMINGUEZ HILLS

Music Department  
1000 E. Victoria St. LCH E 303, LCH A349  
Carson, CA 90747  
310/243-3543  
cah.csudh.edu/music

### CITRUS COLLEGE

1000 W Foothill Blvd.  
Glendora, CA 91741  
626/914-8580  
citrusarts.org/ra  
Degree/Certification Offered: A.S. in Recording Technology, Certificate in Audio Recording Technology, A.A. in Music, Certificate in Emerging Theatre Technologies.

### CITY COLLEGE OF SAN FRANCISCO

Broadcast Electronic Media Arts Dept.  
50 Phelan Ave., Box A6  
San Francisco, CA 94112  
415/239-3000  
ccsf.edu/NEW/en/educational-programs/school-and-departments/school-of-liberal-arts/broadcast-electronic-media-arts.html  
Degree/Certification Offered: Certifications in Sound Recording Arts, Sound Design, Live Sound, Digital Radio, Broadcast Journalism, Broadcast Motion Graphics, Television Production, Video Post-Production, Sound Reinforcement, and Pro Tools.

### COGSWELL POLYTECHNICAL COLLEGE

1175 Bordeaux Dr.  
Sunnyvale, CA 94089  
800/264-7955  
cogswell.edu  
Degree/Certification Offered: B.S. in Digital Audio Technology.

### COLLEGE OF MARIN

Performing Arts, Music Department  
835 College Ave.  
Kentfield, CA 94904  
415/457-8811  
marin.edu/departments/PerformingArts/Music

### CUESTA COLLEGE

Audio Technology Program  
P.O. Box 8106  
San Luis Obispo, CA 93403  
805/546-3100, x2792  
academic.cuesta.edu/performingarts  
Degree/Certification Offered: Certificate of Specialization in Audio Technology/Recording.



### EXPRESSION COLLEGE - EMERYVILLE

6601 Shellmound St.  
Emeryville, CA 94608  
877/833-8800  
expression.edu  
Degree/Certification Offered: Bachelor of Applied Science in Interactive Audio or Sound Arts.

### EXPRESSION COLLEGE - SAN JOSE

1751 Fox Dr.  
San Jose, CA 95131  
855/217-7300  
expression.edu  
Degree/Certification Offered: Bachelor of Applied Science in Interactive Audio or Sound Arts.

Now in two Northern California locations, Expression College has a main campus in Emeryville, CA, across from the Bay Bridge and a branch campus in San Jose. Founded in 1999 by the late (2008) Dutch entrepreneur Eckart Wintzen and audio engineer and educator Gary Platt, Expression College teaches and grants Bachelor's Degrees in six programs: Animation & Visual Effects, Digital Filmmaking, Game Art & Design, Motion Graphic Design, Interactive Audio, and Sound Arts. Expression College utilizes a professional, accelerated program, where students can earn their degree in just over two-and-a-half years. Class sizes are limited to ensure hands-on learning, instructor attention, and access to gear and equipment. Students learn and work with professional-grade equipment and studios. Expression College is an artistic community that inspires and supports students to make their passion their profession.



### FOOTHILL COLLEGE

FOOTHILL COLLEGE  
12345 El Monte Rd.  
Los Altos Hills, CA 94022



foothill.edu/musictechnology  
 The Foothill College Music Technology Program offers a comprehensive course of study that leads to an A.A. Degree in Music Technology and Certificates of Achievement in Pro Tools and Music Technology. Both on-campus and online courses in recording arts, digital audio production, songwriting, music business, digital video and performance are available at times that fit your schedule. Foothill College students enjoy one of the top facilities in Northern California to build core skills needed to enter the entertainment industry. Commercial Music is one of the largest parts of the entertainment industry in California, an industry that includes film, television, radio, the recording arts and new media. Students from our program have gone on to work with R.E.M., Third Eye Blind, Neil Young, Polygram Records, Universal Music Group, Avid, Geffen Records, Microsoft, Bill Graham Presents and a host of major industry players.

**FULLERTON COLLEGE**  
 321 E Chapman Ave.  
 Fullerton, CA 92832  
 714/992-7276  
 music.fullcoll.edu  
 Degree/Certification Offered: Please view music.fullcoll.edu/degrees/recording.shtml.

**GLOBE INSTITUTE OF RECORDING AND PRODUCTION GLOBE SOUND AND CONSCIOUSNESS INSTITUTE**  
 351 9th St. Suite 202  
 San Francisco, CA 94103  
 GlobeRecording.com | SoundHealingCenter.com  
 Degree/Certification Offered: Audio Recording Certificate and Associates Degrees; Sound Healing and Therapy Certificate and Associates Degrees; online classes with live instructors; and Music Business, Digital Audio Production, and Audio for Media Certificates.

**INDIGITAL INSTITUTE OF RECORDING ARTS**  
 1305 Fair Ave.  
 Santa Cruz, CA 95060  
 831/419.6070 | 855/Record-Today  
 TheIIRA.com  
 Degree/Certification Offered: Year-long certified audio engineering program, fully accredited through the National Private Schools Association.

**LA SIERRA UNIVERSITY**  
 Department of Music  
 4500 Riverwalk Parkway  
 Riverside, CA 92515  
 951/785-2036  
 lasierra.edu  
 Degree/Certification Offered: B.S. in Music Technology.

**LEARN PRO RECORDING**  
 Burbank, CA  
 818/505-1007  
 learnprorecording.com  
 Degree/Certification Offered: Basic Audio Engineering and Master Engineering Certificate.

**LONG BEACH CITY COLLEGE**  
 Building G  
 4901 East Carson St.  
 Long Beach, CA 90808  
 562/938-4517  
 lbcc.edu/mrv  
 Degree/Certification Offered: A.A.

**LOS ANGELES RECORDING SCHOOL**  
 6690 Sunset Blvd.  
 Hollywood, CA 90028  
 888/688-LARS  
 recordingcareer.com

**LOS MEDANOS COLLEGE**  
 Recording Arts  
 2700 East Leland Rd.

Pittsburg, CA 94565  
 925/439-2181 x3327  
 osmedanos.edu/recarts/default.asp  
 Degrees/Certification Offered: AA, College Skills certificate, Certificate of Achievement.

**MEDIATECH INSTITUTE**  
 302 Oceanside Blvd.  
 Oceanside, CA 92054  
 760/231-5368  
 mediatech.edu  
 Degrees/Certification Offered: Recording Arts Degree, Digital Film & Video Arts Degree.

**MINA ENTERTAINMENT**  
 Santa Monica, CA 90404  
 310/402-6497  
 cubaseclasses.com

**MIRACOSTA COLLEGE**  
 1 Barnard Dr.  
 Oceanside, CA 92056  
 760/757-2121  
 miracosta.edu/instruction/music/index.html  
 Degree/Certification Offered: A.A. in Music Performance, A.A. in Digital Audio Production, A.A. in Recording Arts/Record Production; certificates of achievement in Business of Music, Digital Audio Production, Recording Arts/Record Production, Sound Reinforcement; certificates of proficiency in Digital Audio, Music Technology, Performance Technician.

**MUSICIANS INSTITUTE**  
 6752 Hollywood Blvd.  
 Hollywood, CA 90028  
 800/255-7529  
 mi.edu  
 Degree/Certification Offered: Bachelor of Music in Performance/Minor in Audio Production, A.A., certificates in audio engineering.



**PYRAMIND**  
 Music Production School  
 880/832 Folsom St.  
 San Francisco, CA 94107  
 415/896-9800  
 pyramind.com/training  
 Pyramind is a multi-faceted music production company offering training programs for music producers as well as services for audio production clients. Pyramind has been a leader in music production training for over 15 years in San Francisco and was amongst the first in the world to offer Pro Tools, Logic and Ableton Live certifications. Only Pyramind is both a world-class music production school as well as a thriving audio production company serving the who's who in the video game and post production industry. Pyramind enrolls students year-round at our ground campus in San Francisco. We also offer a wide range of online classes where aspiring producers can learn the art of music production anywhere on the planet. Head to our website to learn more about our course offerings and genre specific packages.

**THE RECORDING ARTS CENTER**  
 11021 Via Frontera, Suite A  
 San Diego, CA 92127  
 858/592-0556  
 tracsdc.com  
 Degree/Certification Offered: Associate Degree in Recording Arts, Avid Pro Tools User Certification, Avid Pro Tools Operator Certification in Music and Post Production, Avid Pro Tools Expert Certification in Music and Post Production, Avid ICON Expert Certification, Avid Venue Operator Certification, Avid Media Composer User Certification, Waves EDU Certification.

**RECORDING CONNECTION AUDIO INSTITUTE**  
 Local studios in your neighborhood  
 800/295-4433  
 recordingconnection.com  
 Degree/Certification Offered: Certificate.

**SACRAMENTO CITY COLLEGE**  
 3835 Freeport Blvd.  
 Sacramento, CA 95822  
 916/558-2111  
 scc.losrios.edu  
 Degree/Certification Offered: A.A., certificates.

**SAN FRANCISCO STATE UNIVERSITY**  
 Broadcast and Electronic Communication Arts  
 1600 Holloway Ave.  
 San Francisco, CA 94132  
 415/338-1787  
 beca.sfsu.edu  
 Degree/Certification Offered: B.A. in Broadcast and Electronic Communication Arts, M.A. in Broadcast and Electronic Communication Arts.

**UCLA EXTENSION**  
 10995 Le Conte Ave.  
 Los Angeles, CA 90024  
 310/825-9971  
 uclaextension.edu/r/default.asp

**UNIVERSITY OF SOUTHERN CALIFORNIA**  
 Thornton School of Music  
 Los Angeles, CA 90089  
 213/740-6935  
 usc.edu/schools/music/

**UTOPIA PARKWAY MUSIC**  
 Los Angeles, CA 91203  
 213/744-1487  
 utopiaparkwaymusic.com/index.html  
 Degree/Certification Offered: Tutorials.

**WEST VALLEY COLLEGE**  
 14000 Fruitvale Ave.  
 Saratoga, CA 95070  
 408/741-2520  
 westvalley.edu/academics/fine\_arts/music  
 Degree/Certification Offered: Associate of Arts (AA) in Recording Arts, Certificate of Achievement in Recording Arts.

**WOMEN'S AUDIO MISSION**  
 1890 Bryant St., Ste. 312  
 San Francisco, CA 94110  
 415/558-9200  
 womensaudiomission.org  
 Degree/Certification Offered: Classes offered for young women and girls in pro audio and the recording arts. Online courses also available (to men and women) via WAM's Sound Channel program.

**ASPEN MUSIC FESTIVAL & SCHOOL**  
 Edgar Stanton Audio Recording Institute  
 2 Music School Rd.  
 Aspen, CO 81611  
 970/925-3254  
 aspenmusicfestival.com

**COLORADO CHRISTIAN UNIVERSITY**  
 School of Music  
 8787 W Alameda Ave.  
 Lakewood, CO 80226  
 303/963-3130  
 ccu.edu/music

**COLORADO SOUND**  
 3100 West 71st Ave.  
 Westminster, CO 80030  
 303/430-8811  
 coloradosound.com/lessons.html  
 Degree/Certification Offered: Personal recording lessons.

**UNIVERSITY OF COLORADO DENVER**  
 College of Arts & Media  
 Campus Box 162  
 P.O. Box 173364

Denver, CO 80217-3364  
 303/556-2279  
 camarts.org/#explore/by-departments  
 Degree/Certification Offered: B.S. in Music Business, B.S. in Recording Arts.

**CONNECTICUT**  
**THE HARTT SCHOOL UNIVERSITY OF HARTFORD**  
 200 Bloomfield Ave.  
 West Hartford, CT 06117  
 860/768-4465  
 harttweb.hartford.edu/undergraduate/music/production.aspx  
 Degree/Certification Offered: B.S. in Engineering-Acoustical Engineering and Music, B.M. in Music Production & Technology.

**UNIVERSITY OF HARTFORD ACOUSTICS**  
 200 Bloomfield Ave.  
 West Hartford, CT 06117  
 860/768-4100  
 uhaweb.hartford.edu/celmer/  
 Degree/Certification Offered: Acoustical Engineer and Music B.S.E., B.S.M.E. with Acoustics concentration.

**UNIVERSITY OF NEW HAVEN**  
 300 Boston Post Rd.  
 West Haven, CT 06516  
 203/932-7101  
 newhaven.edu  
 Degree/Certification Offered: BA in Music, BA in Music & Sound Recording, BS in Music & Sound Recording, BA in Music Industry.

**YALE UNIVERSITY**  
 Department of Music  
 PO Box 208310  
 New Haven, CT 06520  
 203/432-2985  
 yale.edu/yalemus

**YALE UNIVERSITY**  
 Graduate School of Drama  
 P.O. Box 208244  
 New Haven, CT 06520-8244  
 203/432-8825  
 drama.yale.edu/admissions/sound\_design.html

**FLORIDA**  
**CENTER FOR PRO TOOLS INC.**  
 658 Douglas Ave., Ste. 1114  
 Altamonte Springs, FL 32714  
 321/295-7981  
 centerforprotools.com  
 Degree/Certification Offered: Pro Tools Certified User, Operator and Expert.

**BETHUNE-COOKMAN COLLEGE**  
 640 Dr. Mary McLeod Bethune Blvd.  
 Daytona Beach, FL 32114  
 386/481-2000  
 cookman.edu

**DAYTONA STATE COLLEGE**  
 Mike Curb College of Music  
 Entertainment and Art  
 1200 W International Speedway Blvd.  
 Daytona Beach, FL 32114  
 386/506-3000  
 daytonastate.edu/thearts/musicproductiontechnology.html  
 Degree/Certification Offered: A.S. in Music Production Technology, Certificate in Audio Production Technology.

**FLORIDA STATE UNIVERSITY**  
 Film School  
 University Center 3100A  
 PO Box 3062350  
 Tallahassee, FL 32306  
 888/644-7728  
 fsu.edu/~film  
 Degree/Certification Offered: B.F.A. in Production.



**FULL SAIL UNIVERSITY**

**FULL SAIL UNIVERSITY**  
 3300 University Blvd.  
 Winter Park, FL 32792  
 800/226-7625  
 fullsail.edu  
 Degree/Certification Offered: B.S. in Recording Arts, B.S. in Music Production, B.S. in Music Business, B.S. in Show Production, M.S. in Entertainment Business.

**ROXY THEATER GROUP**  
 1645 SW 107 Ave.  
 Miami, FL 33165  
 305/541-7699  
 roxypac.com  
 Degree/Certification Offered: Certificate in show production.

**UNITY GAIN RECORDING INSTITUTE**  
 1953 Ricardo Ave.  
 Fort Myers, FL 33901-7131  
 239/332-4246  
 unitygain.com/school.html  
 Degree/Certification Offered: Logic Pro 9 - AATC Certification.

**UNIVERSITY OF MIAMI**  
 Frost School of Music  
 PO Box 248165  
 Coral Gables, FL 33124  
 305/284-2241  
 miami.edu/frost/index.php/frost  
 Degree/Certification Offered: B.A., B.M., B.S., M.A., M.M.

**GEORGIA**  
**ART INSTITUTE OF ATLANTA**  
 6600 Peachtree Dunwoody Rd. N.E.  
 100 Embassy Row  
 Atlanta, GA 30328  
 800/275-4242  
 artinstitutes.edu/atlanta/media-arts-602.aspx  
 Degree/Certification Offered: B.A. in Audio Production.

**GEORGE STATE UNIVERSITY**  
 School of Music  
 P.O. Box 4097  
 Atlanta, GA 30302-4097  
 404/413-5900  
 Degree/Certification Offered: Bachelor of Music, Music Recording Technology; Bachelor of Science, Music Management.

**SAVANNAH COLLEGE OF ART & DESIGN**  
 1600 Peachtree St., NE  
 Atlanta, GA 30309  
 scad.edu/sound-design/index.cfm  
 Degree/Certification Offered: B.F.A., MA, MFA.

**ILLINOIS**  
**COLUMBIA COLLEGE CHICAGO**  
 School of Media Arts  
 Audio Arts & Acoustics Department  
 33 E. Congress Pkwy.  
 Chicago, IL 60605  
 312/369-8821  
 colum.edu/aaa  
 Degree/Certification Offered: B.S. in Acoustics; B.A. in Audio Arts, with concentrations in Audio Design & Production and Live & Installed Sound.

**COLUMBIA COLLEGE CHICAGO**  
 School of Media Arts  
 Cinema Art + Science  
 Sound for Cinema Concentration



600 S. Michigan Ave.  
Chicago, IL 60605  
312/369-6700  
colum.edu/Academics/Film\_and\_Video/  
Undergraduate\_Program/Audio  
Degree/Certification Offered: Bachelor of Arts.

**DEPAUL UNIVERSITY**  
Sound Recording Technology Program  
804 W Belden Ave.  
Chicago, IL 60614  
773/325-7260  
admin2.mus.depaul.edu/srt/

**ELMHURST COLLEGE**  
Music Department  
190 Prospect Ave.  
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630/279-4100  
public.elmhurst.edu/music  
Degree/Certification Offered: B.M. or  
B.S. in Music Business, B.A. in Music,  
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**LEWIS UNIVERSITY**  
Department of Music  
One University Parkway  
Romeoville, IL 60446  
815/836-5857  
lewisu.edu/music  
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School of Music  
1184 W Main St.  
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millikin.edu/music

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parkland.edu

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Southern Illinois University  
1100 Lincoln Dr.  
Carbondale, IL 62901  
618/536-7555  
rtv.siu.edu/  
Degree/Certification Offered: B.A. with a  
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312/332-0707  
tfa.edu/programs/recording-arts/program-  
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500 Wilcox Ave.  
Joliet, IL 60435  
815/740-3529  
stfrancis.edu/dara  
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4600 Sunset Ave.  
Indianapolis, IN 46208  
317/940-5962  
butler.edu/creative-media-entertainment  
Degree/Certification Offered: B.A. in  
Recording Industry Studies.

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School of Music  
100 N. 7th St.  
Terre Haute, IN 47809  
812/237-2771  
indstate.edu/music  
Degree/Certification Offered: B.A., B.S. in  
Music; B.A., B.S. in Music Business;  
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of Music in Performance.

**INDIANA UNIVERSITY**  
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Department of Recording Arts  
1201 E Third St.  
Bloomington, IN 47405  
812/855-1087  
music.indiana.edu/departments/  
academic/recording-arts/index.shtml  
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W Lafayette, IN 47907  
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cornerstone.edu/academics/communication/audio/  
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mirecordingarts.com  
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mediainstitute.edu

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Montclair State University's program in Audio/Sound Design approaches the study of audio production as a multi-platform, multi-discipline experience. Students develop skills allowing them to create compelling sound design for television, radio, theatrical productions, gaming, Internet and other forms of new media, as well as proficiency in music production techniques. They then apply



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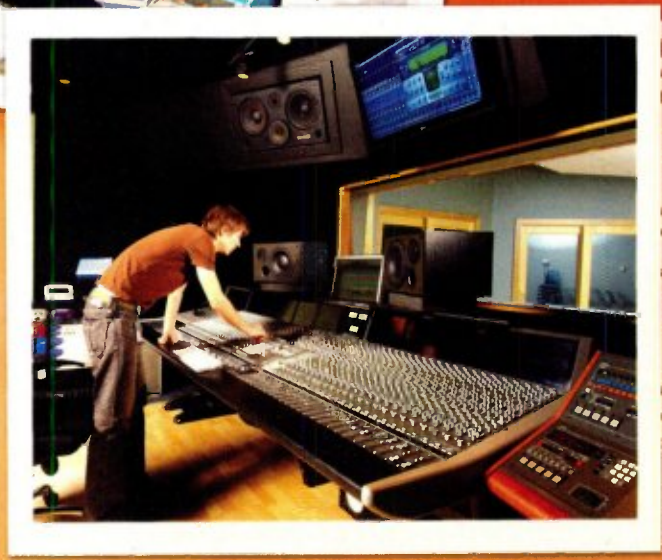
Students at McNally Smith College of Music explore a broad curriculum and pursue a well-rounded education in all areas of the music industry, including production, audio engineering, composition, songwriting, business and performance.

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World Radio History

19 Exchange Street East  
Saint Paul, Minnesota 55101

p: 651.291.0177  
[info@mcnallysmith.edu](mailto:info@mcnallysmith.edu)



these techniques through work at the campus radio station and on various documentary, television, film and music projects. Students benefit from a unique curriculum in the School of Communication and Media, including the study of Media Theory. Access to facilities such as our state-of-the-art audio studios, radio station, DuMont Television Center, Cali School of Music and multipatform newsroom allows students to hone their skills and develop sophisticated techniques on outstanding equipment. Montclair State University is located 14 miles from Manhattan, attracting an extraordinary faculty and giving access to unsurpassed internship opportunities. For more information, go to: [montclair.edu/arts/school-of-communication-and-media](http://montclair.edu/arts/school-of-communication-and-media).

**OCEAN COUNTY VOCATIONAL TECHNICAL SCHOOLS**  
137 Bey Lea Rd.  
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732/286-5678 ext. 3065  
[ocvts.org](http://ocvts.org)

**OWEN FORENSIC SERVICES, LLC.**  
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732/574-9672  
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Degree/Certification Offered: Classes.



**STEVENS INSTITUTE OF TECHNOLOGY**

College of Arts & Letters  
Castle Point On Hudson  
Hoboken, NJ 07030  
[stevens.edu/music-tech](http://stevens.edu/music-tech)  
Degree/Certification Offered: Bachelor of Arts in Music & Technology.  
At Stevens, you'll gain a comprehensive understanding of the interrelationship between music and technology while actively engaging the critical thinking necessary for implementing creative and technical innovation in music. Learning goes beyond the classroom with the Media Arts Center Lab that houses computers, programs and tools, including a 17 Genelec 5.1 surround system for multichannel reproduction; a music studio, a commercial recording facility, a piano lab and a sound synthesis research center; and access to world-class, award-winning faculty, including musicians, sound engineers, and producers who have performed around the world. Our program can lead to a variety of exciting careers, including sound engineer, producer, composer, orchestrator, studio proprietor, sound designer, audio content developer, researcher, programmer, instrument designer/developer, performer and educator. Recent graduates include a chief engineer at a syndicated radio station, staff composer for a film and TV music production house, Master of Music Composition and Theory student and mastering engineer at an award-winning studio.

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**WILLIAM PATERSON UNIVERSITY**  
Department of Music  
300 Pompton Rd.  
Wayne, N.J. 07470  
973/720-2315  
[wpunj.edu/coac/departments/music](http://wpunj.edu/coac/departments/music)

**> NEW YORK**

**AUDIO ENGINEERING SOCIETY**  
60 E 42nd St. Rm 2520  
New York, N.Y. 10165  
212/661-8528  
[aes.org/contact/?area=education](http://aes.org/contact/?area=education)

**CAYUGA COMMUNITY COLLEGE**  
197 Franklin St.  
Auburn, NY 13021  
315/255-1743  
[cayuga-cc.edu/index.php](http://cayuga-cc.edu/index.php)  
Degree/Certification Offered: Technology AAS, Audio/Radio Production AAS, Radio & Television Broadcasting AAS.

**CITY COLLEGE OF NEW YORK**  
Sonic Arts Center  
Shepard Hall Rm. #72  
W 140th & Convent Ave.  
New York, NY 10031  
212/650-8217  
[sonic.arts.cuny.edu](http://sonic.arts.cuny.edu)  
Degree/Certification Offered: B.F.A. in Music with a concentration in Music and Audio Technology.

**DMX DIGITAL MEDIA ARTS AT TOURO COLLEGE**  
27-33 W 23rd St.  
New York, NY 10010  
212/463-0400  
[touro.edu/nyscas/dmx.html](http://touro.edu/nyscas/dmx.html)  
Degree/Certification Offered: Certificate in Digital Media Arts.

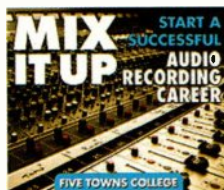
**DUTCHESS COMMUNITY COLLEGE (SUNY)**  
53 Pendell Rd.  
Poughkeepsie, NY 12601  
845/431-8000  
[sunydutchess.edu/assets/com.pdf](http://sunydutchess.edu/assets/com.pdf)  
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Music Recording Technology  
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Canandaigua, NY 14424  
585/394.3500  
[ficc.edu/mrt](http://ficc.edu/mrt)  
Degree/Certification Offered: A.S. in Music Recording Technology.  
The A.S. in Music Recording Technology degree program is designed to provide you the opportunity to learn your craft through extensive hands on training, both as a musician and a recording engineer. Whether you choose to transfer to a baccalaureate degree program or begin a career in music recording directly after graduation, our faculty's real world experiences will help play an important part in your success. The program itself is housed in a state-of-the-art John Storyk designed complex with all studios utilizing ProTools HDX systems, Avid and Toft ATB32 consoles and an extensive collection of world class outboard processing and microphones. In addition to these, 2 new studios will come online at the start of the Spring 2014 semester and will house upstate NY's only 48 channel api Vision and SSL Duality consoles.



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Dix Hills, NY 11746  
631/656-2110  
[ftc.edu](http://ftc.edu)

**Degree/Certification Offered:** B.A. in Music or Music Business.  
Take the first step in launching a successful recording arts career with a Business or Music degree focusing in Audio Recording Technology from Five Towns College. We provide our students with the tools needed to succeed as professional engineers and producers of all styles of music, including soundtracks for film and video productions. Students study the theory of sound, recording electronics, engineering procedures, music production techniques and audio/video post-production. The college's state-of-the-art recording studios, editing suites and MIDI workstations equipping students with a highly focused learning environment for both assigned and extracurricular recording projects. Students will receive hands-on training in our studios and during their internships. Our Career Services Department will guide students to internships that fit into their professional career path. These internships provide an excellent opportunity to enhance their skills while exposing them to the professional world. For more information, check out our website for the next Open House.

**HOUGHTON COLLEGE**  
1 Willard Ave.  
Houghton, NY 14744  
800/777-2566 | 585/567-9500  
[houghton.edu](http://houghton.edu)  
Degree/Certification Offered: Pro Tools Certification, BMus+ Audio Technology and Production.

**ITHACA COLLEGE**  
School of Music



**ITHACA COLLEGE SCHOOL OF MUSIC**  
953 Danby Road, Whalen Center for Music  
Ithaca, NY 14850  
607/274-3171  
[ithaca.edu/music](http://ithaca.edu/music)  
Degree/Certification Offered: Sound Recording Technology (B.M.) and undergraduate programs including Music Education, Performance Studies, and Music Theory, History, and Composition.  
Since its founding in 1892 as a conservatory, the School of Music earns its reputation as one of the best in the nation, offering a superb blend of full-time resident faculty, performance opportunities, required liberal arts courses and success in career placement. In our Sound Recording Technology program, you will take core courses that focus on legacy recording techniques, in addition to training in the latest recording and mixing methods in our state-of-the-art recording facilities. To complement your studies, you are required to take a variety of courses in electro-acoustic music, theatre arts, or outside related fields on campus, as well as work as a paid engineer within Ithaca College's Recording Services work-study program for the duration of your undergraduate studies. Your skills will be developed over four years in the program, culminating with an internship and reside in New York City (as part of the ICNYC program) in your senior year.

**INSTITUTE OF AUDIO RESEARCH**  
64 University Place  
New York, NY 10003  
800/544-2501  
[audioschool.com/programs/audio-recording-production](http://audioschool.com/programs/audio-recording-production)

**MERCY COLLEGE**  
Music & Fine Arts Department  
555 Broadway

Bobbs Ferry, NY 10522  
877/MERCY-GO  
[mercy.edu/cda](http://mercy.edu/cda)  
Degree/Certification Offered: B.S. in Music Industry + Technology.

**NEW YORK UNIVERSITY - THE CLIVE DAVIS INSTITUTE OF RECORDED MUSIC, TISCH SCHOOL OF THE ARTS**  
194 Mercer St., 5th Floor  
New York, NY 10012  
212/992-8400  
[clivedavisinst.tisch.nyu.edu/page/home.html](http://clivedavisinst.tisch.nyu.edu/page/home.html)  
Degree/Certification Offered: BFA, Recorded Music.

**NYU STEINHARDT**  
Department of Music and Performing Arts Professions  
35 W 4th St., 7th Floor  
New York, NY 10013  
212/998-5424  
[steinhardt.nyu.edu/music/technology](http://steinhardt.nyu.edu/music/technology)

**OLD WESTBURY (SUNY)**  
233 Storehill Rd.  
Old Westbury, NY 11568  
516/876-3000, x3103  
[oldwestbury.edu](http://oldwestbury.edu)  
Degree/Certification Offered: B.A. in Media & Communications.

**ONONDAGA COMMUNITY COLLEGE (SUNY)**  
Department of Music  
4585 West Seneca Turnpike  
Syracuse, NY 13215  
315/498-2256  
[sunyocc.edu](http://sunyocc.edu)  
Degree/Certification Offered: A.A.S. in Music.



**SAE INSTITUTE**  
800/986-7723  
[sae-usa.com](http://sae-usa.com)  
Degree/Certification Offered: Associates Degrees in Audio Technology, Music Business; Diplomas in Audio Technology, Music Business; Certificates in Beat Lab, Electronic Music Production, iPhone Application Development.

SAE Institute is more than just another school. We're a philosophy. A movement. A lifestyle. Our diverse network of students, staff and alumni from across the globe share a special passion for creative media that transcends borders and speaks beyond the confines of language. We offer Associates Degrees and Diplomas in Audio Technology and Music Business along with Certificates in Beat Lab, Electronic Music Production, and iPhone Application Development. SAE Institute's core teaching philosophy is a hands-on approach to learning with more studio time and limited class sizes to ensure access to industry-grade equipment and studios. Choose from our seven campus locations: Atlanta, Chicago, Los Angeles, Miami, Nashville, New York and San Francisco.

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[selectsound.com](http://selectsound.com)

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917/714-2158  
[tomfilogomo.com](http://tomfilogomo.com)

**THE COLLEGE OF SAINT ROSE**  
432 Western Ave.  
Albany, NY 12203  
518/454-5278  
[strose.edu](http://strose.edu)  
Degree/Certification Offered: BS Music Industry.

**UNIVERSITY AT ALBANY**  
Department of Music  
Performing Arts Center 310  
1400 Washington Ave.  
Albany, NY 12222  
518/442-4187  
[albany.edu/music](http://albany.edu/music)

**> NORTH CAROLINA**

**APPALACHIAN STATE UNIVERSITY**  
Hayes School of Music  
813 Rivers St.  
Broyhill Music Building  
Boone, NC 28608  
828/262-3021  
[music.appstate.edu/music-industries-asu](http://music.appstate.edu/music-industries-asu)  
Degree/Certification Offered: B.S. in Music Industry Studies with a minor in Business. Concentrations: Music Marketing and Management, Recording and Production, and Music Products.

**BARTON COLLEGE**  
PO Box 5000  
Wilson, NC 27893  
800/345-4973, 252/399-6497  
[barton.edu](http://barton.edu)  
Degree/Certification Offered: B.S. in Communication with a concentration in Audio Recording Technology.

**ELON UNIVERSITY**  
Department of Music  
Elon, NC 27244  
336/278-2000  
[elon.edu/e-web/academics/elon\\_college/music](http://elon.edu/e-web/academics/elon_college/music)  
Degree/Certification Offered: B.S. in Music Technology, B.S. in Music Education, B.A. in Music Performance, B.A. in Music.

**KAREN KANE MUSIC PRODUCTIONS**  
7107 N Bend Rd.  
Wilmington, NC 28411  
910/681-0220  
[mixmama.com](http://mixmama.com)

**SONIC WAVE RECORDING**  
1007 E Whitaker Mill Rd.  
Raleigh, NC 27608  
919/832-9647

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107 Lipinsky Hall, CPO 2290  
One University Heights  
Asheville, N.C. 28804  
828/251-6432

Degree/Certification Offered: B.A. in Music, B.A. in Music/Jazz Studies, B.S. in Music Technology.

**> OHIO**

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1 College and Main  
Bexley, OH 43209  
614/236-6011  
[capital.edu/music-tech](http://capital.edu/music-tech)  
Degree/Certification Offered: Bachelor of Music in Music Technology, Bachelor of Arts in Music Technology.

**CASE WESTERN RESERVE UNIVERSITY**  
Department of Music  
11118 Bellflower Rd.  
Haydn Hall, Room 201  
Cleveland, OH 44106-7105  
216/368-2400  
[music.case.edu](http://music.case.edu)

**CLEVELAND INSTITUTE OF MUSIC**  
11021 East Blvd.  
Cleveland, OH 44106  
216/791-5000  
[cim.edu](http://cim.edu)

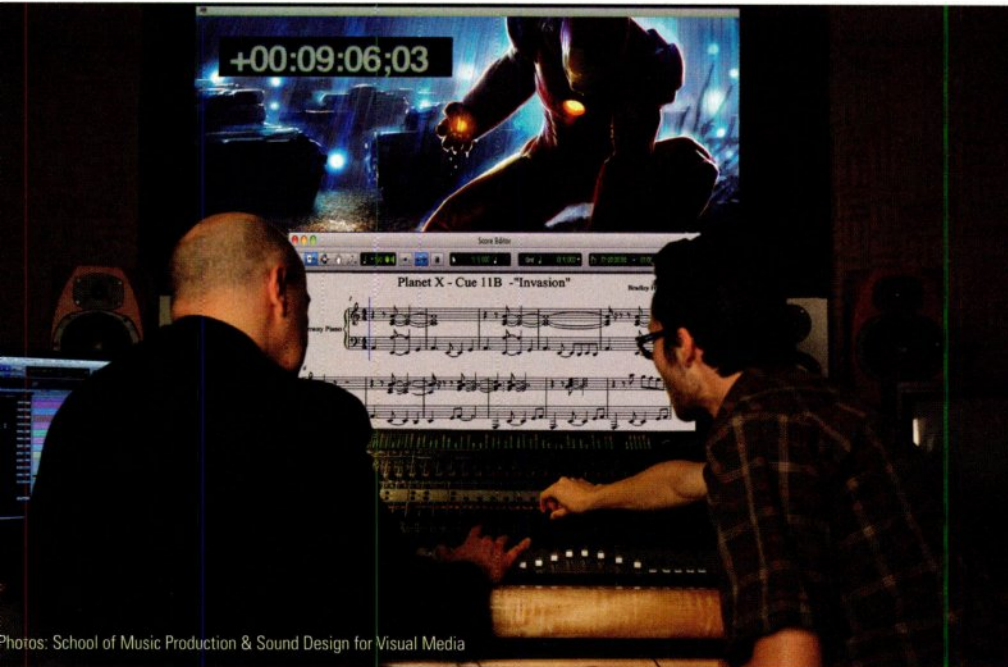
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theratchannel.com  
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**GROOVE U**  
1300 Forsythe Ave.  
Columbus, OH 43201  
614/291-6122  
grooveu.net  
Degree/Certification Offered: Diploma in Music Industry Studies with the following area(s) of specialization: music production, music business, music live, music video, music interactive.

**HOCKING COLLEGE MUSIC PRODUCTION BUSINESS AND PERFORMANCE**  
3301 Hocking Pkwy.  
Nelsonville, OH 45764  
877/HOCKING  
hocking.edu/programs/music

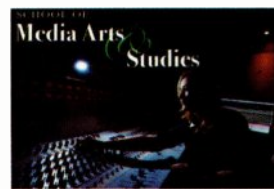
**INTERNATIONAL COLLEGE OF BROADCASTING**  
6 S Smithville Rd.  
Dayton, OH 45431  
800/517-7284  
icb.edu

**LAKELAND COMMUNITY COLLEGE**  
7700 Clocktower Dr.  
Kirtland, OH 44094  
440/525-7000  
lakelandcc.edu/ACADEMIC/ARTS/media

**MALONE UNIVERSITY**  
Bachelor of Arts in Music Production  
2600 Cleveland Ave  
Canton, OH 44709  
800/521-1146  
malone.edu  
Degree/Certification Offered: Bachelor of Arts in Music Production includes recording and technology elements, performance and composition, and music business.

**OBERLIN CONSERVATORY OF MUSIC**  
101 N. Professor St.  
Oberlin, OH 44074  
800/622-6243  
new.oberlin.edu  
Degree/Certification Offered: Bachelor of Music.

**OHIO NORTHERN UNIVERSITY**  
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Ada, OH 45810  
419/772-2000  
onu.edu



**OHIO UNIVERSITY**  
Scripps College of Communication  
School of Media Arts & Studies  
Schoonover Center 319  
1 Ohio University  
Athens, OH 45701  
740/593-4870  
Degree/Certification Offered: Bachelor of Science, Communication.  
The Music Production & Recording Industry program in the School of Media Arts & Studies offers the Music Production track, emphasizing creative, cutting-edge education in producing and engineering music, while the Recording Industry track provides aspiring professionals courses in the business of the emerging music industry. We offer expert, professionally experienced faculty, a 21-seat

production lab, and a world-class, John Storky-designed recording studio, featuring two control rooms: Control Room A features a Rupert Neve Designs 5088 console and a host of Summit, Avalon and Universal Audio components, while Control Room B features a ProTools HD music and 5.1 post-production suite. We provide numerous professional networking opportunities including trips to South by Southwest and AES conferences. Ohio University, located in the culturally vibrant community of Athens, Ohio, offers a four-year Bachelor of Science Degree through the Scripps College of communication, a University System of Ohio designated Center of Excellence.

**OHIO UNIVERSITY ZANESVILLE**  
1425 Newark Rd.  
Zanesville, OH 43701  
740/453-0762  
ouzmedia.com  
Degree/Certification Offered: Associate of Applied Science in Electronic Media.

**OWENS STATE COMMUNITY COLLEGE**  
PO Box 10,000  
Toledo, OH 43699  
800/466-9367  
owens.edu  
Degree/Certification Offered: Music Business Technology A.A.S. (Applied Associates Degree).

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acm-ucO.com  
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ACM@UCO is a fully credited contemporary music program, which is all about the music and creating a "real-world" educational experience for our students. By introducing students to the music industry through auditions, performances and networking

opportunities, ACM@UCO is the premier connection to the music industry in the region. Located in downtown Oklahoma City, ACM@UCO is the only Academy of Contemporary Music in the United States and is in partnership with the original ACM located in Guildford, UK. ACM@UCO students are taught by accomplished musicians, performance experts and business professionals and can earn degrees in Music Performance, Music Production and/or Music Business. Students also have the opportunity to learn from today's leading music industry professionals through the ACM@UCO Masterclass Series. The series has featured artists including Nile Rodgers of Chic and collaborator with Daft Punk, songwriter/pianist Ben Folds and Rock and Roll Hall of Famer Jackson Browne, among others.

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Stillwater, OK 74078  
405/744-8997  
music.okstate.edu  
Degree/Certification Offered: B.M. of Music Education, B.M. in Music with elective Studies Business, B.M. of Music Performance, B.A. of Music.

**ORAL ROBERTS UNIVERSITY**  
7777 S. Lewis Ave.  
Tulsa, OK 74171  
918/495-7500  
oru.edu

**TULSA TECHNOLOGY CENTER**  
Riverside Campus  
801 E. 91st St.  
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918/828-4166  
tulstech.edu  
Degree/Certification Offered: Certificate of Completion; also available to high school students as credit.

**WALTER ARTS CENTER AT HOLLAND HALL**  
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Tulsa, OK 74137  
918/481-1111  
hollandhall.org

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**CALDEN WEST MUSIC**  
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Rockaway Beach, OR 97136  
503/812-5367  
caldenwest.com  
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**NORTH WEST MEDIA INSTITUTE (NWMII)**  
28842 Daystar Dr.  
Corvallis OR 97330  
541/231-1783  
nwmii.us  
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**UNIVERSITY OF OREGON**  
School of Music  
1225 University of Oregon  
Eugene, OR 97403  
541/346-5652

**WESTERN OREGON UNIVERSITY**  
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Monmouth, OR 97361  
503/838-8275  
wou.edu  
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academyformediaproduction.com  
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**THE ART INSTITUTES**  
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**CARNEGIE MELLON UNIVERSITY**  
School of Music  
5000 Forbes Ave.  
Pittsburgh, PA 15213  
412/268-4118  
music.cmu.edu  
Degree/Certification Offered: Advanced Music Studies Certificate in Audio Recording & Production, BS and MS in Music & Technology, Music Technology Minor for undergraduates focused on Audio Recording & Production.



**DREXEL UNIVERSITY**  
3191 Chestnut St.  
Philadelphia, PA 19104  
215/895-6402  
drexel.edu/westphal/undergraduate/MIP  
Degree/Certification Offered: Bachelor of Sciences, accelerated MBA.  
The Music Industry program exposes our students to the multi-faceted aspects of careers in the music industry by offering comprehensive learning experiences in both technology and business. The Mad Dragon Music Group enterprises includes: music publishing, booking, concert promotion, a la carte music marketing services and MAD Dragon Records, Drexel's award-winning student-run record label. This highly competitive program is also enhanced by Drexel's co-operative education system that provides experiential learning with industry partners. The Music Industry Program includes a rigorous course of academic study and awards a Bachelor of Science degree. We also offer an accelerated BS/MBA program for our highly motivated business focused student.

**DUQUESNE UNIVERSITY**  
Mary Pappert School of Music  
600 Forbes Ave.  
Pittsburgh, PA 15282  
412/396-6080  
duq.edu/music/music-technology/index.cfm  
Degree/Certification Offered: B.M. in Music Technology, M.M. in Music Technology.

**HACC - CENTRAL PENNSYLVANIA'S COMMUNITY COLLEGE**  
One HACC Dr.  
Harrisburg, PA 17110  
800/ABC-HACC  
hacc.edu  
Degree/Certification Offered: Music Industry Associate in Arts Degree.

**KUTZTOWN UNIVERSITY**  
Electronic Media Department  
P.O. Box 730  
Kutztown, PA 19530-0730  
610/683-4492  
kutztown.edu/acad/electronicmedia

**LEBANON VALLEY COLLEGE**  
101 N College Ave.  
Annville, PA 17003  
717/867-6275  
lvc.edu/music  
Degree/Certification Offered: Bachelor of Music in Music Recording Technology, Bachelor of Arts in Music Business.

**MUSICINCLUSIVE LLC**  
PO Box 459  
Littlestown, PA 17340  
717/977-4556  
musicinclusive.com  
Degree/Certification Offered: Educational courses in synthesizer programming, as well as other courses listed here: musicinclusive.com/courses.

**TEMPLE UNIVERSITY**  
Department of Media Studies & Production  
2020 N. 13th St.  
Philadelphia, PA 19122  
215/204-5401  
smc.temple.edu/msp  
Degree/Certification Offered: Bachelor of Arts and Master of Arts.

Temple's MSP major offers a flexible curriculum in media production, analysis, business and emergent media, designed and taught by leading scholars, that allows students to explore their own paths through access to the resources of a large, urban university. In the Recording Industry focus, courses in music production and business are taught by industry professionals, including two Grammy® winners, a Grammy® nominee, and successful music entrepreneurs, in the context of an increasingly important media landscape. Capstone options include regional, national and international internships, and a practicum built around a student-run, commercial record label. Graduate study emphasizes analysis with optional production and business courses. Opportunities for minors in Temple's nationally recognized Business School and College of Music are also available. Facilities feature six small production suites and a larger music production studio, outfitted with vintage analog hardware and industry-standard digital software, as well as a multi-seat, music-specific computer lab with breakout isolation booths.

**YORK COLLEGE OF PENNSYLVANIA**  
Division of Music  
Wolf Hall, Room 206D  
441 Country Club Rd.  
York, PA 17403-3651  
717/815-1526  
Degree/Certification Offered: B.A. in Music, B.S. in General Music Education, B.S. in Music (with studies in Music Industry and Recording Technology), A.A. in Music, minors in Music and Music Industry.

**> SOUTH CAROLINA**

**MIDLANDS AUDIO INSTITUTE**  
201 South Prospect St.  
Columbia, SC 29205  
803/782-6910  
midlandsaudioinstitute.com

**UNIVERSITY OF SOUTH CAROLINA**  
School of Music  
813 Assembly St.  
Columbia, SC 29208  
803/777-4280, 803/777-4281  
music.sc.edu

**> TENNESSEE**

**ART INSTITUTE OF NASHVILLE**  
100 Centerview Dr., Ste. 250  
Nashville, TN 37214  
615/874-1067  
artinstitutes.edu/nashville  
Degree/Certification Offered: B.A. in Audio Production.





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Business & Music Business

**BELMONT UNIVERSITY,  
MIKE CURB COLLEGE OF  
ENTERTAINMENT AND  
MUSIC BUSINESS, AUDIO  
ENGINEERING PROGRAM**

1900 Belmont Blvd.  
Nashville, TN 37212  
615/460-5504,  
belmont.edu/cemb  
Belmont University's Audio Engineering Technology program, the first audio engineering program to be accredited by the Technology Accreditation Commission of ABET, is designed to study, investigate and contribute to the art, science and practical application of audio engineering. The AET major is professionally oriented and designed for students seeking careers in the application, installation, manufacturing, operation and maintenance of analog and digital audio and music recording, reproduction, processing and sound reinforcement systems. AET students complete the B.S. or B.A. General Education core with a technical concentration in Audio Engineering Technology and a minor in a related discipline. Practical application of studies are made both in the recording studios, which include Ocean Way Nashville, historic RCA Studio B and Columbia "Quonset Hut" and Studio A, and the R.E. Mulloy studios on campus, and running all phases of production during live music concerts in the 5,000-seat Curb Event Center and the 250-seat Curb Cafe.

**INTERNATIONAL ACADEMY OF  
DESIGN & TECHNOLOGY, NASHVILLE**

One Bridgestone Park  
Nashville, TN 37214  
615/232-7384  
iaed.edu/Nashville  
Degree/Certification Offered: A.A.S. in  
Audio Production.



**MIDDLE TENNESSEE STATE  
UNIVERSITY, DEPARTMENT  
OF RECORDING INDUSTRY**

1301 East Main St.  
Murfreesboro, TN 37132  
Undergraduate Program  
615/898-5030  
recordingindustry.mtsu.edu  
Graduate Program  
615/898-5874  
audioMFA.com  
Home of one of America's first and largest programs, MTSU's Department of Recording Industry offers both undergraduate and master's degree programs designed to prepare students for any aspect of the recording and entertainment industries. The undergraduate program allows students to focus in Music Business, Commercial Songwriting, or Audio Production. The Master's of Fine Arts in Recording Arts and Technologies is America's premier program in audio and music production for students seeking an advanced degree in the field. The facilities include seven studios, two DAW/MIDI labs, two critical listening labs and a mastering facility. All studios and labs are equipped with state of the industry tools from API, SSL, Avid and others. Two studios were recently redesigned by Carl Tatz design. Award-winning students and a world-class faculty of Grammy-winning engineers, producers, entertainment lawyers, and other music industry professionals.

Industry curriculum is fully accredited by the National Association of Schools of Music. Students train in facilities that include comprehensive multi-track studios incorporating 5.1 HD recording and mixing technologies, a 17-station DAW lab, electronic music labs and a multi-channel high-resolution mixing suite. Students choose elective paths in new media, audio for film, composition, electronics or computer programming. Students are further prepared with unique individual instruction emphasized through personalized applied lessons and 24/7 access to production facilities. As the birthplace of rock 'n' roll and the home of the blues, the Memphis music community offers an abundance of diverse opportunities and internship options. Our students have won national competitions sponsored by the Audio Engineering Society, the National Association of Jazz Educators, *Downbeat Magazine*, the NARAS Collegiate Grammy® Music Competition and Shure Microphones. Scholarship funds are available for exceptional students.

**VOLUNTEER STATE COMMUNITY  
COLLEGE**

1480 Nashville Pike  
Gallatin, TN 37066  
615/230-3200  
volstate.edu/RecordingStudio



**WAVES INC.**

2800 Merchants Drive  
Knoxville, TN 37912  
865/909-9200  
waves.com  
The Waves Certification Program is an extensive training curriculum that provides a high-quality, standardized means of mastering Waves plugins and the concepts behind them. Over the past few years, thousands upon thousands of aspiring producers, engineers, and musicians the world over have completed the Waves Certification Program and learned the basics of five essential Waves plugins. You'll learn the fundamentals of working with Waves processors and get hands-on experience with tools like Renaissance EQ, Renaissance Compressor, C1 Parametric Compressor, Renaissance Reverb, and SuperTap Delay. Plus, you will own these 5 plugins! You'll gain mastery over the Waves user interface on multitrack "mix-minus" sessions using directed demonstrations and Waves' acclaimed OpenMix technology. You'll solve common mix problems using Waves processors, and get tested for the Waves Certification. Once you pass the exam, you'll receive a framing quality diploma directly from Waves and a Waves Certification Program t-shirt to commemorate your achievement. Read more here: waves.com/Content.aspx?id=4970#ixzz24k6BDNem.

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10915 Hardin Valley Rd.  
Knoxville, TN 37933-0990  
865/694-6400  
psccc.edu  
Degree/Certification Offered: Associates  
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Sound Production Certification.

**THE UNIVERSITY OF  
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**UNIVERSITY OF MEMPHIS  
RUDI E. SCHEIDT  
SCHOOL OF MUSIC**

129 Music Building  
Memphis, TN 38152  
901/678-2559  
memphis.edu/music/academics\_new/  
industry.php  
Degree/Certification Offered: Bachelor  
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444 Fawn Ridge Rd.  
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800/933-CFNI (2364)  
cfni.org  
Degree/Certification Offered: Bachelors  
of Practical Ministry, Worship and  
Technical Arts Major.

**DALLAS BAPTIST UNIVERSITY**

College of Fine Arts  
3000 Mountain Creek Pkwy.  
Dallas, TX 75211  
214/333-5316  
dbu.edu/musicbiz  
Degree/Certification Offered: Bachelor of  
Arts in Music Business, Bachelor of  
Science in Music Business, Bachelor  
of Business Administration in Music  
Business.

**DEL MAR COLLEGE**

Sound Recording Technology  
101 Baldwin Ave.  
Corpus Christi, TX 78412  
361/698-1214  
delmar.edu/music  
Degree/Certification Offered: Associates of  
Applied Science (AAS) and Level 1 Certificate.

**HOUSTON COMMUNITY  
COLLEGE NW**

Spring Branch Campus  
1010 W. Sam Houston Pkwy.  
North Houston, TX 77043  
713/718-5635  
northwest.hccs.edu/portal/site/northwest

**MEDIATECH INSTITUTE**

13370 Branch View Lane, Suite 135  
Dallas, TX 75234  
972/869-1122  
mediatech.edu  
Degree/Certification Offered: Recording Arts  
Degree, Digital Film & Video Arts Degree.

**MEDIATECH INSTITUTE**

4719 South Congress Ave., Suite 100  
Austin, TX 78745  
512/447-2002  
mediatech.edu  
Degree/Certification Offered: Recording  
Arts Degree.

**MEDIATECH INSTITUTE**

3324 Walnut Bend Lane  
Houston, TX 77042  
832/242-3426  
mediatech.edu  
Degree/Certification Offered: Recording  
Arts Degree.

**SAN JACINTO COLLEGE CENTRAL**

8060 Spencer Highway  
Pasadena, TX 77505  
281/476-1832  
sanjac.edu | sjccmusic.com  
Degree/Certification Offered: Associate of  
Applied Science in Audio Engineering;  
Certificate of Technology, Techniques  
of Audio Engineering; Certificate of  
Technology, Broadcast Audio Technology.

**SOUTH PLAINS COLLEGE**

1401 S. College Ave.  
Levelland, TX 79336  
806/894-9611  
southplainscollege.edu | livesoundspsc.com  
Degree/Certification Offered: Associates  
Degree, Live Sound Certificate, Avid Pro  
Tools Certifications.

**STEPHEN F. AUSTIN STATE  
UNIVERSITY**

School of Music  
2210 Alumni Dr.  
Nacogdoches, TX 75962  
936/468-4602  
music.sfasu.edu  
Degree/Certification Offered: Bachelor  
of Music, Emphasis in Sound  
Recording Technology; Avid Pro Tools  
Certifications

**TEXAS STATE UNIVERSITY**

601 University Dr.  
San Marcos, TX 78666  
512/245-8451  
txstate.edu/music/srt  
Degree/Certification Offered: BS, Sound  
Recording Technology.

Texas State University owns and operates the Fire Station, a multipurpose recording facility housing four control rooms, an automated SSL Duality console, three Pro Tools|HD systems, and numerous professional microphones and outboard devices. Students participate in commercial recording sessions while pursuing their degrees. Admission is competitive. Program applicants should have significant musical abilities, well-developed aural skills and possess competencies indicating an ability to complete pre-calculus and other technical courses. The curriculum emphasizes recording, music, digital media, math/science and an internship.

**UNIVERSITY OF TEXAS AT  
ARLINGTON**

700 Greek Row Dr.  
Music Dept. Box 19105  
Arlington, TX 76019  
817/272-3471  
uta.edu/music  
Degree/Certification Offered: Bachelor's  
of Music in Music Media (Audio  
Production) and Music Business.

**UNIVERSITY OF TEXAS AT AUSTIN  
COLLEGE OF FINE ARTS**

Office of the Dean  
Doty Fine Arts Building (DFA) 2.4  
23rd Street and Trinity Street  
Austin, TX 78712  
utexas.edu/finearts

**UNIVERSITY OF TEXAS AT SAN  
ANTONIO**

Music Department  
1 UTSA Circle  
San Antonio, TX 78249  
210/458-4272  
musictech.utsa.edu  
Degree/Certification Offered: Certificate in  
Music Technology.

**> UTAH**

**BRIGHAM YOUNG UNIVERSITY**  
PO Box 24498  
Provo, UT 84602  
801/378-6395  
cfac.byu.edu

**> VIRGINIA**

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109 Park Ave.  
Falls Church, VA 22046  
703/532-9033  
centerforaudioengineering.com  
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Cue is a state-certified audio engineering  
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**JAMES MADISON UNIVERSITY**  
School of Music  
880 S. Main St. MSC 7301  
Harrisonburg, VA 22807  
540/568-6714  
jmu.edu/music

**NORTHERN VIRGINIA COMMUNITY COLLEGE**  
1000 Harry Flood Byrd Highway  
Sterling, VA 20164-8699  
703/948-7744  
nvcc.edu/loudoun/rec\_media\_tech  
Degree/Certification Offered: Recording Technology certificate, Media Technology certificate.

**OLD DOMINION UNIVERSITY**  
Diehn Fine & Performing Arts  
4810 Elkhorn Ave.  
Norfolk, VA 23529  
757/683-4061  
Degree/Certification Offered: Degrees in Music Production, Music Business and Music Business/Production.

**RADFORD UNIVERSITY, CENTER FOR MUSIC TECHNOLOGY**  
Department of Music  
PO Box 6968  
Radford, VA 24142  
540/831-6174  
radford.edu/cmt-web  
Degree/Certification Offered: Music and Technology degrees.

courses include the design and application of recording systems, sound reinforcement, mixdown, electronic music, popular song and jingle writing, and lyric writing. Learn in a fully equipped studio with a Solid State Logic Duality console and an array of outboard signal-processing equipment, state-of-the-art microphones, Pro Tools, Cubase and Logic Studio, and MIDI and analog synth equipment. Students also learn in MIDI and Mac labs with industry-standard software applications. To learn more, go to su.edu/mprt.

> WASHINGTON

**ART INSTITUTE OF SEATTLE**  
2323 Elliott Ave.  
Seattle, WA 98121  
800/275-2471 | 206/448-6600  
artinstitutes.edu/seattle  
Degree/Certification Offered: Bachelor of Science in Audio Design Technology, Audio Production Associate of Applied Arts.

**BATES TECHNICAL COLLEGE**  
2320 South 19th St.  
Tacoma, WA 98405  
253/680-7000  
bates.ctc.edu  
Degree/Certification Offered: Associate of Technology degree in Broadcasting/Audio/Video Production, with optional certification by the Society of Broadcast Engineers.

**JACK STRAW PRODUCTIONS**  
4261 Roosevelt Way NE  
Seattle, WA 98105  
206/634-0919  
jackstraw.org

**MIRROR SOUND STUDIO**  
301 NE 191st St.  
Seattle, WA 98155  
206/440-5889  
mirrorsound.com

**SEATTLE AUDIO SCHOOL**  
843 Hiawatha Place South #304  
Seattle, WA 98144-2823  
206/330-6438  
seattleaudioschool.com  
Degree/Certification Offered: Audio Engineering Basics certificate. Programs: one-on-one mentoring, classes and workshops.

**SHORELINE COMMUNITY COLLEGE**  
Greenwood Ave. N  
Shoreline, WA 98133  
206/546-4101  
shoreline.edu/musictech01.aspx  
Degree/Certification Offered: Digital Audio AAAs, Merchandising AAAs, Electronic MIDI/Music Production AAAs, Performance AAAs.

**UNIVERSITY OF WASHINGTON PROFESSIONAL AND CONTINUING EDUCATION**  
4333 Brooklyn Ave. NE  
Seattle, WA 98105  
206/685-8936  
pce.uw.edu

> WASHINGTON, D.C.

**AMERICAN UNIVERSITY**  
4400 Massachusetts Ave. NW  
Washington, D.C. 20016  
202/885-3420  
american.edu/cas/performing-arts/audio-tech.cfm  
Degree/Certification Offered: B.A. in Audio Production, Minor and B.S. in Audio Technology, B.S. in Business and Music, M.A. in audio technology and the audio production graduate certificate. Thinking With Your Ears - Hear that? It's the sound of learning. Exploring

the world through your ears. At American University, we train our students to think with their ears. Through our undergrad and newly-created master's program in audio technology, our students get broad exposure to all facets of the audio experience...from music recording...to audio production for broadcast and film...to sound synthesis. In addition to using our new 2,200 square state of the art recording studio, our students step off campus into internships in Washington, DC, New York City, and even Los Angeles designed to enhance and broaden their degree. And once they get that degree, they're off to the professional world of National Public Radio, The Cutting Room, and work with artists such as Madonna and Shakira. Think it. Hear it. Learn it. At American University's Audio Technology program. Check us out at american.edu/cas/performing-arts/audio-tech.cfm and let the learning begin.

**THE OMEGA STUDIOS' SCHOOL OF APPLIED RECORDING ARTS & SCIENCES**  
5609 Fishers Lane  
Rockville, MD 20852  
800/93-OMEGA  
omegastudiosschool.edu  
omegastudios.com  
Degree/Certification Offered: Certificates in Comprehensive Recording Industry Program, Audio for Film and Television Program, Master Engineer Series of Programs, Recording Engineering and Studio Techniques, Audio Production Techniques, Electronic Music Synthesizers and MIDI, Sound Reinforcement for Live Performance, Essentials of Music Business & Artist Management.

> WISCONSIN

**MEDIA INSTITUTE COLLEGE OF MEDIA ARTS**  
2702 Agriculture Dr.  
Madison, WI 53718  
800/236-4997  
mediainstitute.edu

**UNIVERSITY OF WISCONSIN OSHKOSH MUSIC DEPARTMENT**  
800 Algoma Blvd.  
Oshkosh, WI 54901  
920/424-4224  
uwosh.edu/music  
Degree/Certification Offered: Bachelor of Music in Recording Technology.

> WYOMING

**CASPER COLLEGE**  
125 College Dr.  
Casper, WY 82601  
800/442-2963  
caspercollege.edu/music

> CANADA

**THE ART INSTITUTE OF VANCOUVER**  
2665 Renfrew St.  
Vancouver, BC V5M 0A7  
866/717-8080 | 604/683-9200  
artinstitutes.edu/vancouver  
Degree/Certification Offered: Professional Audio Visual Diploma, Professional Recording Arts Diploma, Electronic Music Certificate.

**BANFF CENTRE**  
107 Tunnel Mountain Dr.  
Banff, Alberta T1L 1H5  
403/762-6100  
banffcentre.ca/film-media/audio

**CENTRE FOR ARTS & TECHNOLOGY, KELOWNA**  
Landmark Technology Centre III  
Suite 10 - 1632 Dickson Ave.  
Kelowna, BC Canada V1Y 7t2  
250/860-2787 | 866/860-2787  
digitalartschool.com  
Degree/Certification Offered: Audio Engineering & Production (Advanced Diploma, 18 months), Electronic Music Production (Diploma, 12 months), Studio Production (Diploma, 12 months).

**CENTRE FOR ARTS & TECHNOLOGY, FREDERICTON**  
130 Carleton St.  
Fredericton, NB  
Canada E3B 3T4  
506/460-1280 | 877/369-1888  
digitalartschool.com  
Degree/Certification Offered: Audio Engineering & Production (Advanced Diploma, 18 months), Electronic Music Production (Diploma, 12 months), Studio Production (Diploma, 12 months).

**CENTRE FOR ARTS & TECHNOLOGY, HALIFAX**  
1577 Barrington St.  
Halifax, NS  
Canada B3J 1Z7  
902/429-1847 | 866/429-1847  
digitalartschool.com  
Degree/Certification Offered: Audio Engineering & Production (Advanced Diploma, 18 months), Electronic Music Production (Diploma, 12 months), Studio Production (Diploma, 12 months).

**HARRIS INSTITUTE**  
118 Sherbrooke St.  
Toronto, Ontario M5A 2R2 Canada  
800/291-4477  
harrisinstitute.com  
Degree/Certification Offered: one-year Honours Degree (Audio Production program).

**MCGILL**  
Schulich School of Music  
Strathcona Music Building  
555 Sherbrooke St. W.  
Montreal, Quebec H3A 1E3  
514/398-4535  
mcgill.ca/music

**MID-OCEAN SCHOOL OF MEDIA ARTS**  
1588 Erin St.  
Winnipeg, Manitoba R3E 2T1 Canada  
204/775-3308  
midoceanschool.ca  
Degree/Certification Offered: Audio in Media (6 months).

**MUSITECHNIC**  
888 deMaisonueuve East #440  
Montreal, Canada H2L 4S8  
514/521-2060 | 800/824-2060  
musitechnic.com  
Degree/Certification Offered: One-year training program called Audio Production Techniques that covers sound recording, music production techniques (synth sound design, sampling, MIDI sequencing, audio editing), post-production techniques (sync, audio montage, sound design, mixing), and game audio (sound design, integration).

**NIMBUS SCHOOL OF RECORDING ARTS**  
242 East 2nd Ave.  
Vancouver, BC  
Canada V5T 1B7  
604/875-8998  
nimbusrecording.com  
Degree/Certification Offered: One-year Degree in Advanced Music Production, 6-month Degree in Music Business.

**ONTARIO INSTITUTE OF AUDIO RECORDING TECHNOLOGY (OIArt)**  
500 Newbold St.  
London, Ontario N6E 1K6  
519/686-5010  
oiart.org

**RECORDING ARTS CANADA**  
390 Notre-Dame West, Ste. 320  
Montreal, Quebec H2Y 1T9  
514/286-4336  
recordingarts.com

**RECORDING ARTS CANADA**  
111 Peter St., Ste. 708  
Toronto, Ontario M5V 2H1  
416/977-5074  
recordingarts.com

**SHERIDAN COLLEGE INSTITUTE OF TECHNOLOGY AND ADVANCED LEARNING**  
1430 Trafalgar Rd.  
Oakville, Ontario, Canada L6H 2L1  
905/845-9430  
sheridancollege.ca | tinyurl.com/Bgc5qrr  
Degree/Certification Offered: Three-year Advanced Diploma in Media Arts.



**TREBAS INSTITUTE**  
550 Sherbrooke St. West, Ste. 600  
Montreal, Quebec, Canada H3A 1B9  
514/845-4141  
trebas.com

**TREBAS INSTITUTE**  
2340 Dundas St. West, Second Floor  
Toronto, Ontario, Canada M6P 4A9  
416/966-3066  
trebas.com  
One of the first colleges to offer accredited programs since 1979 in audio engineering and production, sound design, entertainment management, film and television production, and event management, Trebas helps students acquire knowledge, skills and professionalism for entry into recording for the music business, DJing, game design, and film and television production. All courses taught by leading industry professionals, many with Academy Awards. All programs are one year in length. Graduates receive world-recognized diploma and develop portfolio of recordings or film/TV productions, produced in high-tech film, television, music recording studios. Focus is on preparing graduates for real-world careers. Student loans. Internships. Life-time job placement. Graduates have more than a dozen Grammy Awards and have worked with major game design, record, film, television companies and artists including Elton John, Drake, Cher, Bon Jovi, Rod Stewart, Robert Plant, Barbra Streisand, Celine Dion, Sean Paul. Member of Music & Entertainment Industry Educators Association and National Association of Career Colleges. Past guest lecturers include Tom Dowd, Bruce Swedien, Clive Davis.

**UNIVERSITÉ DE MONTRÉAL'S FACULTY OF MUSIC**  
200, av. Vincent-d'Indy, bureau B-301  
Montréal (Québec) H2V 2T2  
514/343-6427  
musique.umontreal.ca  
Degree/Certification Offered: Major in Digital Music, Minor in Digital Music, Bachelor in Electroacoustic Music, Bachelor in Mixed Electroacoustic Music.

**VANCOUVER FILM SCHOOL**  
198 West Hastings St.  
Vancouver, BC V6B 1H2  
800/661-4101  
vfs.com



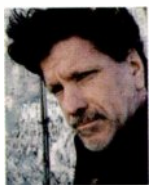
**SHENANDOAH UNIVERSITY (SHENANDOAH CONSERVATORY)**

1460 University Dr.  
Winchester, VA 22601  
800/432-2266  
su.edu  
Degree/Certification Offered: Bachelor of Music (BM) in Music Production & Recording Technology. Pursue your passion for music. Shenandoah University's renowned Shenandoah Conservatory offers a Bachelor of Music in Music Production & Recording Technology. The program combines private study, ensemble participation and access to digital and analog recording technology. Learn MIDI and DAW systems and apply what you learn in professional practice. Study in small classes with an active performing faculty. Courses include music literature and history, jazz history and analysis, and jazz arranging and composition. Technical



# RobairReport

## LIFE LESSONS FROM THE TRENCHES



By Gino Robair

**E**verything I needed to know to get through life, I learned as an assistant engineer.”

Maureen Droney dropped this gem in my lap during a meeting at the 2013 AES show in New York City. Currently the Senior Executive Director of the Recording Academy's P&E Wing, Droney's engineering résumé is enviable to anyone in the biz and includes albums by Aretha Franklin, Whitney Houston, Herbie Hancock, Santana, Huey Lewis and the News, and Bobby McFerrin among many others. My curiosity was piqued.

Her comment brought to mind all the assistant engineers I've worked with over the years, and as many of us do, I remembered the best and the worst. This month, however, I'll focus on the former.

With that in mind, I asked Droney to share some examples of how her early days as an assistant engineer shaped her as a person. I found her answers to be especially critical during a time when people often think that “building a studio” and becoming an “engineer” is as simple as purchasing an interface and downloading some software. Granted, with the move toward personal studios, there are fewer opportunities for up-and-comers to go through the apprenticeship process of being an assistant engineer. However, where the job does exist, the demands haven't lessened.

“Highly developed communication skills are the most important thing I got out of being an assistant engineer, including a sense of when to speak and when not to,” she says. This is probably one of the toughest lessons to learn for millennials, the so-called “entitlement generation,” who are used to sharing their opinions openly. You have to learn to listen and stay engaged throughout a session, even when it slows to a crawl.

If you've watched professional tennis matches, you've seen a person run out from the sidelines to grab the ball when it's out of play, then dash back to where they started. The best assistant engineers work like that: They notice when the vocalist's headphone cable is in the way or a mic stand is beginning to sag, and immediately take care of the issue without having to be asked. Then they get out of the way. They know better than to let something—including themselves—become a distraction to the creative process. And like Radar O'Reilly on *M.A.S.H.*, they know what the engineer will ask for before he or she says anything.

“But much, much more than that,” Droney continues. As an assistant engineer she gained “a highly developed work ethic: the ability to work really, really hard, and to push yourself far beyond

what you'd ever thought you could do.” While most people reading this magazine know that the assistant engineer often puts in the most hours—setting up before everyone arrives; tearing down after everyone leaves—the list of new candidates shortens significantly once they learn that this glamorous job will involve 12- to 16-hour days, seven days a week during the project cycle.

“A commitment to excellence.” If it goes without saying, Droney wouldn't have said it. Yet, she makes it clear that you must learn to strive for the best. That extends to all aspects of your work, being meticulous at every level. In studios where different engineers come in each day, every aspect of the studio has to be normalized after a session, from correctly winding cables, boxing up the mics and putting everything away, to taking out the garbage and making sure the next crew finds a pleasant and inspiring environment. When something doesn't work, you mark it and make sure it's fixed before it returns to regular use. All of the details count, not just Pro Tools key commands and EQ settings.

In terms of long-term importance, you cannot ignore her next comment: “Setting goals and accomplishing them (that is, getting the job done), stemming from the team effort necessary to get the record made!” Planning, follow-through, and the ability to collaborate—three life skills that are almost guaranteed to lead to success.

“Certainly perseverance, and tenacity, too.” Unless you want to remain an assistant engineer in perpetuity, you figure out the technologies you don't understand, work past the rough projects and difficult clients, and remain a step ahead of your peers.

As Droney suggests, this is not simply a list of professional codes of conduct, but behaviors of successful people—behaviors that are rare within the general populace. It's the 20 percent beyond Woody Allen's famous quote that “80 percent of success is showing up.”

But once you have internalized these skills on the job, can you put them to use in your life? It's easy to answer in the affirmative, but it can be difficult to maintain them as you get older and other aspects of existence demand increasing amounts of time, energy and concentration. Are you up to the challenge?

Droney mentions one last lesson: “There is the joy of it; of making music, and working with talent and creativity, and respecting and nourishing it.” You were drawn to this profession for a reason, so don't let the pressure of the job distract you from the bigger picture—ever. If you're able to keep everything in perspective, you won't even notice the studio you've developed. ■



# stand·ard [ 'stan-dərd ]

noun

1. an object that is regarded as the usual or most common form of its kind
2. something established by authority, custom, or general consent as a model or example
3. the stuff no studio is complete without

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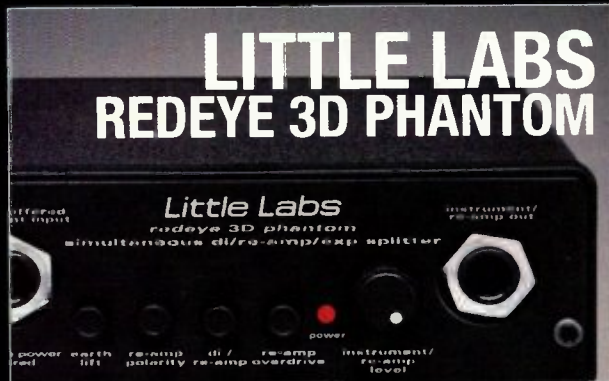
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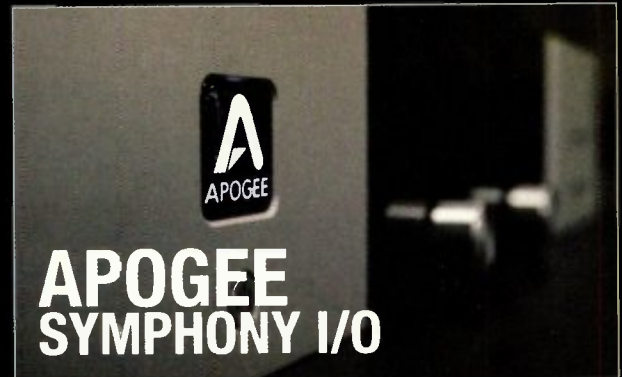
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# Tech // new products



## ACCUSONUS DRUMATOM

### Leakage Wrangler

Drumatom (\$398; [drumatom.com](http://drumatom.com)) from accusonus is a stand-alone software application for Mac and PC that allows users to adjust, reduce or eliminate drum leakage on a live recording using patent-pending Advanced Audio Analysis (A3) technology. Features include drag-and-drop file entry into the GUI, a Process and Focus function for fine-tuning leakage to

taste, then export of the entire drum group or individual files back to their own channels.

## SLATE DIGITAL VIRTUAL MIX RACK

### Vintage Modeled Modular Plug-ins

Slate Digital's Virtual Mix Rack (VMR) ([www.slatedigital.com](http://www.slatedigital.com), \$TBA) features four plug-ins that have been modeled from classic hardware processors including every nuance of the circuit path. The plug-ins include the FG-N 'Brit-N' EQ, a classic Neve-like module featuring high, low and two midrange bands and a highpass filter. The FG-S 'Brit 4k' EQ mimics an SSL 4000 series with high, low, dual mid-bands and a highpass filter. The FG-116 'Modern Compressor' is a mix of several VCA compressors offering control over attack, release, threshold, ratio, makeup gain and wet/dry mix. The FG-401 'Vintage Compressor' is another hybrid featuring a model of the St. Ives transformer used in classic British processors. The plug-ins can be loaded in any order from a browser on the left into the main GUI with a simple drag and drop.



## ELYSIA MUSEQ PLUG-IN

### Software Mimic

The Plugin Alliance ([plugin-alliance.com](http://plugin-alliance.com)) has released the elysia museq plug-in (\$249). All features from the original hardware unit are present with the

bonus of a slightly simplified Mix version for easy setup, essentially offering two plug-ins in one. Features include resonant highpass and lowpass filters (switchable to high and low shelf types), Warm mode sound shaper, an integrated M/S matrix for mid and side processing, linkable channels for convenient stereo operation, and dedicated output level controllers for adapting settings to the available headroom.



## AEA N22 MICROPHONE

### Sturdy, Handcrafted, Protected Ribbon

The AEA N22 microphone ([www.ribbonmics.com](http://www.ribbonmics.com), \$999) is an affordable, handcrafted microphone that is built to last. Features include a highly protected ribbon to allow close-up miking without pop filters, provide wind protection for live sound use, phantom-powered design for optimal performance with a wide range of preamps, and the same 2.35-inch ribbon that AEA microphones have built a reputation on. Other features include a sturdy design that works with third-party clamp mounts; a new, custom German-made transformer with exceptional bandwidth, distortion, and consistent performance; and a small form factor that is easy to use with lightweight stands and in tight miking situations.

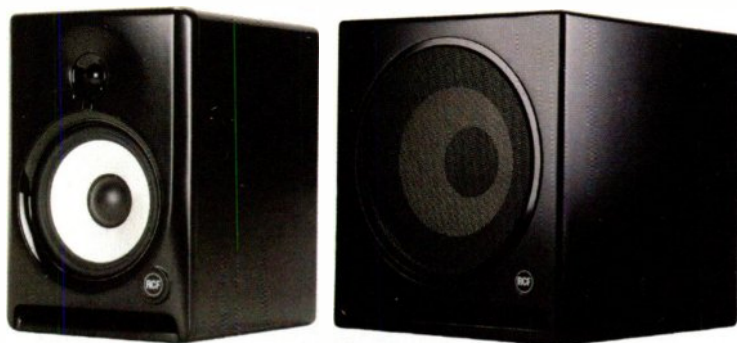




## YAMAHA NUAGE UPGRADE

### NU ADR/Preamp Control

Yamaha has added two new components to NUAGE, the Dante-enabled controller from Yamaha and Steinberg ([www.yamahaca.com](http://www.yamahaca.com)). The new ADR Mode for the NUAGE Master allows the operator to enable the Nuendo 6 ADR Taker functionality on the Ncs500-CT to provide transport control for the Rehearse, Review and Record modes via the NUAGE Master Transport section. Insert Marker and Insert Cycle Marker buttons are conveniently assigned in the touchscreen as well as marker information like Start/End points for cycle markers. The second feature is control of the AD8HR mic preamp from the NUAGE Multi-Function Knobs when the "PRE" Button is pressed in the control section. HA Gain, HA Trim, HPF and 48-volt phantom power can be edited along with LC (Low Cut), HC (High Cut), and Digital Gain. The upgrade is free.



## RCF AYRA SERIES MONITORS

### Affordable Near-Fields

The Ayra Series from RCF ([www.rcf-usa.com](http://www.rcf-usa.com)) features three models of active studio monitors and the Ayra Sub 10 subwoofer. The Ayra 5 (\$245), Ayra 6 (\$347) and Ayra 8 (\$429) near-fields each use a soft-dome tweeter and 5-, 6- or 8-inch composite Fiberglass woofer, and are driven by a Class-A/B design 35W+20W, 50W+25W, and 80W+30W amplifier, respectively. The backs of the lacquer-painted, semi-matte black cabinet offer XLR and RCA inputs; input sensitivity control and high-frequency trim knobs; switch for power on/off; and selector switch for 115V or 230V operation. The Sub 10 (\$511) features a 10-inch driver, 250W Class-A/B design, and stated frequency response of 35 to 130 Hz ( $\pm 3$  dB), and puts out a hefty 113dB max SPL.



## TC UPCON CONVERTER

### 5.1 Up and Down Mix

UpCon from TC Electronic ([www.tcelectronic.com](http://www.tcelectronic.com)) is a combined upconversion and downmix processor in a single high-density rack unit. UpCon continuously monitors the channel format of the incoming audio, and if the signal falls back from true 5.1 to stereo, UpCon seamlessly crossfades into a convincing 5.1 surround upconversion without adding any interruptions or artifacts. The unit comes with the ability to process one stream (8 I/Os) out of the box but can accommodate two more streams via UpCon 3G expansion cards. Prices are as follows: \$6,000, UpCon with one SDI stream; \$9,500, UpCon with two SDI streams; \$13,000, UpCon with three SDI streams.

## ISOACOUSTICS SUBWOOFER STAND

### Boomer Isolation

The ISO-L8R200SUB (\$64.99) from IsoAcoustics ([www.isoacoustics.com](http://www.isoacoustics.com)) is specifically designed for subwoofers. Like other IsoAcoustics models, the ISO-L8R200SUB is designed to clean up acoustic issues with the subwoofer, allowing it to float on axis while reducing the low frequencies that are driven into the supporting surface. It also reduces structural vibrations and cleans up bass smear. The stand measures 7.8 inches wide by 10 inches deep and 5 inches high, and can be used as a single unit or combined with additional units for larger subwoofers.





# New Sound Reinforcement Products

## EAW ANYA LOUDSPEAKERS

### Vertically Complete

Anya (priced per configuration) from EAW ([eaw.com](http://eaw.com)) is a complete, self-contained, high-power sound reinforcement system that adapts all performance parameters electronically. Columns of Anya modules hang straight, without any vertical splay, while the Resolution 2 software adapts total system performance to produce asymmetrical output that delivers coherent, full-frequency range response across the entire coverage area as defined by the user. Each Anya module includes 14x

1-inch exit/38mm voice coil HF compression drivers loaded on a proprietary HF horn that expands to fill nearly the entire face of the enclosure. Six MF cone transducers, measuring 5 inches each and arranged in two columns of three, use Radial Phase Plugs and Concentric Summation Array technology to enter the horn and sum coherently with the HF wavefront. Dual 15-inch LF cone transducers use Off-Center Aperture loading to increase the spacing of the apparent acoustical centers, extending effective horizontal pattern control well into the LF range.



## NEUTRIK NL2FX CONNECTOR

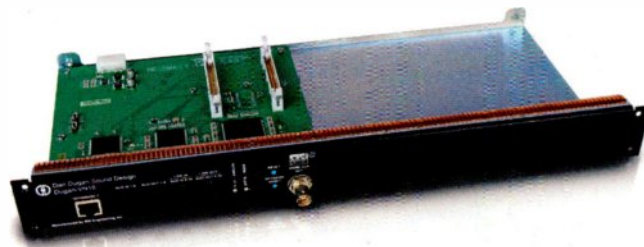
### More Robust speakON

The NL2FX speakON connector (\$3.29) from Neutrik ([neutrik.com](http://neutrik.com)) replaces the NL2FC connector and introduces several important improvements. The NL2FX uses the proven latch-and-strain relief design of Neutrik's acclaimed STX series, which is identical to that used on the company's NL4FX. Features include higher power handling capability (40A RMS per contact versus 30A RMS for the NL2FC), providing the ability to accommodate an even wider range of amplification sources. The NL2FX can handle larger-gauge wire, supporting screw termination of 12 AWG wire (versus 14 AWG for NL2FC).

## AVID DUGAN-VN16 AUTOMIXER

### Multi-Mic Control

The Dugan-VN16 ([www.avid.com](http://www.avid.com), \$3,750) allows owners of Avid SC48, FOH Rack or Mix Rack-based systems to meet the unique requirements of high-profile multi-mic speech applications. Features include management of up to 16 open microphones, 16 channels of ADAT optical I/O, three operating modes to fit different application needs, and configuration and mixing via the Dugan Control Panel software (included) or the Dugan Control Panel for iPad (sold separately.)



## 4HM AM64 AES-TO-MADI CONVERTER

### Fiber and Coaxial Signal Transport

The AM64 (\$TBA) from 4HM ([www.4hmaudio.com](http://www.4hmaudio.com)) is a 1U, multiformat AES-to-MADI converter that provides fiber and coaxial transport. It includes up to 64 channels (32 stereo pairs) of AES/EBU or AES3-id audio (selectable from the front panel) and provides format conversion to MADI with switchable sample-rate converters. The AM64 is compatible with both single-mode and multi-mode fiber on ST connectors, and additionally provides BNC for MADI output. Inputs are on four 25-way D-Sub connectors for balanced digital audio and a single 37-way D-Sub for unbalanced digital. There is a sync reference input on BNC, and derived word clock and AES clock outputs, which are both also via BNC.



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# Tech // reviews

## API THE BOX

New Small-Format Console, Same Legendary Sound



**W**e all know the API brand from the 1970s classic consoles, Lunchbox series processors, Legacy, Vision and 1608 desks. It's safe to say that API has a reputation for building recording consoles and outboard equipment that deliver a recognizable thick, warm analog sound. It is an "expensive" sound that, for a long time, was financially out of reach for most. While the Lunchbox made it possible to get "that" API sound, it was still a long reach to a full API console. With the introduction of THE BOX, API has landed in the mid-ground, finally manufacturing an affordable, small-footprint console.

### OUTSIDE THE BOX

THE BOX is a very cool vintage-looking, small-format recording/mixing console. In a way, it harkens back to the old split design. Channels 1 and 2 have a 550a 3-band EQ each, while channels 3 and 4 have free 500 Series slots, allowing you to customize that part of the console. In addition, all four recording channels have insert send and return points to hook up your favorite outboard processors.

The mic pre is the same as that used on the 1608 and offers +35dB of gain; 48V phantom power; phase reverse; a Mic/Line/Instr selector; a smooth 50Hz, 6dB/octave highpass filter; insert bypass switch; compressor pre/post; and a pad to reduce the mic input sensitivity by 20 dB and the Line input by 6 dB. It leaves the Instrument input unaffected.

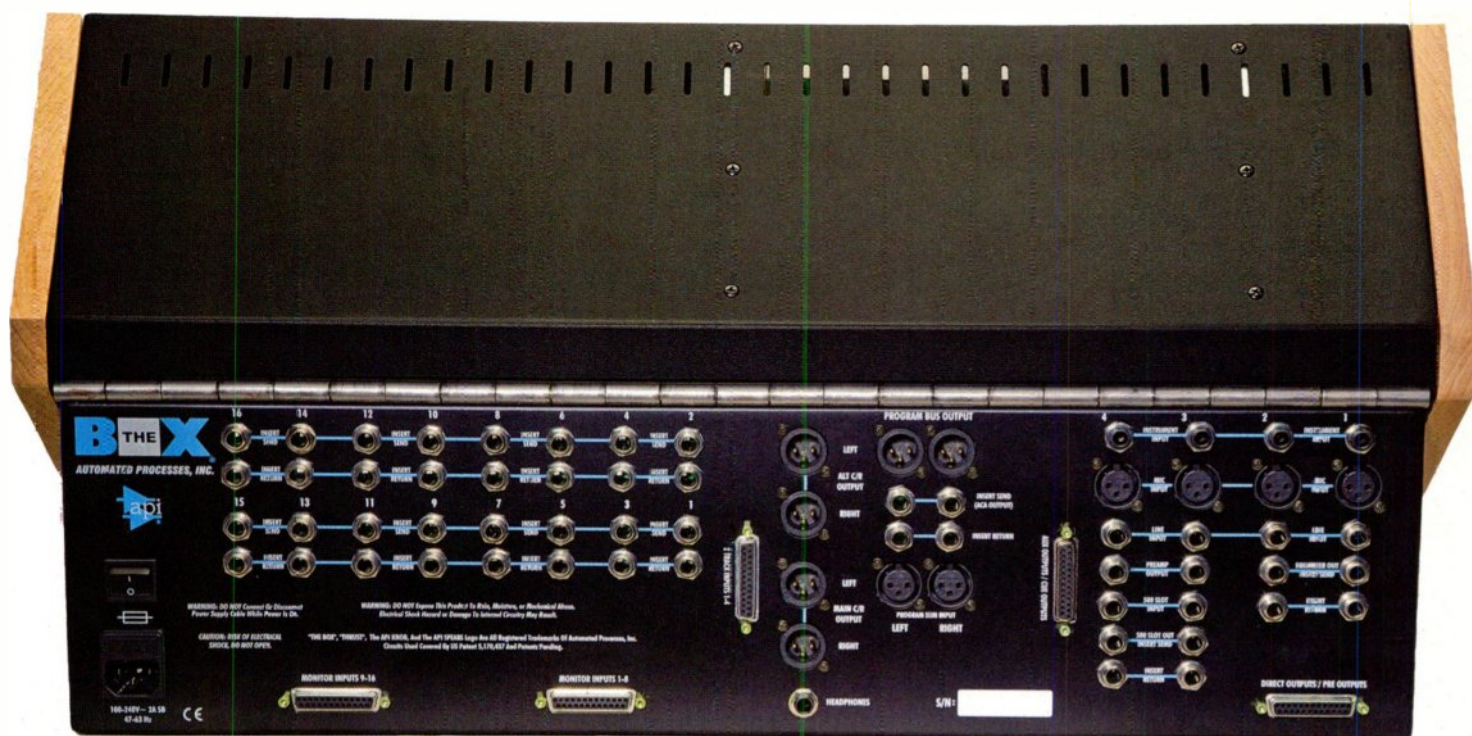
There's also a useful 8-segment LED meter that you can switch between preamp-out and post-fader to keep an eye on your input levels. The Direct Pre switch allows you to bypass the fader section and send the preamp signal to the direct output.

THE BOX provides two mono aux sends and a stereo cue send. Each pair of the sends has pre/post-fader switching and a bypass switch. The stereo aux send can be routed to feed into the

### TRY THIS

If you've run out of inputs on THE BOX in mix mode, run your external summing mixer outs into the four 2-track inputs. Activate the four Cue Sources and patch the Cue output (3-4) to the Program Sum inputs. You're now summing an additional eight inputs into your console, turning it into a 28-channel desk.





stereo cue bus instead of aux buses 3 and 4. To accommodate the four sends, THE BOX is equipped with four auxiliary buses and a stereo cue bus, each with corresponding masters.

Each channel has a dedicated, center-detented pan pot; a program bus assign switch, feeding the signal to mix bus; and a Safe switch, putting that particular channel in solo safe mode. The faders are 100mm long-throw API proprietary, each with its own solo and mute buttons.

#### COOL SUMMER

THE BOX has 16 input summing channels, giving you the opportunity to mix on long-throw faders from your DAW. Each channel is identical and comes geared with the faders, including their mix bus routing, insert, solo, and mute switches; the same Aux and Cue sends you have on the recording channels; pan pots; and a 0dB fader bypass switch.

The 0dB switch is just like setting the fader to unity gain with the fader bypassed while all other channel functions continue to operate normally. For the purists, this also slightly shortens the signal path, while providing full

***API's patented Thrust circuitry has also been added to THE BOX 527 compressor design. Thrust inserts a highpass filter into the compressor's detector, reducing the low frequencies that pump and giving you a punchier sound. This is a very smooth and transparent compressor. It's great for tracking and lovely and soft on full mixes.***

channel functionality. The return channels come in pairs, side by side, and all the Aux/Cue/Pan controls are laid out above each other, making good use of the space.

#### CENTER OF ATTENTION

Any console worth its salt comes armed with

a master section, and THE BOX's is probably its most powerful feature. Obviously, this is where the master program fader lives. The Aux/Cue masters, headphone level, and talkback microphone and controls reside here, as well. You have control over the talkback level by means of a gain pot and three further calibration trim pots, and you can feed the electret talkback mic to the Slate, the Auxes and Cue sends.

The headphones can be switched off, and Cue mix output can be routed to the headphones to replace its default main mix setting. At all times, the headphone feed is sent out to two very useful headphone sockets.

The solo master section comes equipped with a trim control and a couple of switches that flip between AFL and Solo In Place and Solo Clear. The control room part of the master panel sports the classic API big control-room knob for the main speaker level. The Alternative speaker switch and trim control allow you to set up a secondary set of monitors, and the Cut, Dim (with dim attenuator), Mix Insert and Mono switches complete this well-laid-out monitoring section.



The Control Room Source selection switches give you the option to monitor either the main program mix bus or four sets of 2-track stereo inputs. The same goes for the Cue Sources. THE BOX can route the Program bus and the four 2-tracks to the cues.

One important thing to be aware of is that the Cue sources are additive. This means that you can route the main console mix and all four stereo inputs to the cue bus. That is not so for the Control Room sources. You can decide to monitor each of the four 2-tracks individually or combined or the Program mix feed. Once you select the console output to be monitored, the 2-tracks are bypassed.

### THE MAIN SQUEEZE

Compression plays a major role in most recording and mix setups, and THE BOX is loaded with an integral API 527 stereo bus compressor. The default setting is inserted in the main bus; however, this bad boy can be unlinked and routed to the recording channels, so you can track with compression.

If you've used the 2500 or The Channel Strip compressors, you'll feel right at home. The 527s sound and behave in a very similar way and have the same controls: routing, bypass, threshold, ratio, attack, release, soft/hard knee and link switches. As with the 2500, you can select between Old and New style of compression. The Old style uses "feedback" compression found in the more vintage units like the 525, while the New style employs a "feed-forward" type where the compressor's side-chain is fed directly from the input.

API's patented Thrust circuitry has also been added to THE BOX 527 compressor design. Thrust inserts a highpass filter into the compressor's detector, reducing the low frequencies that pump and giving you a punchier sound. This is a very smooth and transparent compressor. It's great for tracking and lovely and soft on full mixes. Personally, I'd have liked to see a faster release control à la the 2500 to give you more punch for more aggressive work.

### IN SESSION

I visited the API factory for the review and had anticipated a very small, stripped-down version of an API. Instead, I came face-to-face with a slick, extremely professional-looking console. To begin the test drive, I rigged up Pro Tools, running through a Universal Audio

## PRODUCT SUMMARY

**COMPANY:** Automated Processes Inc.

**PRODUCT:** THE BOX

**WEBSITE:** [www.APIaudio.com/THEBOX](http://www.APIaudio.com/THEBOX)

**PRICE:** \$17,995

**PROS:** Great sound. Elegant and ergonomic design. Affordable. API Warranty (one year factory service plus five years on all parts).

**CONS:** Non-additive Control Room source switching. Slow-ish compression release time. No signal indicators on the 16 return channels.

Apollo and a couple of Focal monitors.

The connectivity on the back of THE BOX is straightforward and well laid out.

The mic pres come in on XLRs; the Line, Inserts and Instrument inputs accept balanced and unbalanced jacks, respectively. DB-25 connectors provide access to the direct outputs, mic pre outs, Aux outs, 2-track inputs and the 16 summing inputs. The Main and Alt monitors and the Program Sum input are all on XLRs.

I immediately wanted to get my hands on the faders and find out what this beast sounded like. Rather than starting out by checking out the recording path, I decided to load up a new Elliott Randall track I'm working on. We typically finish our projects through API gear, so this was the perfect time to see how THE BOX compares to the vintage API we're used to.

As THE BOX comes with two empty API 500 series slots, I ventured out into the warehouse and found myself two extra JDK V14 4-band equalizers. Popping those in is as easy as installing a new unit into your Lunchbox.

I brought everything out of Pro Tools into the 16 return channels, pushed the faders up, and there was the unmistakable warm, yet crisp and clear API sonic character. To demonstrate that you don't have to stick to the 16 return channels for mixing, I cross-patched four of the outputs into the recording channels so that I could use the 550a EQs, make use of the additional 500 Series slots and, more than anything, switch the bus compressors into channels 1-4. The results were stunning. Within seconds, I got that classic, fat analog sound. Even returning reverbs and delays from the

DAW through THE BOX smooths them out.

The DAW in this instance ended up being a tape machine. All I used it for was to play back the files and generate some of the effects. All the EQing, balancing and compression was done on the API. Elliott Randall and I liked the mix created on THE BOX so much that we decided this is the mix that will be released. Client pleased, engineer very happy. Box ticked.

I also wanted to hear how THE BOX performed on material with vocals. I had some backing vocals to overdub for an Underground Ally album, so I took this opportunity to put the recording channels through their paces. Again, within minutes I had a lovely warm mix ready to sing to. I rigged up a condenser and pulled in a JDK 8MX2 to feed the auxes and cues into, and I had myself a cool headphone mixer to test the fold-back functionality. The mic preamps sound amazing. They have tons of headroom and sound thick. The highpass filter cleans up pops and rumble, and the mic pre, EQ and compressor combo is fantastic for recording.

### SUMMING UP

The console is very well laid out. Having the sloping back makes working a lot more comfortable. It sounds and looks great. Having a big chunk of API as the centerpiece in your studio setup is bound to impress clients. If there's one thing to moan about, it would be the Control Room source selectors—if they could be additive, like the cue sources, this desk would provide you with 30 inputs instead of its current 22. However, that may just be me being channel greedy.

API has created a truly amazing piece of equipment. Overall, I am blown away by this well-engineered sonic beauty and its value for the money. If you were to buy four API pre's, two 550a's, two more API 500 Series modules, an API stereo compressor, a monitor controller and a couple of fader packs, you'd end up paying a lot more!

Anyone serious about recording and mixing who is working in the box and is thinking about upgrading or changing consoles, or is simply on a quest for great analog sound, get your hands on THE BOX. ■

*Wes Maebe is a London-based engineer/producer/musician. Check out his work at [www.wesonator.co.uk](http://www.wesonator.co.uk).*



Continued from p. 29

### SIX-MONTH CURRICULUM

Becka, who has more than a decade of audio education experience in addition to 30-plus years as an engineer, shares a co-director of education title with Mark Rubel, a producer-musician-engineer-consultant with "85 semesters of teaching recording." Rubel led the development of the six-month curriculum and serves as primary instructor.

"We think that six months is the right period of time for our program," Rubel says. "All our time is spent on recording and audio, and it is an intensive experience. By limiting each entering class to 30 students, we can take the time for personalized instruction. And with a max of five student engineers per control room during their time in the studio—which comes out to more than 50 percent of their time here—they get maximum time at the board. We have the rare opportunity to present the proper balance of theory and application, then give them a vessel like Blackbird Studio to place it in. We hit the red button in the first week! But we also teach them how to comport themselves in a real studio and how to take care of their own business."

Besides Becka and Rubel, the core of The Blackbird Academy staff includes Director of Student Operations and Marketing Carma Bandstra, who logged years on the road as a tour manager, followed by a stint at Full Sail; Director of Live Sound Tony Cottrill, a studio and live sound engineer with more than 35 years as a teacher; and Leeann Carlen, Executive Assistant/Publicity, a Belmont University grad with seven years in artist management. They are backed by Blackbird studio manager Scott Phillips, who handles artist relations and scheduling for the Academy; and Nick Shasserre, Blackbird assistant studio manager and IT director who manages Human Resources for the Academy. More are being hired by the end the year to expand their outreach.

### MORE TO COME

The Blackbird Academy Live Program is set to start in January, limited to 20 students per six-month cycle. Classes will take place at an offsite facility across Clair Global Nashville, with a curriculum that incorporates all things tour-related, with emphasis on etiquette and getting along on the road. And the second round of studio students will be entering at around the same time.

Then there's a two-day Beats and Business Seminar with Will Power set to take place the same month. A weeklong Blackbird Studio Sessions with special guests. And then the weeklong summer camps for high school students to prepare for...It's busy, and it's just starting.

Still, it's a new venture and there are no guar-

antees. McBride is both realistic and optimistic. "The support we are getting from the industry is both overwhelming and exhilarating!" he says. "But we know that our success is based solely on the success of our graduates, and I just know they will succeed. We are preparing them for a great career in audio engineering, whether live or studio. This is about passion. We won't ever let them forget that attitude is 99 percent of the gig!" ■

*Tom Kenny has talked with John McBride often over the past two years about audio education and The Blackbird Academy. He also has served on the Advisory Board at Full Sail for five years and speaks occasionally at colleges. Mix technical editor Kevin Becka is the co-director of education at The Blackbird Academy.*

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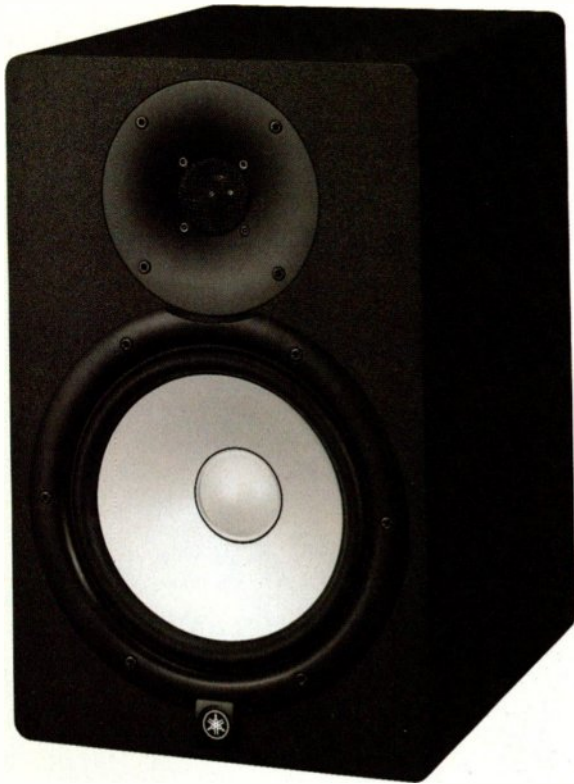
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## YAMAHA HS8 ACTIVE STUDIO MONITOR

Crystal-Clear, Wide-Range Response at an Affordable Price



The HS8's 1-inch dome tweeter is nestled in a thick waveguide positioned above the monitor's 8-inch cone woofer.

**S**even years ago, I reviewed Yamaha's HS Series monitors (the HS50M monitor and HS10W subwoofer in *Mix*'s April 2006 issue) and was mightily impressed. The overriding hallmark was an eminently crystal-clear sound when placed on console-top shelves—positioning that defenestrates most other monitors' clarity of reproduction. Nevertheless, Yamaha saw room for improvement. The HS Series has been updated, with better performance promised for the three full-range monitors and subwoofer comprising the product line. For this review, I took a stereo pair of the largest two-way model, the HS8, for a spin.

### WHAT'S NEW

The HS8 features a newly designed 1-inch dome tweeter and 8-inch woofer. (The woofer's white cone harks back to its seminal

forebear, the NS10M.) A 75-watt amp drives the woofer, which is protected by a built-in limiter, while a 45W amp juices the tweeter. A white LED illuminates—behind the Yamaha logo—on the cabinet's face when power is applied.

A number of design elements were used to reduce resonance, noise and diffractive effects in the HS8's cabinet, which measures 9.8x15.4x13.1 inches (WxHxD). The corners of the MDF (medium-density fiberboard) enclosure are anchored using a three-way mitered-joint technique borrowed from architectural design protocol. The cabinet's rear-firing port is designed to quell any potential air vortex, reducing noise up to 6 dB. To reduce diffraction that would otherwise degrade imaging, the tweeter is mounted in a shallow waveguide and the sides of the cabinet are rounded along their top and bottom edges. The waveguide's considerable thickness minimizes distortion-birthing vibration.

Surveying the HS8's rear panel, a Room Control switch compensates for bass build-up when you must place the monitor near a wall; the three-way switch provides 0, -2 or -4 dB attenuation below 500 Hz. A three-way High Trim switch boosts or attenuates response 2 dB above 2 kHz—the drivers' crossover frequency—and alternatively provides a null (0dB) setting. The XLR connector and TRS phone jack input connections are both balanced, but the latter can accept unbalanced signals. The XLR connector does not latch—a minor concern. A continuously variable level control attenuates output to mute silence when turned all the way down; it's detented at the noon position for +4dB nominal input level and accommodates -10dB input when cranked to the max. A heat sink (for the amplifiers), rocker-style power switch and IEC power receptacle round out the rear panel. The included detachable AC cord measures roughly eight feet in length, longer than that provided for most monitors and allowing greater flexibility in placement. The HS8 weighs 22.5 pounds and consumes 60 watts of power.

The HS8's frequency response is stated to be 47 Hz to 24 kHz, -3 dB, with 10dB down points at 38 Hz and 30 kHz. Examining the monitor's frequency-response chart, the most noticeable deviation in response is a dip between 6 and 9 dB, with a nadir of roughly -3.5 dB.

### TRY THIS

While mixing a music production, use this simple test to confirm the lead vocals are loud enough to be clearly heard: Very slowly turn down your control-room monitor level until no sound is heard. If the lead vocal is the last element of the mix to go silent, you can be certain it won't sound too low on any reasonably good system.



## PRODUCT SUMMARY

**COMPANY:** Yamaha

**PRODUCT:** HS8

**WEBSITE:** yamahaproaudio.com

**PRICE:** \$499 each

**PROS:** Superb clarity, detail, imaging and transient response. Tight bass reproduction. Built-in filters and level control. Long, detachable AC cord. Excellent value.

**CONS:** Very slightly understated reproduction of sibilance. XLR connector doesn't latch.

Otherwise, the spec departs no more than about 1dB from ruler-flat response from 50 Hz to well over 20 kHz.

### IN THE CONTROL ROOM

Yamaha recommends placing the HS8 at least five feet from the nearest wall for truest response when bypassing its filters, but that wasn't possible in my small control room. I placed a pair of HS8s in vertical orientation on Primacoustic Recoil Stabilizers—situated on workstation shelves—about three feet from the nearest wall. (Recoil Stabilizers decouple monitors from shelves, dramatically improving imaging and impulse response.) In my control room, an Acoustic Sciences Corporation Attack Wall (a set of modular tube traps) is positioned to prevent sound emanating from the rear of the monitors from reflecting off the front wall. The Attack Wall quiets speaker-boundary effects, pinpointing imaging and tightening the low end at my mix position.

Listening back to my mastered mixes with the HS8s' filters nulled, imaging was very good and the spectral balance very even, save for mildly understated sibilance and a slight buildup in the upper-bass and low-midrange bands. I could clearly hear fundamental tones produced by a four-string electric bass down to about an F# on the low string, below which notes were audible but understated.

After activating a 2dB cut below 500 Hz using the Room Control filter on each monitor, the imaging and transient response became positively outstanding, and the upper-bass and low-midrange bands sounded crystal-clear. Most surprising was the total absence of flabbiness in the bass band I've come to expect from monitors that employ a bass reflex port. The only drawback was that

the bass response sounded less extended. I wish the HS8 offered a bell-curve filter that mildly attenuated the upper-bass and low-midrange bands; even with using Recoil Stabilizers, there is often a residual sympathetic resonance in this area when monitors are placed on shelves, and a filter that targets only that area would have preserved the HS8's bass extension. That said, including a third filter would surely have raised the HS8's price. If you think your own placement might necessitate using the HS8's Room Control filter, simply add a subwoofer having a built-in tunable high-cut filter to your setup to bring the bass band back into perfect balance. (Yamaha's new HS8S subwoofer can vary its high-cut corner frequency from 80 to 120 Hz.) In fact, even using a flat Room Control setting, you'll need a subwoofer to be able to accurately assess what's happening in the bottom octave (from 20 to 40 Hz) of your mix; this is true for virtually all near-field monitors.

Placing the HS8s in horizontal orientation—still on shelves, and with tweeters to the outside—the imaging was very good but couldn't compare to the faultless imaging displayed in vertical orientation. With both setups, I never felt a need to goose the HS8's High Trim control; the high-frequency detail this monitor provides is superb. In fact, the HS8 still produced outstanding imaging, transient response and high-frequency detail with the High Trim control adjusted to attenuate response 2 dB above 2 kHz (with the Room Control filter also in the -2dB position); the sound just had a little less air and depth. The HS8 can produce very loud SPLs if you need it to.

### SCORE CARD

The hallmark of the HS Series monitors has always been that they provide extraordinary clarity with shelf-top placement, and the new HS8 is no exception. Especially with this setup, the HS8 outperforms other monitors I've heard in its price range. Add superb transient response, imaging and depth and tight bass reproduction to its list of attributes, and the verdict can only be two thumbs up. Way up. ■

*Michael Cooper is a recording, mix, mastering and post-production engineer and the owner of Michael Cooper Recording in Sisters, Oregon.*

# NEW MONITOR CONTROL



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## UNIVERSAL AUDIO, MILLENNIA AND WAVES

### Three Mastering EQ Plug-Ins

**A**s engineers, we are always looking for the “Magic Button” to bring that polish to our work, something to take our recordings to the next level in our search for audio perfection—but more EQ plug-ins? Yes! And these three EQs are a great way to add mojo to your finished product. For the most part, the Pultecs, NSEQ-2 and RSS6 plug-ins are mastering EQs, meaning they are at home performing wide sweeping tonal shifts on an entire mix rather than surgically cutting specific frequencies on a single track.

#### UA PULTEC EQS

Universal Audio’s new Pultec Passive EQ Plug-In Collection contains three individual plug-ins: the EQP-1A Program Equalizer, the MEQ-5 Mid-Range Equalizer and the HLF-3C Cut filters. The HLF-3C Cut filters are new to the UAD line, while the other two units update the previous Pultec EQP-1A and the Pultec-Pro. My only complaint is that they did not create a virtual rack, or all-in-one Pultec plug-in that contains all three units. Loading these units one by one and the extra round trips of audio to the UAD and back works okay, but a single plug-in containing all three would be a dream come true.

The EQP-1A delivers exactly what you hope for: all the beautiful highs, the glossy sheen over your sound, and the ability to sculpt out the low end for monstrous kicks.

The MEQ-5 is a bit more temperamental. You are given two different boost, or Peak, sections, each with their own range of preset frequencies, and a single cut or Dip section. While the Peaks offer a tasty rounded boost to the area around the selected frequencies, the Dip offers preset frequencies from 200 Hz up to 7 kHz and really scoops the sound.

I really like the sound of the HLF-3C filters. I first used one on an electric guitar track to roll off the bottom. Choosing the 80Hz setting did just what I needed; it gave me a perfect low cut without being too steep. The high-cut filter reminded me of my old Altec EQ from the early '70s; it rolled off the sound and added a warm and analog feel that you do not get from engaging a digital pass filter.

For me, the MEQ-5 dug into the sound much more than I wanted. The Peak controls were not to my liking. I know there are fans of this EQ out there and they will love that it is molded exactly like the real thing. But for me, the MEQ-5 on its own did not get the job done and I needed to pair it with another EQ.



*Pictured from top: the UAD HLF-3C, MEQ-5 and EQP-1A.*

#### PRODUCT SUMMARY

**COMPANY:** Universal Audio  
**PRODUCT:** Pultec Passive EQ Plug-in Collection  
**WEBSITE:** uaudio.com  
**PRICE:** \$299  
**FORMAT:** Mac/Win VST, RTAS and AU  
**PROS:** Great-sounding collection.  
**CONS:** No virtual racking or chaining.

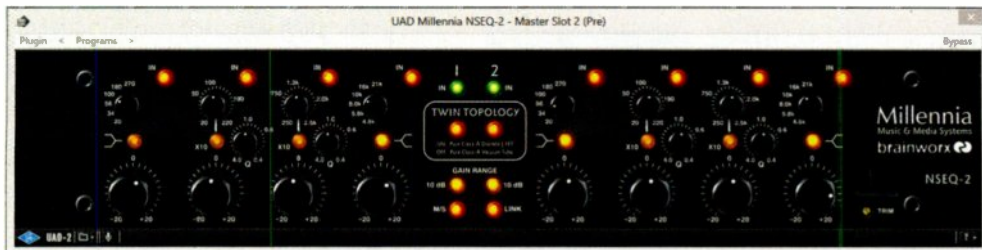
#### TRY THIS

Adding these plug-ins to a track or mix, even with the controls zeroed or the EQ out, adds a tasty and subtle touch to the track. EQ out adds some low-midrange warmth while having the EQ in, but when set to flat, adds a nice sheen.

Overall, this collection is a joy to use. The EQP-1 is my favorite EQ for just adding the beautiful highs and definition that take my mixes to the next level. Having the added HLF-3C and MEQ-5 rounds out the collection, and when added to a track give you the option of being able to handle any EQ job while adding a great vintage vibe to the sound.



UA's Millennia NSEQ-2 allows you to switch between Pure Class-A Discrete JFET and Class-A Tube signal paths.



## PRODUCT SUMMARY

**COMPANY:** Universal Audio; developed by Brainworx  
**PRODUCT:** Millennia NSEQ-2 EQ plug-in  
**WEBSITE:** uaudio.com  
**PRICE:** \$299  
**FORMAT:** Mac/Win VST, RTAS and AU  
**PROS:** Sounds clean and transparent, wonderful workflow, addition of M/S mode.  
**CONS:** In M/S mode there is no way to solo either mid or side. No HP filter.

## UA MILLENNIA NSEQ-2

Millennia's NSEQ-2 hardware unit is widely known for its sonic neutrality, and to me it shows just how clean and pure an analog signal path can be. Brainworx, which developed the plug-in version for UA, did a great job in bringing this unit to life in the digital world, and added features not found on its hardware counterpart—namely, the ability to work in M/S mode.

I first used the NSEQ-2 on a mastering job I was doing for Derek Neutz. The Enya-style track had many instruments and lots going that blended nicely. The NSEQ-2 very quickly got the sound I was looking for—some air on top, a little more support in the bottom—and seemed to be doing a decent job. After a listen, it seemed that the midrange of the stereo signal was spot-on, but that adding some air to the sides might bring more life to it. So I switched to M/S mode and unlinked the controls, and I was able to quickly add air to the widest stereo signal. I wished I could solo the side signal to just hear it; perhaps they could add this feature down the road.

The NSEQ-2 also allows you to switch between Pure Class-A Discrete JFET and Class-A Tube signal paths. Both are so clean-sounding

## TRY THIS

Place the NSEQ-2 on your mix bus, add some highs and lows to taste, then switch in and out the JFET/Class-A Tube signal path emulation to sample some of the subtle nuance you can get from this feature.

that most will not hear the difference. The one feature I miss is a dedicated highpass filter. I realize the original did not have one, but it would have been a great addition to the plug-in.

I added the NSEQ-2 into a mix I am doing for the band Ukemi out of Austin. Their music is very modern—driving yet ethereal—with plenty of layers for playing with EQ. The first stop was drum overheads, and the clear sound this EQ produces was a good fit. Next I tried the NSEQ-2 on a tom track with the Gain knobs switched to  $\pm 20$ dB, which gave me okay results. Placing the plug-in on a cello track was amazing, as I was able to grab the body of the sound and bring out the definition with very little work. I got similar results with guitars and bass.

The NSEQ-2 offers some great enhancements over other EQs I use for mastering, such as the M/S feature and its ability to sound pure without being sterile. It is missing a HP filter option, which to me would be a wonderful addition to the software version. But that aside, if you are looking for a transparent yet analog-sounding mastering EQ to fall in love with, the NSEQ-2 should be at the top of your list.

## WAVES RS56 PASSIVE EQ

This new EQ plug-in from Waves is based on the legendary RS56 Universal Tone Control Passive Equalizer from the early 1950s. It was used in preparing music for the record lathe and became a favorite of audio engineers at Abbey Road Studios. Waves, not surprisingly, partnered with Abbey Road to faithfully bring the original hardware EQ into the DAW world.

After an easy installation, I had this very knobby looking EQ up and running in Magix Sequoia 12. The workflow takes a minute to digest, but it was a quick study and I was soon playing with the interestingly laid out GUI. I love knobs on EQs, and rather dislike graph-

**THE NSEQ-2 VERY QUICKLY GOT THE SOUND I WAS LOOKING FOR—SOME AIR ON TOP, A LITTLE MORE SUPPORT IN THE BOTTOM—AND SEEMED TO BE DOING A DECENT JOB. AFTER A LISTEN, IT SEEMED THAT THE MIDRANGE OF THE STEREO SIGNAL WAS SPOT-ON, BUT THAT ADDING SOME AIR TO THE SIDES MIGHT BRING MORE LIFE TO IT.**



The Waves RS56 passive EQ plug-in is based on the RS56 Universal Tone Control Passive Equalizer from the early 1950s.



## TRY THIS

For starters, add the RS56 across your mix bus, select M/S mode, then set the Top control to Blunt, 16,400 Hz, and boost about 3-4 dB.

ic representations of the curves, so I was glad to see a Collapse button that hides the graphical readout and master section.

Each of the three EQ bands comprises a boost/cut control on the left, a frequency control on the right, and shape control in the middle. Shape is not a "normal" control. There are six presets, with the center four—Blunt, Med Blunt, Med Sharp and Sharp—simply for bell shaping. The two other settings, Low End and High End, work differently, depending on which of the three bands you are using. The Top band controls the frequencies from 5,800 Hz and up. Setting the shape to High End boosts or cuts like a shelf EQ. Setting the shape to Low End will boost or cut everything below 5,800 Hz in the same shelf-like style. The Bass band works opposite of the Top band, and the Mid band works as a low- or high-shelf, but exactly as you'd expect.

## PRODUCT SUMMARY

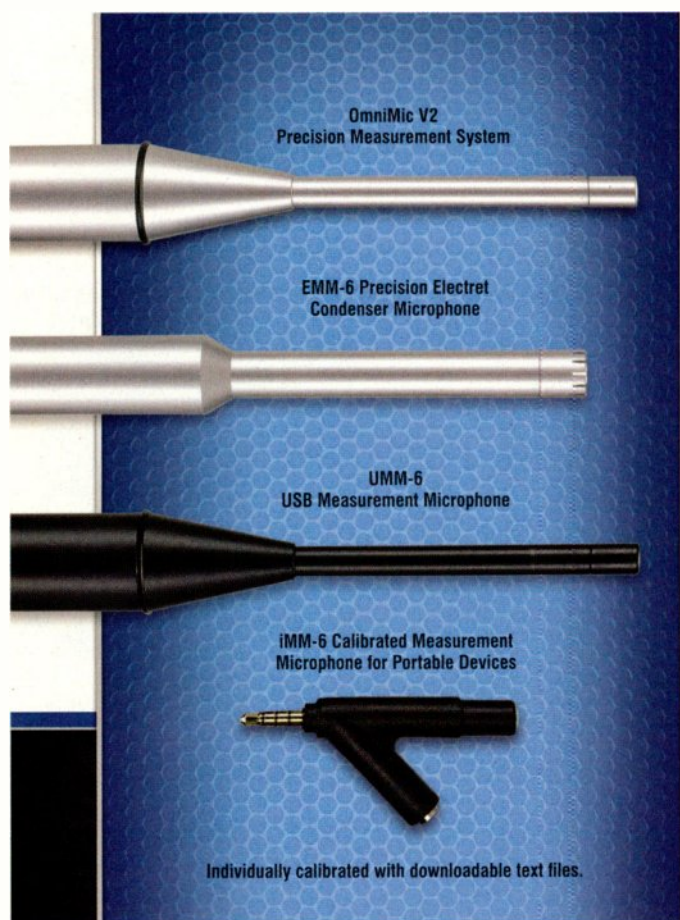
**COMPANY:** Waves  
**PRODUCT:** RS56 Passive EQ  
**WEBSITE:** waves.com  
**PRICE:** \$200  
**PROS:** M/S mode, for basic sound sculpting during mastering it's wonderful.  
**CONS:** Not good on single tracks, only supports up to 96 kHz (Native), no HP filter.

Having such a limited fixed-frequency setup, I was worried I would not get usable results. But the top end added the sheen without harshness. On the right song, the preset frequency choices can yield a good result, but most of the time I felt limited and did not get what I wanted out of the Bass band.

Using this plug-in in M/S mode was wonderful. The RS56 even allows you to monitor just the side or mid signal and adjust their outputs separately. Adding highs to the sides to make the reverb airy without affecting the vocals sitting in the mid signal sounded great. The RS56 really

shined when program material was sent through it. The M/S mode and its ability to listen to just mid or side is a great feature. I really like this plug-in for mastering. It definitely adds a vintage flare to the sound. This is not a transparent EQ, but for mastering, or to simply add some tasty flavor on your mix bus. If that's what you need, then this may be precisely what you're looking for. ■

*Tim Dolbear is a producer and mixing/mastering engineer at Eclectica Studios in Austin, Texas.*



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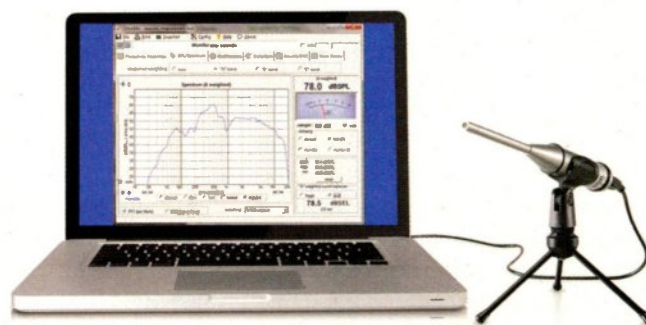
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## SLATE DIGITAL VIRTUAL BUSS COMPRESSORS

Plug-in Bundle Gives Classic Hardware a New Spin



The VBC Rack contains three compressors that can be reordered, soloed or bypassed.

**M**any plug-ins that model vintage hardware strive to emulate the original item's complete sonic and functional attributes, warts and all. Slate Digital's Virtual Buss Compressors, on the other hand, cherry-picks the best and jettisons the rest. Each of the three compressors included in the bundle is either a modified model of a single hardware unit (attempting to improve its sound or function) or combines the best traits of various compressors to create a hybrid processor.

The bundle includes four plug-ins: Three contain a single bus compressor each, and the fourth lumps all three into a virtual rack for simultaneous use. Each component plug-in incorporates not only a model of a classic hardware unit's compression curves, but also its harmonic- and phase-distortion behavior and noise—essential analog characteristics. Intended for processing mixes and tracks routed to a stereo aux bus (such as subgrouped drums), the plug-ins only operate in 2-channel configurations at the time of this writing.

I reviewed the AU version of Virtual Buss Compressors Version 1.0.1.6 in Digital Performer 8.04, using an 8-core Mac Pro

running OS X 10.8.4. VST, RTAS and AAX formats are also offered. An iLok 2 dongle is required for operation.

### REMODELED CLASSICS

The FG-Grey plug-in models the SSL 4000 Series console's bus compressor, but also incorporates the characteristics of Saint Ives transformers on its I/O. (Saint Ives transformers are famously used in dozens of Neve modules and consoles.) The virtual-transformer modeling purportedly adds presence and clarity to the mid-range and preserves the bottom end when deep compression is applied. Unlike with the SSL hardware unit, the amount of gain reduction stays the same when you change the plug-in's attack time, facilitating setup and A/B comparisons.

The FG-RED plug-in models the classic Focusrite RED 3 compressor, with some modifications. The original hardware increases compression depth rapidly with increased ratio settings above 1.5:1, making fine adjustments somewhat difficult. The ratio settings are more

highly resolved in Slate's plug-in, providing greater knob travel over the lower portion of the range. (A 6:1 ratio setting in the plug-in sounds like the 3:1 setting in hardware.) But perhaps the plug-in's most noteworthy modification is the addition of a drive control, which models the saturation characteristics of the RED 3's output transformer, so integral to the hardware's vintage analog sound; unlike with the hardware unit, you don't have to crank makeup gain in the plug-in to get transformer-saturation flavoring.

The FG-MU plug-in combines the attributes of Fairchild 670 and Manley Variable Mu tube compressors, along with traits of unspecified tube amps. Whereas FG-Grey and FG-RED can only operate in stereo mode, FG-MU offers dual-mono operation (with defeatable stereo linking) and a mid-side mode.

Each of the three compressors includes controls for attack and release times, threshold, makeup gain, variable

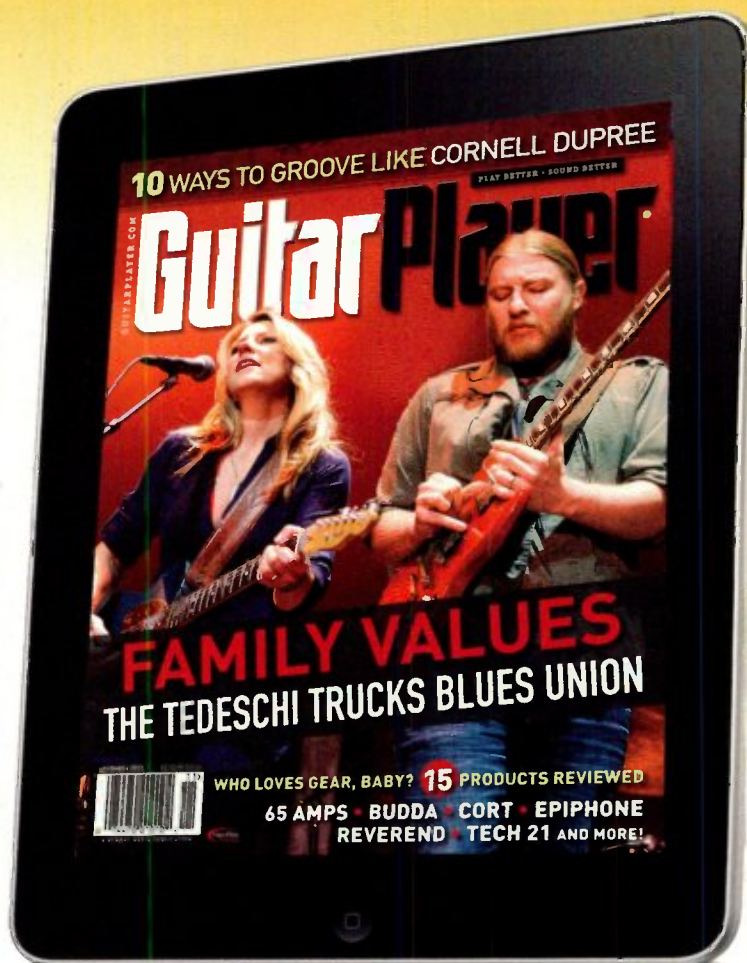
### TRY THIS

In VBC Rack, set FG-Grey to 4:1 ratio, moderate attack time, auto release and bypassed highpass filter. Adjust the threshold for 1 dB of gain reduction. Place FG-RED next in the chain, and set its ratio to 1:1 (no compression) and its drive knob to 5.5. Bypass FG-MU. Your mix's bottom end will become more focused and the top end will gain a subtle sheen.



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## PRODUCT SUMMARY

**COMPANY:** Slate Digital

**PRODUCT:** Virtual Buss Compressors

**WEBSITE:** [slatedigital.com](http://slatedigital.com)

**PRICE:** \$249

**PROS:** Sounds great (on select applications). Unique. Compressors can be reordered and independently bypassed or soloed in VBC Rack. Low price. No evident bugs.

**CONS:** Some FG-Grey and especially FG-MU setups increase crest factor. Can't lock mix or threshold control while browsing presets.

highpass filter (in the sidechain) and wet-dry mix (enabling parallel compression). FG-Grey and FG-RED also each provide an auto-release and ratio control, whereas FG-MU controls compression depth by adjusting its input and threshold controls (consistent with vari-mu designs). VU-style metering—alternately displaying input, output and gain-reduction level—graces the lot.

The VBC Rack plug-in lumps FG-Grey, FG-RED and FG-MU together in one GUI. Drag and drop the component compressors within the rack to change their order in the signal path. Each compressor can also be bypassed or soloed by respectively clicking or control-clicking its virtual power switch.

All four plug-ins offer A and B workspaces; you can copy control settings from one to the other. Presets can be saved and recalled, and banks of presets imported and exported.

### BUS RIDE

My first test of VBC was on a rockin' country production. I had previously bounced a percussively strummed acoustic guitar track through an SSL 4000 Series bus compressor to level it, using the following settings: 10 ms attack, 0.1 sec release and 10:1 ratio. I set up FG-Grey on a bus for the original (unprocessed) stereo track, using the same compressor settings so I could compare the plug-in's sound to that produced by the hardware. I adjusted FG-Grey's threshold for 9 dB of gain reduction on peaks and an 8dB crest factor, similar to that achieved using the SSL hardware. The plug-in delivered a fantastic, in-your-face sound that was remarkably similar to that produced by the SSL

bus compressor. That said, the SSL track had more detailed transients and greater depth. It's important to keep in mind that this was not a real-time A/B comparison to hardware, and Slate didn't try to exactly replicate the SSL's sound. Bottom line: FG-Grey sounded much more like an SSL bus compressor than any other plug-in I'd heard to date. I was very impressed.

FG-Grey, with a 4:1 ratio selected, also sounded marvelous placed on a subgroup for drums. A moderate attack and fast release let just enough transients through to perfectly marry

the traps' punch to the room mics' greatly magnified ambience. Raising the highpass filter's corner frequency made the kick drum sound larger and less contained—great for a booming, aggressive sound.

***FG-GREY, WITH A 4:1 RATIO SELECTED, ALSO SOUNDED MARVELOUS PLACED ON A SUBGROUP FOR DRUMS. A MODERATE ATTACK AND FAST RELEASE LET JUST ENOUGH TRANSIENTS THROUGH TO PERFECTLY MARRY THE TRAPS' PUNCH TO THE ROOM MICS' GREATLY MAGNIFIED AMBIENCE.***

Enlisting FG-Grey to apply 1 dB of gain reduction to a full mix—using a 4:1 ratio, slow attack and auto release—tightened up the bottom end a bit. But the 4:1 ratio also often caused previously contained peaks to clip my mix bus, even with no makeup gain applied. (My guess, based on past observations of other plug-ins that model tube gear, is this was probably due to modeled harmonic distortion added to the signal.) And even using the slowest attack, fastest release, 1.5:1 ratio and highest possible threshold, FG-Grey reduced the mix's depth somewhat.

I got much better results using FG-RED to





FG-RED



FG-MU



FG-Grey

compress a mix. A-list mixer Chris Lord Alge contributed some terrific rock presets for this plug-in that tighten up the sound beautifully. Cranking the drive control imparts a sound somewhat reminiscent of an aural exciter; to keep the mix from sounding too edgy, I generally preferred setting the drive knob to 5.5 (on a scale of 1 to 10). But I also got excellent results slamming rock mixes with 4 to 7 dB of gain reduction, using maxed-out ratio and drive settings, and setting the mix control to only around 30 percent (that is, using very little of the processed signal).

FG-MU sounded absolutely superb on subgrouped drums. Fast attack and release times and 15 dB of gain reduction created a positively explosive sound. While I felt the compressor pumped too much to use on strummed acoustic guitar, its bright, bass-lean tone sounded great on this instrument with no compression applied. But on a full mix—with or without compression applied—bass frequencies were attenuated too much, undoing my carefully crafted bass-treble balance. Peaks were also heightened, compelling me to reduce the mix's volume at least 2 dB to avoid clipping.


#### GLOBAL CONSIDERATIONS

Happily, I encountered no bugs during my

review process. I regretted, however, that I couldn't lock the plug-ins' mix and threshold settings while auditioning different factory presets—a minor complaint. When using FG-Grey or FG-MU with a high threshold (for shallow compression) on your mix bus, you may want to put a brickwall limiter at the end of your signal chain to control their algorithms' accentuated high-frequency transients. Otherwise, you'll often likely need to lower the mix bus' output level to prevent clipping, and that could make your mix sound too quiet (unless, of course, you intend to have the crest factor fixed in mastering).


FG-RED sounds splendid on mixes, while FG-Grey and FG-MU excel on subgrouped drums and bused guitars. None of the plug-ins are great tools for increasing the loudness of a mix; in fact, FG-Grey and especially FG-MU often increase crest factor. But what I love most about these compressors is, not only do they sound great on select applications, they also sound different than any other plug-ins currently available. Selling for only \$249, Virtual Buss Compressors is a great buy. ■

Mix contributing editor Michael Cooper is a recording, mix, mastering and post engineer and the owner of Michael Cooper Recording in Sisters, Oregon.



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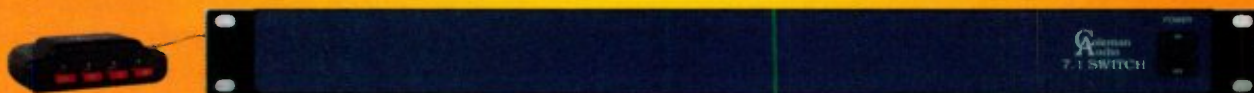
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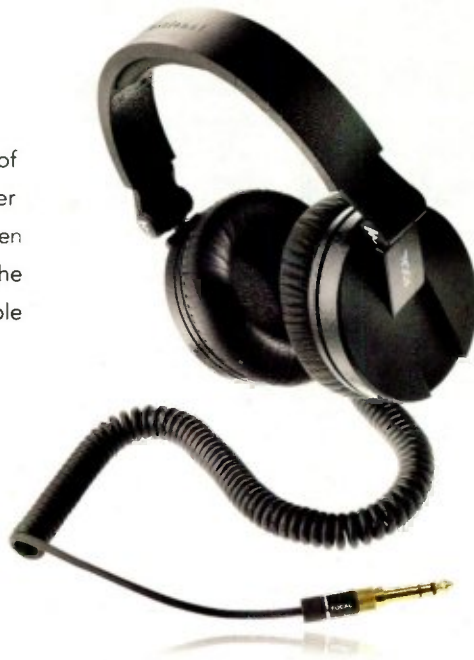


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## RACE TO THE MIDDLE?



By Kevin Becka

I love consoles. I like a good controller, too, especially when they're done well. I just got back from AES and for the second time this year got up close with Yamaha/Steinberg's Nuage. It has an elegant, hands-on interface and is great for certain types of production work. But for recording, there's nothing like the hands-on touch a console brings to a session. There's a certain quickness and confidence you can feel when reaching for integrated preamps, faders, EQs and processors. It brings the stress of a session down, while boosting creativity for both the engineer and talent.

In my work as a reviewer and tech wrangler for *Mix*, I've always watched with interest as companies release new live or recording consoles, and where they set the bar relative to features vs. price. [To be clear, I'm defining a console as a device that has mic preamps, monitor section and at least 16 faders.] At one end, the race to the bottom has been a repeating theme as companies duke it out by lowering prices and upping features—challenging the competition to match them or often watch sales slip.

Over the last decade, in both the live and studio console markets, there's been a wide swing in what's available, and for whom. However you may like them, the cruise ship-sized, large \$\$ console has passed its "sell by" date—except for a fortunate few. In their place, a few \$80k-range desks have emerged, which leaves the home and smaller project studio users out of the picture. But recently, there has been a move to the middle and interest from a new set of buyers looking for something affordable and targeted to modern workflows, whether analog, digital or a hybrid.

Yamaha has always played well in this range, as have PreSonus and Mackie, companies that continually redefine both live sound and recording consoles. Then the category blew up. Behringer bought Midas and Klark-Teknik in 2009 and in 2012 released the X32 digital live sound mixer, bringing an unprecedented range of features below \$3k and maintaining a Midas-like feel to the product. Soundcraft released the Si Expression 3 at Winter NAMM 2013, for about the same price. They matched the features of the X32 and brought along Harman HiQnet integration with a 64x64-channel option card slot and I/O support for AES, FireWire/USB/ADAT, Aviom, CobraNet, BSS BLU Link, Dante and optical MADI. All that was missing were the words "take that!"

Behringer/Midas/Mackie/PreSonus weren't first to recognize

the large market at the entry level. Roland's V-Mixer first broke that barrier with a mixer, digital snake and stage box with DAW integration for small venues/clubs, houses of worship and road-worthy rigs which can be thrown in a trunk or bus and moved quickly to the next town. Live sound is a hot market, raising the bottom line for creative-minded companies targeting products below \$10k. I find similar competition in the mid-to-high price range, with DiGiCo, Avid, Midas and Yamaha all having solutions. And then this past month SSL entered the live market for the first time. It seems there is business high and low.

On the recording side it's slightly different. A few examples: Rupert Neve Designs' Portico offers a 16-channel recording console with all the bells for just over \$32k. The Tree Audio Roots, vacuum tube console is \$22,500 for eight channels of front end with EQ and limiter with four 500 series slots. API has the 1608 at just under \$40k for a 16-channel, 8-bus console with 16 500 series slots, monitor section, talkback, 5.1 monitoring and optional P-mix automation. And SSL's AWS 900 series sits in the \$80k range, offering 24 channels and features incorporated from their higher end consoles.

But what about the hole in the middle: the under-\$20k models? Something for those who want a higher-end signal chain, the hands-on feel of a console and a quality build. Just out of the box for live sound is the S3L Avid Live System, and for recording, API's THE BOX, both coming in at \$17,995. While that range isn't new for live, THE BOX sits nicely in a big price gap not yet breached in recording at this level of quality, features and build. The compromise is, you only have four active recording channels, but for those looking for an affordable overdub room and mixing solution, this is great news.

The pitch to this emerging and vital market is aimed at the smaller-workflow user looking for quality in the mid-price range, under two dimes. Features like a unity gain zero button on each channel, and the ability to quickly switch the API 2500 stereo bus compressor across any of the two input channels are a great fit for the studio looking to get outside of the box in great style.

I'm guessing from seeing all the great new products coming out of AES (see our show report in this issue), that the race for the middle is here. I'm expecting we'll be seeing a lot more new products targeted to the sometimes forgotten middleman looking for great gear in the mid-range. ■



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## C.J. Drumeller

C.J. Drumeller supervises audio and other technologies for the World Revival Church in Kansas City, Missouri. Recognizing the benefits of networked audio, Drumeller uses a pair of RedNet 5 units and a RedNet 3 audio interfaces to help propagate their message. Together with other Dante-enabled products, the church benefits from a fully digital signal path from stage to speaker. “RedNet has made the workflow so much more flexible,” he says. “I don't know of any other interface that do what RedNet has done for us.”

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*Ken Christian – Keyboardist*



## Ken Christian

Accomplished keyboardist and recordist, Ken Christian uses RedNet to route audio between his large collection of synthesizers and other studio gear. Before implementing his three RedNet 3, Christian says his studio was a maze of wires, patch bays and patch cords. “It used to be very complicated, and I'd spend as much time routing as creating. Then I got RedNet, and it's dramatically changed my studio and the way I work. I love it.”

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