electronic MUSICIAN
RECORD • PRODUCE • PERFORM
EMUSICIAN.COM

the KILLERS

CRAFTING ARENA GLAM-ROCK ON 'BATTLE BORN'

Down-and-Dirty **Pitch Correction**

The New Rules for Artist Survival

Box • PreSonus AudioBox • Heavyocity 'Damage'

THE DIGITAL REVOLUTION IS NOT ONLY HERE.
IT'S WIRELESS.

Break free from the confines of front of house. The Mackie DL1608™ redefines mixing by combining the power of a full-featured, 16-channel digital live mixer with unmatched ease and mobility of the iPad. Now, mix from anywhere — front of house, the stage... the bar. Free your mix. Free your mind.

MACKIE.
DL1608

MACKIE.COM/DL1608

CHECK OUT RUSTY'S TRIPPY ADVENTURE

Microphone of choice.

Change is good.

Blue's Interchangeable Capsules Series gives you the ultimate in audio flexibility and range – it's like having nine microphones in one! Featuring the *Bottle* (Blue's premier mic), *Bottle Rocket Stage One* (solid state), and *Bottle Rocket Stage Two* (tube), this trio of recording tools integrate the best of Blue's discrete Class A circuitry with a unique and revolutionary system of interchangeable capsules, *The Bottle Caps*. In seconds you can hot swap between up to nine different capsules, giving you a wide palette of tonal characteristics and pickup patterns that would take a stuffed mic locker to duplicate! Found in many of the world's most respected studios, these mics deliver perfect sound for any recording application.

Blue Microphones

www.bluemic.com

Visit us on the web and discover our complete line of award-winning microphones for studio, stage or desktop. Whatever your sound, Blue is the right choice!

Sweetwater®

Use Your Sweetwater Card and Get 18 Months 0% Interest on Hot Studio Gear!

Available on Select Brands — Call for Details*

Native Instruments Komplete 8
This amazing collection of 27 of Native Instruments most sought-after synths, instruments, effects, and processors includes enough content to satisfy even the most eclectic songwriter. Komplete 8 also includes a huge selection of specific drum, piano, and guitar instruments, as well as classic NI synths, including ABSYNTH, MASSIVE, and FM8. In all, you get over 11,000 different sounds.

Studio One v2 and StudioLive 16.0.2
An impressive recording rig for studio or stage! With the PreSonus StudioLive 16.0.2 digital console and audio interface, combined with Studio One v2 software, you can tackle virtually any recording project with ease. The StudioLive 16.0.2 sports PreSonus's acclaimed XMAX preamps for fantastic sound quality, plus 16-in/16-out recording capability via FireWire. Add Studio One v2 DAW software, easy to use with a pro-level feature set, and you're in for an incredible recording and mixing experience.

Use your Sweetwater Musician's All Access Platinum Card to purchase a Creation Station CS200, CS250, CS400, or CS450 music computer — and pay ZERO interest for 18 months!

Value Added Reseller
Professional Audio

FREE Warranty**
We cover nearly every item for a minimum of two years.

FREE Shipping
Almost every piece of gear ships 100% free.

All Access Platinum Card*
Apply for your card today at Sweetwater.com/AllAccess!

*For complete details on our 0% Interest financing plans, please visit www.sweetwater.com/financing/aliaccess.php. The terms and conditions of our 0% Interest financing plans vary depending on manufacturer and/or product line. To qualify, purchases must be made using the Sweetwater Musician's All Access Platinum Card and paid in full within the financing time period. Subject to credit approval.
**Please note: Apple products are excluded from this warranty, and other restrictions may apply. Please visit www.sweetwater.com/warranty for complete details.

electronic MUSICIAN

COVER FEATURE

12 **The Killers** What happens when you spend a year tracking in the studio and throw super-producers Brendan O'Brien, Steve Lillywhite, Stuart Price, Damian Taylor, and Daniel Lanois into the mix? You get *Battle Born*, the innovative fourth record by the Las Vegas rockers.

12

22

LISTEN

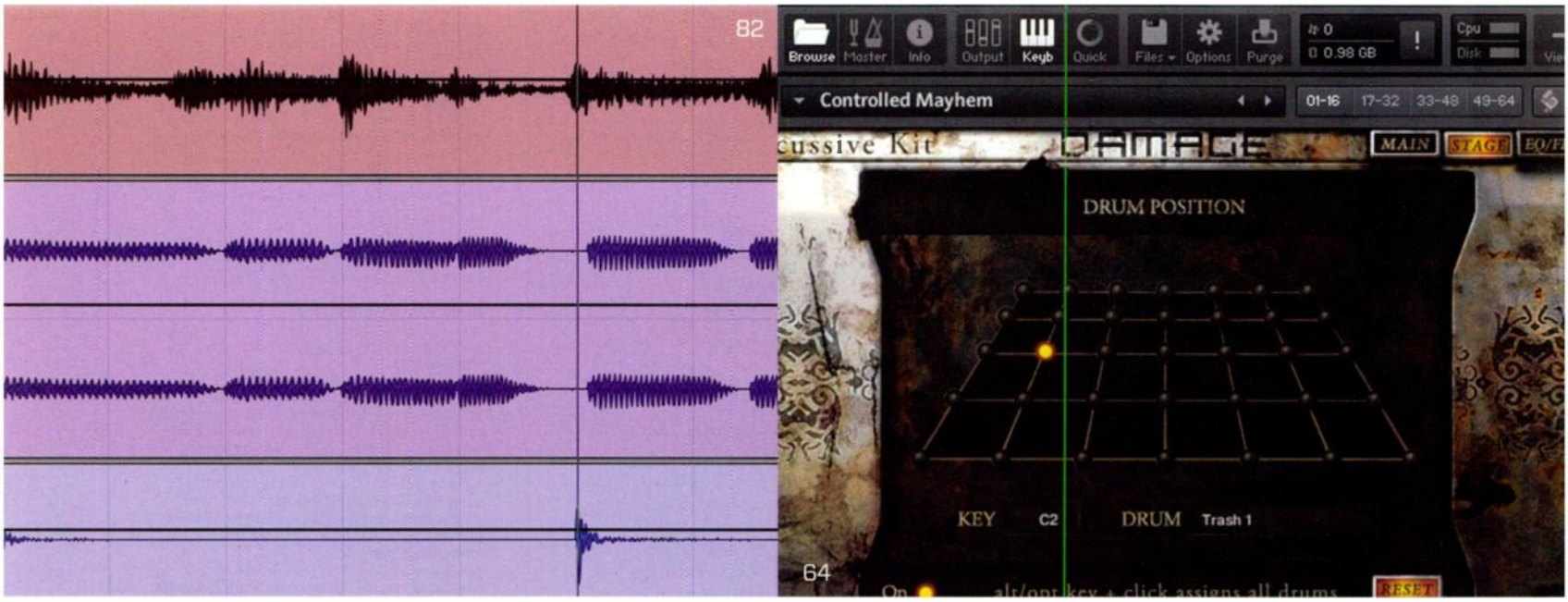
SPECIAL FEATURE 22 **Survival of the Artist** The music business is changing by the minute. What does it take to be a successful musician in the Internet age? We get a dose of reality from forward thinkers Amanda Palmer, Wayne Coyne, and a host of innovative industry execs.

PROFILES 32 **Justin Meldal-Johnsen** The monster bassist has appeared on albums by the likes of Beck, Nine Inch Nails, Goldfrapp, Black Eyed Peas, and Pink. Recently, he has stepped into the producer role, counting M83's *Hurry Up, We're Dreaming* and Neon Trees' *Picture Show* among his major projects. Here, he talks about finding ways to inspire musicians to experiment in the studio.

40 **Jimmy Cliff** On paper, the studio collaboration between the reggae legend and Rancid's Tim Armstrong might sound unlikely. But nothing could be further from the truth. Learn how the artists drew from common musical roots to create *Rebirth*, Cliff's first full-length release in eight years.

PLAYLIST 46 Music reviews from *Electronic Musician* contributors

09.2012 contents



LUST

ROUNDUP 48 **Studio Monitors** Your speakers are the cornerstone of your studio; choosing them is a highly subjective (and overwhelming) process. We break down the options for you.

REVIEWS 60 **Peavey MuseBox** Instrument and effects processor
62 **PreSonus AudioBox** Integrated software/hardware interface
64 **Heavyocity *Damage*** Software percussion instrument
NEW GEAR 66 Production tools to help you make better music

LEARN

MASTER CLASS 68 **Scoring Americana** Acoustic instruments tied to American folk traditions can be effective scoring tools. Learn expert techniques for expanding your sonic palette.

TECHNIQUES 80 **Recording** Keep Noise Out of Your Recordings
82 **Production** Down-and-Dirty Pitch-Correction Techniques

DEPARTMENTS

10 **Community**
CRAIG S LIST 90 **Five Reasons** to Steal Music

EM (ISSN 0884-4720) is published monthly by NewBay Media, LLC 1111 Bayhill Drive, Suite 125, San Bruno, CA 94066. EM is a trademark of NewBay Media. All material published in EM is copyrighted ( ) 2012 by NewBay Media. All rights reserved. Reproduction of material appearing in EM is prohibited without written permission. POSTMASTER: Send address changes to EM, P.O. Box 15605, North Hollywood, CA 91615. Publisher assumes no responsibility for return of unsolicited manuscripts, photos, or artwork. All product information is subject to change; publisher assumes no responsibility for such changes. All listed model numbers and product names are manufacturers' registered trademarks.

Canada Post: Publications Mail Agreement #40612608. Canada Returns to be sent to Bleuchip International, P.O. Box 25542, London, ON N6C 6B2. Periodicals Postage Paid at San Bruno, CA, and at additional mailing offices.

electronic MUSICIAN
www.emusician.com | VOL. 28 NO. 09, SEPTEMBER 2012

PLEASE DIRECT ALL ADVERTISING AND EDITORIAL INQUIRIES TO: ElectronicMusician, 1111 Bayhill Dr., Ste. 125, San Bruno, CA 94066 PHONE 650.238.0300 FAX 650.238.0262 EMAIL electronicmusician@musicplayer.com

PLEASE DIRECT ALL SUBSCRIPTION ORDERS, INQUIRIES, AND ADDRESS CHANGES TO: 800.289.9919, outside the US 978-667-0364, emmag@computerfulfillment.com

Back Issues are available for $10 each at 800.289.9919, 978.6670364, emmag@computerfulfillment.com

Periodicals Postage Paid at San Bruno, CA, and at additional mailing offices.

Follow us on

Q2HD
Handy Video Recorder

ZOOM

RECORD

HD AUDIO

HD VIDEO

SHARE

STREAM

Play. Capture. Stream.

INTRODUCING THE ZOOM Q2HD HANDY VIDEO RECORDER.
Brilliant stereo recording and HD video... Now with live streaming.

COMMUNITY

insight

The Great Digital Divide

HERE WE go again: controversy about the value of music in the Internet age. This time, it started with a blog by a young NPR intern entitled "I Never Owned Any Music to Begin With," and spiraled into webwide debate in which everyone from industry pundits to rock stars to the *New York Times* chimed in on the future of music consumption.

Of course, this is all a re-tread of a decade-old fight pitting proponents of free Internet culture against "old-school holdouts" criticized as clinging to obsolete business models. But it's more complicated than that. Devaluation of music doesn't just erode the middle class of musicians, it has far-reaching implications, extending into music education and even product development.

I'm not saying the existing system works. Nor am I suggesting that artists are entitled to anything just *because* they create something. But I do believe that if someone wants to enjoy an artist's work, he or she should pay for it. And given that we're not anywhere near a "perfect" solution, musicians need to embrace the current reality and find new paths to success. In our "Survival of the Artist" feature (on page 22), we share advice from innovative musicians like Amanda Palmer and Wayne Coyne as well as perspectives from music supervisors, band managers, and leaders at companies like Spotify and Pandora that are redefining the way we access music.

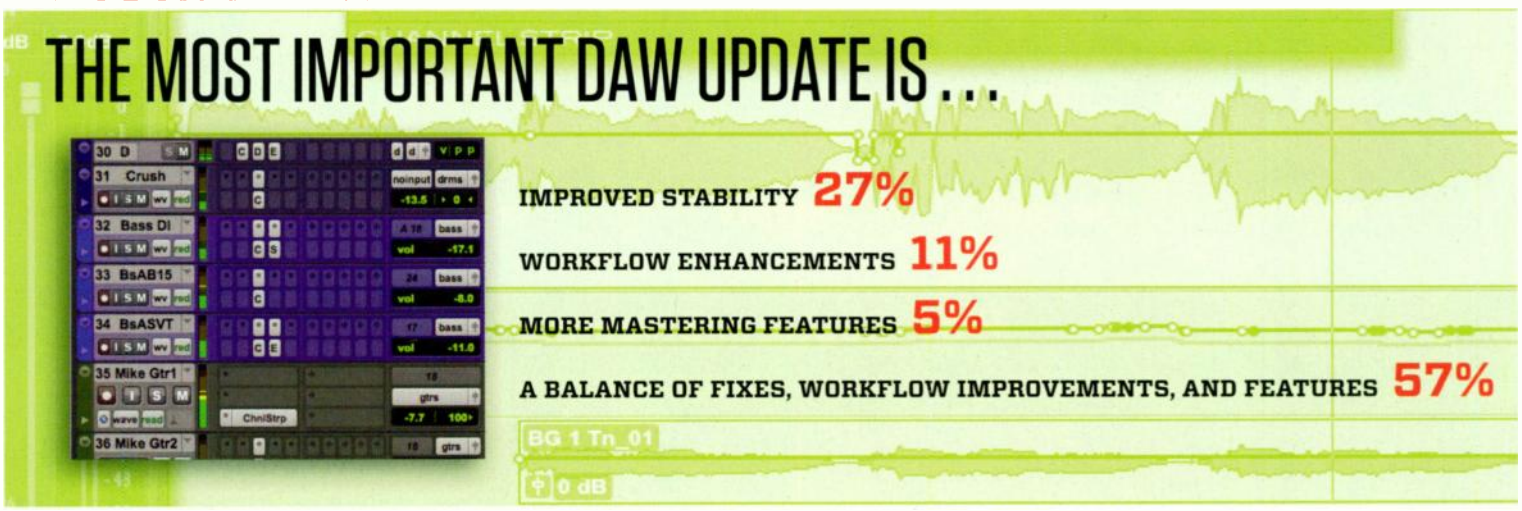
What are your new tools for success? We'd love to hear from you; we're all in this together.

SARAH JONES
EDITOR
sjones@musicplayer.com

"WHEN YOU HAD TO WORK, OR BEG, FOR THE MONEY TO BUY AN ALBUM, MUSIC WAS CONNECTED TO THE EFFORT YOU MADE TO ACQUIRE IT. BY YOUR EFFORT/WORK/ BEGGING, YOU INHERENTLY ASCRIBED A VALUE TO IT."

National Guitar Workshop founder David Smolover, in *Digital Music News*, June 2012

The *Electronic Musician* Poll



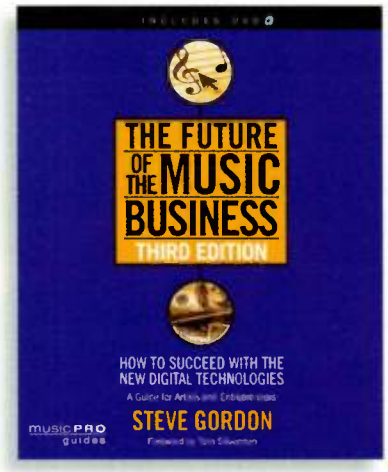
YOUR TAKE

What's your best method for promoting music?

Here's our favorite response. Daniel Kasnitz wins a copy of Steve Gordon's *The Future of the Music Business, Third Edition: How to Succeed with the New Digital Technologies*. Thanks, Daniel!

Start by making your music as good and well-produced as it possibly can be, so that people will enjoy it and want to hear it over and over again. Making something that people love is the best possible promotional effort. All the promotion in the world will not help something that no one likes.

DANIEL KASNITZ
BRATTLEBORO, VT



Send *Electronic Musician* Your Stories, Win Gear! Talk to us! Share your tips with *Electronic Musician*, and we'll print our favorite in an upcoming issue. And if we choose your letter, you'll win sweet gear! This month, we're giving away Roland R-Mix mix manipulation software for Mac/PC and iPad. Contest open to U.S. residents age 18 or over.

THIS MONTH'S QUESTION: **WHAT'S YOUR BEST GO-TO SOFTWARE MIXING TRICK?**

Send your answers to ElectronicMusician@musicplayer.com.

ask!

I'M PRETTY KNOWLEDGEABLE ABOUT SIGNAL PROCESSING, BUT I JUST CAN'T SEEM TO GET COMPRESSION TO SOUND "RIGHT." EITHER THERE'S TOO MUCH OR TOO LITTLE. IS THERE A RECOMMENDED WAY TO ADJUST COMPRESSOR SETTINGS?

DAVID BAIN
EL SEGUNDO, CA
VIA EMAIL

The key to understanding compression is that the threshold, ratio, knee, attack, release, and output gain controls are interactive—if you adjust one control, you'll likely need to revisit the others. For example, if you lower the threshold to compress more of the signal, then the ratio setting has a greater effect, so you may need to reduce it a bit. Increasing the attack time lets through more of the attack, which is less subject to the threshold and ratio controls . . . and so on.

Until you become a compression expert, take advantage of any program-dependent option that adjusts release and/or attack automatically. You can always defeat it to customize the settings.

As a guideline, start with a moderate compression ratio like 4:1, and reduce the threshold until you can "hear" the compression. Now reduce the ratio until you don't hear any obvious compression effects, and adjust the output gain to match peaks in the bypassed and enabled positions. If there's not enough compression, reduce the threshold (or increase the ratio) slightly to emphasize the compression.

Incidentally, Yamaha's "one-knob compression" technology (incorporated in mixers like the MGP Series), is designed to solve this issue. Particularly for live use, reducing compression to a single control lets you dial in the sound you want rapidly, with little—if any—compromise in sound quality.

THE EDITORS

API's 527 compressor is a 500 Series module with the essential threshold, ratio, attack, and release controls, as well as several special-purpose switched functions.

Got a question about recording, gigging, or technology?
Ask us! Send it to ElectronicMusician@musicplayer.com.

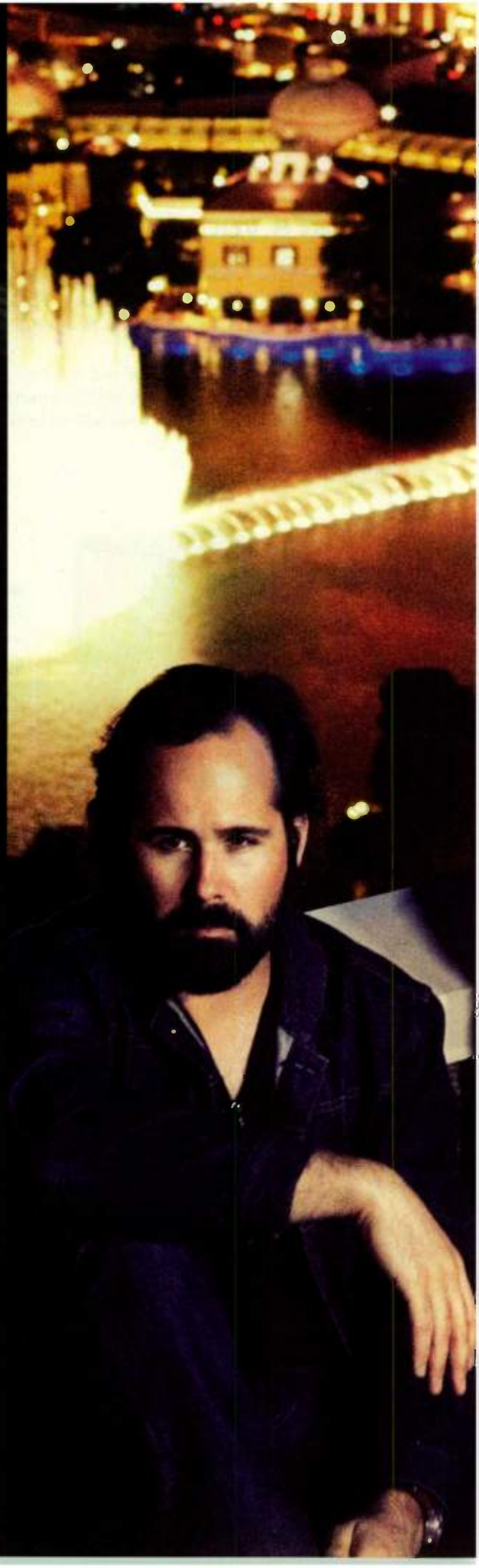
the KILLERS

BORN AGAIN

On *Battle Born*, their fourth record, The Killers spent a year in the studio with super-producers Brendan O'Brien, Steve Lillywhite, Stuart Price, Damian Taylor, and Daniel Lanois, drawing on individual strengths to form a cohesive musical package.

BY KEN MICALLEF

IN THEIR relatively brief, four-album career, The Killers have scored multi-Platinum hits through such changeable musical styles that the critics can't switch gears fast enough to keep up. But at the end of the day, The Killers—singer/keyboardist Brandon Flowers, guitarist David Keuning, bassist Mark Stoermer, and drummer Ronnie Vannucci—are simply great songwriters. Whether channeling Depeche Mode or Bruce Springsteen, The Killers ultimately create glitz-filled, but down-at-the-heels Americana. Sure, it's not the hirsute style popularized by Kings of Leon or Alabama Shakes, but by mythologizing the fading American dream better than a lot of bands in the past 20 years, The Killers appeal to not only the collective rock-and-roll heart, but a sense of dashed hopes and a disquieting future. Yet even given their innate talent, The Killers are far from figuring it all out. They regularly misstep, as would any band going for broke.



The Killers (left to right)—Ronnie Vannucci, Brandon Flowers, Dave Keuning, and Mark Stoermer.

Robert Root at Battle Born studios.

"Ronnie came back from a music store with a collection of these little micro amps, five inches tall by five wide. Sometimes we'd have one of those in the control room, put a 58 on it, and add it on top of the direct signal from the analog synths."
—engineer Robert Root

"With *Day and Age*, we were experimenting and having fun, but it wasn't right," Ronnie Vannucci explains. "It didn't have the liftoff I wanted; it didn't feel like everybody was represented—enough. The general answer would be that I wanted more guitars. [Laughs.] I was a big proponent of having more of a meat-and-potatoes approach to our music, which is four guys in a room, capturing that kind of temperament. We wanted the sound to remain big and be able to fill arenas, but still have something to cling to lyrically and yet be more personal."

How to capture a band's essence when it wants to both fill stadiums and retain some semblance of "meat and potatoes"? After *Hot Fuss*, *Sam's Town*, and *Day and Age*, The Killers wondered, "Why work with one producer when we can work with five?" As the band compiled a new album's worth of songs, they reached out to Brendan O'Brien, Steve Lillywhite, Stuart Price, electronic boffin Damian Taylor, and Daniel Lanois. The result is *Battle Born*, which gathers The Killers' disparate strengths into a single mighty song-craft package.

"When you wait 'til the last minute to find a producer, chances are less likely you will land somebody," Vannucci explains. "So we'd get somebody for two weeks at a time and splice them in when we could. That's recording parlance! At first, we were wondering if that was going to be a problem, and of course continuity of sound was a concern. But we tend to be so heavy handed as co-producers, there's going to be that kind of congruent line anyway. Everyone shared their brain for a while."

Brendan O'Brien worked with the band at Nashville's Blackbird Studio; the other producers journeyed to Las Vegas and The Killers' own studio, Battle Born. The experience gave the band a unique insight into the producer's process.

"Brendan O'Brien is like a stone-cold professional," Flowers says. "He knows what he likes and he can articulate that and what direction a song should go in, and just like that—Bang! That's what we're going to do, and we do it. Lillywhite is a little more of a free spirit, and he kind of flies by the seat of his pants. He says things like 'Be fearless.' Damian Taylor is more of an electronic guy, but he knows guitars; we did a little bit of everything with Damian. It was nice to be able to send Damian a demo and see where he would take it, and then he'd bring it back in and work on it with Lillywhite and put guitars on it. After 30 minutes jamming with Daniel Lanois, we had 'Heart of A Girl,' he works very organically. We were doing things we'd never done." Often one producer would start a song, and another would finish it. Or in the case of Taylor and Lillywhite, the two worked simultaneously in Battle Born's A and B rooms.

Jamming, Producing, Alternating As with *Day and Age*, songs grew from demos and jam sessions. Engineer Robert Root manned the Pro Tools rig as songs took shape.

"Demos played a bigger part even than on *Day and Age*," Root explains. "The guys realized that even though these are demos and we're working out the songs, some of it can be used. Parts of the demos did make it to the record. Mostly Brandon would record demos by himself; he'd lay down piano or melody lines. Then they'd jam on it. Also, the writing sessions were half-days of the guys just jamming in the room. They work and come together and flesh out the songs so quickly."

Though he is credited with producing specific songs, Damian Taylor is *Battle Born*'s sonic Everyman, mixing many tracks, programming synths, and even providing radical drum-miking techniques. "Damian was a huge help in programming," Root says. "He's organic but also works with all these synths and electronic instruments. That really helped steer the direction of some songs to find the happy place in between the electronic and the acoustic. Steve is very organic as well. He's very hands-on-the-faders; he doesn't typically jump into the computer at all, but that's how they differ. Damian works a lot in the computer

Punches
Above its weight

ZXA1
ZXA1-Sub

Weighing-in at just 19 and 46 pounds respectively, the 8" two-way ZXA1 and new 12" ZXA1-Sub from Electro-Voice combine to offer heavyweight performance in a featherweight package.

- Rugged, lightweight, low-profile construction
- Powerful onboard 800-W (ZXA1) and 700-W (ZXA1-Sub) Class-D amplifiers
- Custom-designed woofers and drivers deliver legendary EV sound quality
- Size-defying 126-dB maximum SPL
- Intuitive input panel for easy control and connectivity

EV LIVE FOR SOUND

mics • dsp • amps • speakers

www.electrovoice.com

"I looked at what we really did best on our previous records and I wanted to capture that on *Battle Born*. It's not about us throwing anybody a curveball, it's about playing to our strengths." —Brandon Flowers

and plug-ins and tweak-land. Whereas Steve listens to the performance and the feel, then does everything analog. Stuart Price plays everything, very hands on. He is very much into Logic.

Battle Born studio has two rooms, A and B. A, the live room is roughly 30 x 18-feet with nine-foot drop ceilings. It has an iso booth and a former drum booth that houses a grand piano. The B room consists of the control room and an iso booth. Across from the B room is a storage closet that doubles as a supplementary drum booth. When recording, the band formed a circle in A's live room, with Flowers singing to a scratch track then re-cutting master vocals in the A performance room and control room. The former drum booth proved too bright for Vannucci's drum sound, so Lillywhite suggested using an untreated storage room with 25-foot ceilings and non-parallel walls as the drum room for a handful of songs.

Tracking Tricks "When I'm singing with a [Shure SM] 58, I have to have my hands on it because I am so used to performing live with a 58," Flowers explains. "That's where I feel comfortable, gripping that sucker. I have my hand over the ball. I think it makes it more directional and it also distorts it. The emotions come across a certain way when I'm really up on the mic like that. It's about being comfortable, but it does affect the mic detrimentally when I grip it like that. But sometimes if it's an edgier song, that can sound cool.

"There are songs where I use a Neumann or a Telefunken U48," Flowers continues. "There, I'm doing it old-school behind a pop filter. I use the 58 live, and it tends to be the mic I go to when recording. It sounds more like us when I am singing on a 58; my delivery is stronger. In the early days when we used to play bars, we were more raw and played faster, and a little heavier. The sound is better live now. But cupping the 58 can still be the natural thing to do."

Root typically runs the 58 into an API 550A into a Purple Audio Action compressor. "I don't set it too fast on the attack for Brandon," he says. "I set to a pretty fast release, and the ratio is usually four to one. I get rid of some low mids occasionally. Often I will really push it into the red off the preamp just because it's supposed to be an 1176 kind of sound. But the Purple Audio isn't too murky sounding in the low midrange when pushing it really hard like an 1176 might be. We also go through an 1176 at times, or a [Empirical Labs] Distressor. The 58 won't pick up the nuances of a large-diaphragm mic but unless the song really requires that sort of detail we just stick with the 58."

Taylor replaced Flowers' Nord Lead 2 parts with various synths, including M-Audio Venom, Moog Voyager, Korg MS20, and Roland MKS-80. "Brandon demoed songs with a Nord Lead in Logic," Taylor says. "He liked the clean and wooshy sounds. A few demo sounds had a certain character so we used a bunch of his original stuff on the record. Then we replaced melodies on different songs. Brandon will always throw down melodies on whatever he's got lying around. So I found the right tones for the given song, and dialed them in from scratch. The Korg MS-20 is my desert island synth. And I also like a free one called Chip 32 by Sam. It's really good, it's like a wavetable synth, but it's like it's out of a Commodore 64. Super basic, but it has a real character to it. That is most often lacking in plug-ins."

Taylor processed everything including drums through Universal Audio plug-ins. "They just sound really good, basically," he says. "I switch as much between plug-ins as hardware EQs for their inherent quality. UAD is good in terms of being able to access different colors without sounds being

th
ANNIVERSARY
MOTIF

Celebrating the 10th Anniversary of the MOTIF

Purchase a Yamaha MOTIF XF Synthesizer and GET A FREE MOTIF 10th Anniversary Pack Featuring Over $800 Worth of Hardware & Software!

The Anniversary Pack Includes:

- 512MB Flash Board (FL512M)
- Chick Corea Mark V Electric Piano Sample Library
- GEN16 Z-Pack Ziłdjian Cymbal VST with FXpansion Yamaha Maple Custom Drum Kit
- YC-B3 Organ Tone Wheel Emulation VST
- Steinberg Prologue Analog Synthesizer VST
- Keyfax New Media "Drums and Percussion" Patterns
- XF Fully Loaded Instructional Video
- Discount coupons for KARMA Motif, XF Tools and more

For more info visit www.4wrd.it/MOTIF10EM5
Go to your authorized Yamaha dealer and get your MOTIF XF and the anniversary pack now.

Scan this code for more info

YAMAHA

"For 'Matter of Time,' we used a different drum kit on the verse than the chorus. The chorus is bigger and more spacious, whereas we wanted the verses to be tighter and almost Billy Idol-esque."
—producer Damian Taylor

degraded too much. I mixed The Killers' *Dark Shadows* song 'Go All the Way,' and usually I want separation and distinction and depth between the elements, but with that song we wanted to sound totally 1970s. I wanted everything to gel together so I put virtual 1176s and virtual tape machines on everything. The UAD stuff made it really gel together and sound like one thing, which doesn't always happen with digital."

Keyboards went direct, but Ronnie Vannucci also had the bright idea to mic keys on the cheap. "One day Ronnie came back from a music store with a collection of these little micro amps," Root reports. "Literally, five inches tall by five wide. You clip them to your belt. Ronnie bought every model they had. Sometimes we'd have one of those in the control room, put a 58 on it, and add it on top of the direct signal from the analog synths. We got a nasty little distorted mic signal from the mini amps."

Guitars were recorded through many different amps, using an SM57 off axis and directly on the grill. A U48 was also put up "for depth halfway across the room, 12 or 15 feet out," Root says. Bass ran direct through a Line 6 Bass POD, coupled with a miked signal from an Ampeg SVT Classic or Fender Bassman. Root prefers an Audio-Technica ATM25 for bass duties. "I'm pretty sure it's designed for kick drums," Root says, "but it seems to have the bottom end that's needed and a nice midrange quality. If he is really digging in, you really pick up the detail on the top end."

Tracking the Nudge Vannucci's titanic drumming has practically become legendary, and his hardware plays a pivotal role. His Johnny Craviotto maple set is augmented by huge hi-hats that range from 16 to 18 inches, with crashes of the same dimensions. "Ronnie has these huge cymbals that he seems to hit ten times harder than the drums," says Taylor. "So if you're trying to mike up 16- and 18-inch floor toms with this huge cymbal next to them, you get ten times more bleed. On a couple tracks, I used one microphone. We'd wind up with close mics on there too, but it was more about getting a sound at the source. We wound up finding this golden spot: Mark brought a new Telefunken U48. We ran that through a Great River; I didn't compress it on the way in, 'cause I do a lot of post processing."

"That captured a very distinct, very present sound without over-cluttering the spaciousness of the song," Root adds. "We did that method on a couple tracks where Ronnie was in a bigger room with a Telefunken U48 about five feet off the drum kit, pointed at the snare; that really captured the entire kit. Then Damian was free to mangle it however he wanted in the box with EQ and compression."

Taylor encouraged Vannucci to use multiple drum sets, often within the same song. "For 'Matter of Time,' we used a different drum kit on the verse than the chorus," Taylor says. "The chorus is bigger and more spacious, whereas we wanted the verses to be tighter and almost Billy Idol-esque. On that one we removed the bottom heads and used the smaller drum kit, instead of a five-piece, and we put [Sennheiser] 421s on the toms. That's a less-natural sound but it really pops out of the speakers."

Root close-miked Vannucci's drums with an AKG D 112 or a Shure Beta 52 on the kick, and "a homemade sub-kick using a speaker cone. On the snare top head and toms, we used Josephson E22s, which I love. They are proximity-dependent and very directional, and they have an earthy tone where you actually feel you're hearing the wood from the drum. For overheads, we used the omni-directional Earthworks which are very accurate and pick up the entire kit. We placed them as a spaced pair just a couple feet away above the edges of the kit. We used the storage room as a chamber with a Neumann U67 in there for a room mic sound. Ronnie was out in the live room ten feet away from the mic, but because it's only getting a little bit of leakage from the kit we got a nice, natural reverb sound."

After the songs were tracked and the producers moved on to their next projects, The Killers tackled mastering. In the past, some of their songs, such as "When You Were Young," sounded as if they were mastered for radio. Dynamics were clipped, and distortion crept in during climaxes. Was that material mastered with radio in mind?

"Whatever you didn't like about 'When You Were Young' was making me excited," Flowers says, laughing. "I don't know a lot about recording, so this is all a little new to me. I will literally sit there at the mixing board or in my car or wherever we listen to a mix and just feel how the music affects me and I try to give my comments based on that."

"It's really a nightmare for me, the whole process," Flowers continues. "You get a mix, and you slave over it, then you send it to mastering. We just received three versions of mastering that I'm comparing. Each one sounds different. I hate the whole thing. But I'm thinking about the way it feels, not about radio. One has more sizzle, one has more bottom end and sounds more rounded off, it's kind of dull, and the other one is obviously meeting in the middle. I care so much about it, I prefer it to be the one I like. I'm leaning to a comp of the two masters. I prefer the verses from the one without so much sizzle, but the choruses hit harder with the sizzle one." [Sighs.]

Battle Born: Battle-Tested? The Killers continue to prove their mettle as their records roll out, year after year, hit after hit; this is how legacies are born. "I looked at what we really did best on our previous records and I wanted to capture that on *Battle Born*," Flowers explains. "It's not about us throwing anybody a curveball, it's about playing to our strengths. We're grown up now. Let's do what we do." ■

Ken Micallef has covered music for DownBeat, Modern Drummer, *and* Rolling Stone. *His first book,* Classic Rock Drummers *(Hal Leonard), is currently in reprint status while he manages his family's cotton farm and ponders the future of the vinyl LP and tube amplification.*

More Online
Read interview outtakes.

emusician.com/september2012

MAGMA™

VIRTUAL STUDIO RACK (VSR) TECHNOLOGY

Only $199!

65 ALL NEW EFFECTS!

- High-Quality, Custom, Swappable Effects Racks
- Low CPU
- Drag & Drop Effects to Any Rack Position
- Flexible Routing Matrix
- Includes Over 600 Factory Presets

NOMAD FACTORY

ILIO

Contact your favorite dealer!

800.747.4546 www.ilio.com

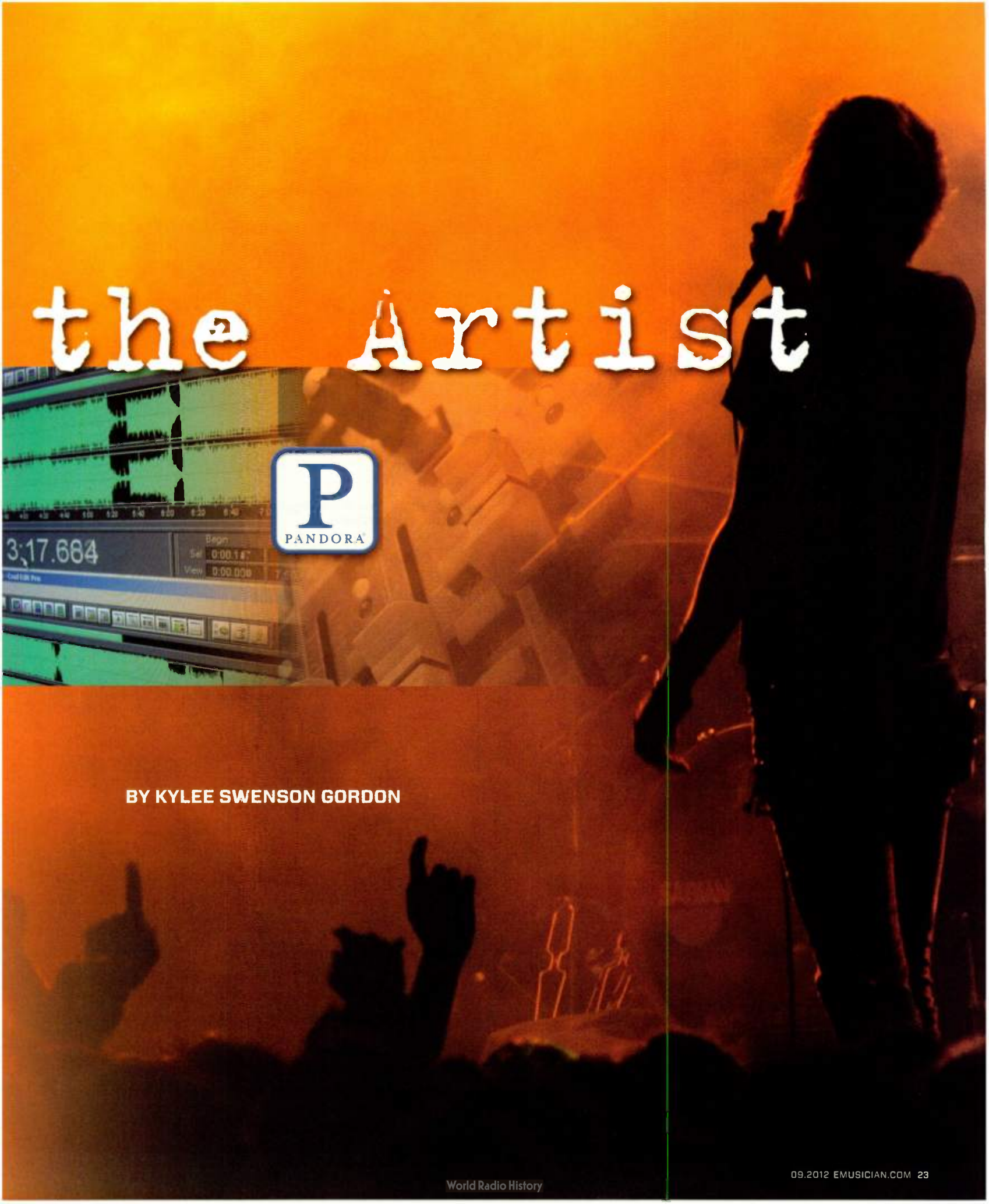
Survival of

Veteran musicians and music-industry execs debate the innovations and traditions that will keep your music alive and kicking

FOR SOME, the urge to create music becomes an obsession, and ultimately fuels the notion of a lucrative career. You get a taste of success, and a dangling carrot appears. Just as you're about to grab it, it moves, and you find yourself forever chasing after bigger and better opportunities.

It's no secret that over the years, the music industry has changed drastically, and this changing landscape continues to raise questions about what it takes to be a successful musician: How can artists make money? What is effective social-media engagement? Is touring crucial? What are the missed opportunities?

the Artist



BY KYLEE SWENSON GORDON

"[My Twitter] engagement, even if it seems a little crazy and obsessive, is why you're seeing those results on Kickstarter, because every single one of my followers is in turn a megaphone out to their own communities and fans."
—Amanda Palmer

Amanda Palmer's new album, *Theatre Is Evil*, was funded through Kickstarter.

Electronic Musician set out for answers and enlisted help from The Flaming Lips' Wayne Coyne, solo artist/Kickstarter queen Amanda Palmer, Chester French frontman/Spotify advisor D.A. Wallach, *Glee* music supervisor PJ Bloom, Linkin Park manager Ryan DeMarti, San Francisco alt rock radio leader Live 105 FM's music director Aaron Axelsen, Pandora founder Tim Westergren, and Walk Off the Earth member/YouTube sensation Gianni Luminati.

But first, some perspective from a veteran musician of nearly 30 years. "Most things that we're going to do, all of us, are going to fail," Coyne admits. "It's hard to make anything work, and you don't have very much control over it. The thing that we decided that we could control was: We knew that we could be kind; we knew that we could be generous; we knew that we could have fun. If our music succeeds, then good for us: Then we get money and people think we're cool. But if it doesn't succeed, we know at least we did that."

Coyne's positive attitude has taken him far. "We ran into so many people early on who had tough lawyers and fought their labels every step of the way," he says. "We never wanted to do that. Sometimes things just don't go the way you want them to, but it's made doubly bad if things don't succeed and you're treating everybody like shit, you're demanding, and then they fail anyway."

When the Flaming Lips released "She Don't Use Jelly," it wasn't an instant hit. "When it was first put out in 1993, nobody really cared about it," Coyne admits. A year-and-a-half later, the song caught fire and was re-released. Not that Coyne and his bandmates were concerned about the song's success. "By then, we'd already been a band for ten years, and we had made mistakes. We said, 'We believe in our music, and if we keep believing in it, maybe someone else will, too.'" Their tenacity paid off. The band has released more than a dozen albums and participated in numerous unusual high-profile projects along the way. (The latest: breaking the Guinness World Record for "the Most Live Concerts in 24 Hours.")

For Gianni Luminati, whose band Walk Off the Earth made the most popular cover song in the history of YouTube (their five-person/one-guitar version of Gotye's "Somebody That I Used to Know"), frustration pushed him to try new things. Although it was hard work for Luminati and his bandmates to churn out visually creative covers that involve ukuleles falling from the sky and Luminati dashing through an obstacle course of instruments, it paid off. "I was sick of not getting opportunities to play shows and not having people throw me a bone," he reveals. "I was just like, 'Well, I'm just going to do this myself.' It was the quickest way that I was getting a response, and people were respecting what we were doing."

Meet Your Fans Coyne is equally open in his approach to social media, tweeting daily about his escapades and giving play-by-plays of events in the studio. Meanwhile, solo artist Amanda Palmer (formerly of the Dresden Dolls) gives credit to Twitter for her Kickstarter success, where she famously crowdfund a record-setting $1,192,793 this summer for her new album, *Theatre Is Evil*. "I can not stress enough how much Twitter changed my touring life, my business approach, my brain," she says. "I move through my life permanently conscious of my Twitter feed. It's not something I set aside ten minutes to do every day. I check my feed constantly and share information, links, photos, and content from the time I wake up in the morning to the time I go to bed. That engagement, even if it seems a little crazy and obsessive, is why you're seeing those results on Kickstarter, because every single one of my Twitter followers is in turn a megaphone out to their own communities and fans."

But Palmer doesn't overuse Twitter to self-promote. "You have to treat your relationships with your fans like a relationship with a friend," she says. "It's not all about taking

create.

DESTROY

kaossilator2

Touchpad Synthesizer & Loop Recorder

Create music on the fly.

- Create and save your own loops and musical phrases
- 2 Loop Recording banks; unlimited overdubs
- Scale, Key, & Note Range melody control
- Record loops and full performances to microSD

KORG.COM/KAOSSILATOR2

minikaosspad2

Touchpad Effects Processor & Media Player

Tweak audio with real-time effects.

- Mangle and modify audio with 100 killer effects
- Affect any external or onboard audio source
- Store and playback MP3/.wav files
- Record your newly-tweaked tracks to microSD

KORG.COM/MINIKP2

KORG

"We are getting into a realm where artists are making art because they must, and if they can find a way to make money, good for them. I started to make music because I knew that I was afflicted by it. If I didn't do it, I was not happy."

—Wayne Coyne, Flaming Lips

what you need and asking for something when you want it. It's about having an ongoing conversation and caring about and listening to the other person. If you only go to your Twitter fanbase when you want something, you're not being a good friend. You're being that irritating, selfish friend that no one wants to hang out with."

Linkin Park also focuses on engaging with fans in a meaningful way. "Fans don't want to feel like they're having advertisements shoved in their faces all the time," says Ryan DeMarti, the band's manager. "When fans feel connected to an artist through channels such as Twitter, they will be more inclined to stick with them for the long haul. The best approach is to be yourself and be honest. If you are goofy, be goofy. If you support social causes, talk about them. And when you have new projects or appearances to promote, do it tastefully without blowing up your fans' Facebook timeline or Twitter feed. It's easy to cross the line and have all of your communications become online noise that your fans ignore."

For Live 105's Axelsen, engagement is all in the questions. "Facebook's become very narcissistic, but I think it's a great opportunity to involve your listeners in the process: 'Hey, we're touring in Seattle. Where should we get tacos?' or 'What should our design be on our band t-shirt? Here's three of them, vote.' Or, 'We're on the road. Which ten albums should we listen to?' I think that resonates more than, 'Here we are, like us. Come to our show.' I know Facebook is a global medium, but localize it. Really target the cities that you're going to."

Advisor for the music-streaming service Spotify and frontman of Chester French (which recently released their sophomore album, *Music 4 Tngrs*), D.A. Wallach allows that intense fan engagement isn't for everyone. "What worked for me was being super-accessible and super-responsive," he says. "But I think it's different strokes for different folks, and people like Jack White seem to generate a lot of interest and mystique by taking a different approach in the way they deal with the Internet."

However, Pandora founder Tim Westergren says the days of artist mystique are numbered. "To survive as an artist, you have to nurture the fanbase so people literally feel responsibility to help your career along," he says. "I don't think the kind of arm's length, 'I'm a rock star' thing is really going to work. It will work for fewer and fewer people each passing year."

No Shortcuts! Although Walk Off the Earth has built a fanbase with consistent content on YouTube, *Glee* music supervisor PJ Bloom (who helped break the band Fun.), believes that being an ever-present online persona is not the sole ingredient for success. "I think what you're talking about is a band that caught lightning in a bottle," he says. "They made a decision to do something outside of the box and had massive success at it. But I don't think those kinds of miraculous instances happen enough to substantiate the idea of not being a band or an artist in a traditional way."

In other words, the time and effort you put into creating and performing music is crucial. "Anyone can say, 'Hey Aaron, we just formed a band a week ago. Here's our demo. Will you play it?'" Axelsen says with a laugh. "Making a band is analogous to baking a cake. If you're going to make a good cake, you still have to put all of the ingredients into it and bake it for a f**king hour in the oven. It still takes that process. You can't just be like, 'Hey, we made a cake. It was in the oven for two minutes. What do you think? Taste it!'"

And here's another reality check: You still need talent. "One of the effects of the migration of the music business online is that it's given everyone an opportunity to participate, and the truth is that very few are good enough to be professional musicians," Westergren says. "But just because it doesn't work for most people is not a sign that the ecosystem is broken. When I intersect with bands and hear various stories about their success, it's pretty clear why: They're talented, they're great performers, and they have charisma. When you marry that to a smart, effective use of these new DIY tools, then you've got the recipe for success."

Axelsen seconds that notion. "Every artist has the ability to get his or her song on YouTube, Soundcloud, Twitter, or Bandcamp," he says. "Gold is worth something because it's scarce. If you can go to a vending machine, put a quarter in it, and get out a bucket of gold, that would devalue the worth of it. And that's analogous with bands. The core of a good artist is if he or she has something to offer."

And once you have good songs, you have to perform them—a lot. "It's not a stale model to record and bust your ass touring. It's still the model," Palmer says. "I don't think there's ever going to be a model where you just sit in your

bedroom and do some stuff and some songs and wait for everyone to pay you."

Wallach plays devil's advocate. "Because all of the money evaporated from the music business over the past 20 years, people started to conflate the different pieces of work that as an artist you're able to produce: social media, videos, cover songs, and whatever," he says. "I think in the future it makes sense that there are artists who don't even need to tour. I don't know why you have to have a really great live show if your thing is that you're really good at making songs in a studio or making YouTube videos covering other people's songs."

But for Walk Off the Earth, YouTube success actually translated to ticket sales. "Touring as a small-level band, you're going to play in front of 50 to 100 people a night and you'll spend a lot of money doing it," Luminati says. "If you get an online following, that's a lot more people you're reaching than if you're driving across North America playing sh*tty shows. We're playing sold-out shows across the States to 1,000 people a night, and we've never played any of these towns before. I know bands that have toured ten to 15 years to be able to play for 500 people in a city, and they've got a lot of miles under their belt."

Meanwhile, Palmer's become savvy about maximizing tour profits. "It used to be that you'd have to give all your money to the clubs and promoters and give all your album sales to the label, and as long as you owned your merchandising, you'd be lucky to make your living off of t-shirts," she says. "But I just booked 35 solo shows, each with a $5,000 guarantee, going directly through my fans. No promoter, no venue split, no booking agency. I put 35 house parties for sale on my Kickstarter, the fans banded together on Facebook, pitched in the money, picked someone's house, and bought it. If I were to play a $5,000 show the old-school route in Chicago or name-your-city, I'd be lucky to walk away from that show with one or two grand."

Her band Amanda Palmer and the Grand Theft Orchestra is also supporting her new album on a traditional club tour, and she'll be crowd-sourcing additional musicians along the way. "In every city we'll have used the Internet as a tool to get string players, horn players, stage hands, and we'll put our show together locally, uniquely in every single city."

Building Your Team The idea of "street teams" is nothing new, but according to Palmer, musicians still underestimate fans' willingness to help. "It's important to create an environment in which your fans actively want to support you because then they'll do anything for you," she says. "Sometimes they just need to be tipped off: 'Hey guys, this link is important. Could you please Re-tweet this and post on Facebook?'"

Westergren suggests taking it a step further and hiring a loyal fan with skills. "The artist's primary responsibility is to put out fantastic-sounding music and put on terrific shows," he says. "You can wind up spending way too much time on the administrative part of your career and lose the inspiration artistically. I think it's a good idea to divide up your pie one more slice and get the help of someone who loves your band and is really good at the stuff you don't love to do."

But how? "You gotta wade into your fans and get to know people," he says. "You'd be surprised at the number of people willing to put up a hand and participate if asked," Westergren says. "They'll take pride in it versus viewing it as a pain in the ass, which the bass player will. Get them to put together a plan and audition for you. Then that person becomes a member of the band and gets a share. They don't play an instrument, but they find ways to amplify what you do, and for a lot of people that's a huge thrill."

One online tool that's unearthed fan generosity is Bandcamp, where you can sell or give away songs directly to fans, or allow them to pay what they want. "Every second song that we would release we would make free," Luminati says, "but we would also allow people to make donations. Half the people were taking it for free, but the other half was donating as much as $5 for one song."

On a larger scale, Kickstarter can fund entire projects with the help of fans, but Palmer cautions against jumping into it prematurely. "You can get everyone enthusiastic, make a lot of money, and then realize you don't have the time, energy, or resources to deliver what you promised," she says. "And it's a mistake for bands to go to Kickstarter before they have anything to offer and before they have enough of a crowd to fund from. It's not a wise idea to get your friends together and say, 'Let's start a band. We'll Kickstarter a record, and then we'll write songs and find a fanbase.' Then they're

"To survive as an artist, you have to nurture the fanbase so people literally feel responsibility to help your career along. I don't think the kind of arm's-length, 'I'm a rock star' thing is really going to work."
—Pandora founder Tim Westergren

"A lot of bands focus on the big win: 'How do I get on *Glee*? How do I get on *Grey's Anatomy*? There's so much content out there right now, and all of it needs music—cable and satellite television, indie films, ads, video games, webisodes, web content. So it's really about collecting the pennies instead of spending all your time focusing on the big win."

— *Glee* music supervisor PJ Bloom

confused as to why their Kickstarter tanks. You can't get everybody excited about your Kickstarter if you don't have an everybody."

Swimming the Revenue Stream As physical album sales have dried up, many bands turned to TV/film licensing hoping for a big payday. Bloom says bands should be realistic: "A lot of bands focus on the big win: 'How do I get on *Glee*? How do I get on *Grey's Anatomy*? How do I get the main title song on the next big 200-million-dollar *Transformers* action film?'"

Bloom suggests that bands focus on the little wins first. "People in my position are always looking for great music for little money that we can clear quickly," he says. "There's so much content out there right now, and all of it needs music—cable and satellite television, indie films, ads, video games, webisodes, web content. So it's really about collecting the pennies instead of spending all your time focusing on the big win."

Developing a relationship with a placement house, publisher, or label is key. "People at placement houses have the relationships with me and my peers," Bloom says. "For us, it's about time management. If I have a scene in a television show that I need to find a song for, I'm going to go to the placement houses because I have a shorthand with these people: We have a relationship, they know what I like, and they have a ton of content."

Bands should also have their ducks in a row: Have songwriter splits registered, have samples cleared, be flexible with fees, respond to requests quickly, and don't be snobbish about opportunities.

"One of the huge issues I come across all the time is people being overly sensitive to how their content is used," Bloom says. "'I don't like that television show,' or 'I'm not a fan of horror,' or 'I don't want to sell soap.' I've never used a song by a band in any show, movie, or media that has damaged the band's reputation with their fans. It never happens. And I think it's rather arrogant of artists to think they can deny those opportunities and maintain a working relationship with the sync community."

As for album sales, artists may still sell CDs and vinyl and collect checks from digital distributors, but many fans are now consuming music via streaming services such as Rhapsody, Rdio, and Spotify. The big debate: Artists are earning pennies on the dollar for full album streams, and it's hindering download sales.

Wallach sees it differently. "The big transition we're seeing is from a unit-sales world where essentially every sale of my music is a down payment on all the listening that that person will ever do to that music," he says. "They give me 99 cents, and that's all I ever get. If they listen to the song five times, I've relatively speaking made a lot of money per listen. But if they listen to it a thousand times, it's diminishing returns. We say the artist should be paid every single time people listen to their music, and each time that payment's going to be much smaller, but our goal is that over six months or maybe a year, the average fan listening to my music on Spotify should generate more money for me than they would have if they'd bought it. I bought *Dark Side of the Moon* when I was in high school for $6.99 in some discount bin, and I've listened to it hundreds of times. If all that listening had taken place on Spotify, I'm confident the income would exceed what Pink Floyd made from that single sale."

Time will tell if Spotify will ever generate real income for artists, but Wallach says the service has more value than money. When Chester French went on a U.K. tour a few years ago, a couple dates were unsuccessful. If he'd known more about his audience demographics, the band might have planned their tour differently. "I can log in and see the demographics of who's listening to our songs, down to the minute," Wallach says. "How can we leverage that to be more strategic and targeted? If that means only playing shows in places where you have fans, that should be a net benefit to everyone in the system."

Right now, musicians can email Spotify at artists@spotify.com to get targeting information, and the company is working on a tool for musicians to cull that information in the future. Pandora also plans to help artists with geo-targeting. "Pandora has a healthy agenda to take what's happening on Pandora and translate it into value for musicians," Westergren says. "We know an immense amount about people's listening in the U.S., what they like, their zip code, and we have the ability to communicate with them. That infrastructure could be tremendously powerful for artists."

Forging Ahead At the end of the day, most artists will never make Beyoncé-level money. "The best that you can probably hope for is something like a teacher's salary, which is abysmal if you think about its value to society," Coyne laments.

It's a reality echoed by DeMarti. "Artists

Number 1

Focusrite: The best selling Firewire interface brand in the US*

At the heart of any good interface are great mic preamps.
Focusrite have been designing mic pres for more than 25 years. It's what we do.

More customers choose Focusrite 'Best In Class' interfaces

The Saffire range:

1 LIQUID Saffire 56
28 in / 28 out interface with 2 Liquid and 6 Focusrite preamps

2 Saffire PRO 40
20 in / 20 out interface with 8 Focusrite preamps

3 Saffire PRO 24 DSP
16 in / 8 out interface with 2 Focusrite preamps featuring VRM technology

4 Saffire PRO 24
16 in / 8 out interface with 2 Focusrite preamps

5 Saffire PRO 14
8 in / 6 out interface with 2 Focusrite preamps

The benefits of Focusrite Interfaces:

FireWire

Focusrite's Saffire interfaces are designed to work seamlessly with your Mac or PC, providing a high quality audio signal path in and out of your computer. Saffire interfaces are universally compatible with all audio workstation software packages.

Focusrite's unparalleled preamp legacy forms the foundation of this interface range, each model featuring two or eight award-winning Focusrite preamps. Combined with 'best in class' performance Saffire PROs deliver seamless integration, excellent routing flexibility and superior driver stability.

Saffire PRO interfaces have the best 'real world' technical specifications, and are widely recognized for their great sound.

* September 2011 through April 2012 according to MI Sales Track total unit & dollar sales

For more information visit **www.focusrite.com/saffire**

Focusrite®

"Touring as a small-level band, you're going to play in front of 50 to 100 people a night and you'll spend a lot of money doing it. If you get an online following, that's a lot more people you're reaching than if you're driving across North America playing sh*tty shows." —Gianni Luminati

should not count on selling enough music to support themselves," he says. "That does not mean they shouldn't focus on becoming the best songwriters and performers they can be. Music is more popular than ever; people just aren't paying for it. What music fans do pay for is to experience it live. Not only will touring make you a better band or artist, but you will build your fanbase with real fans who will hopefully stick with you through thick and thin."

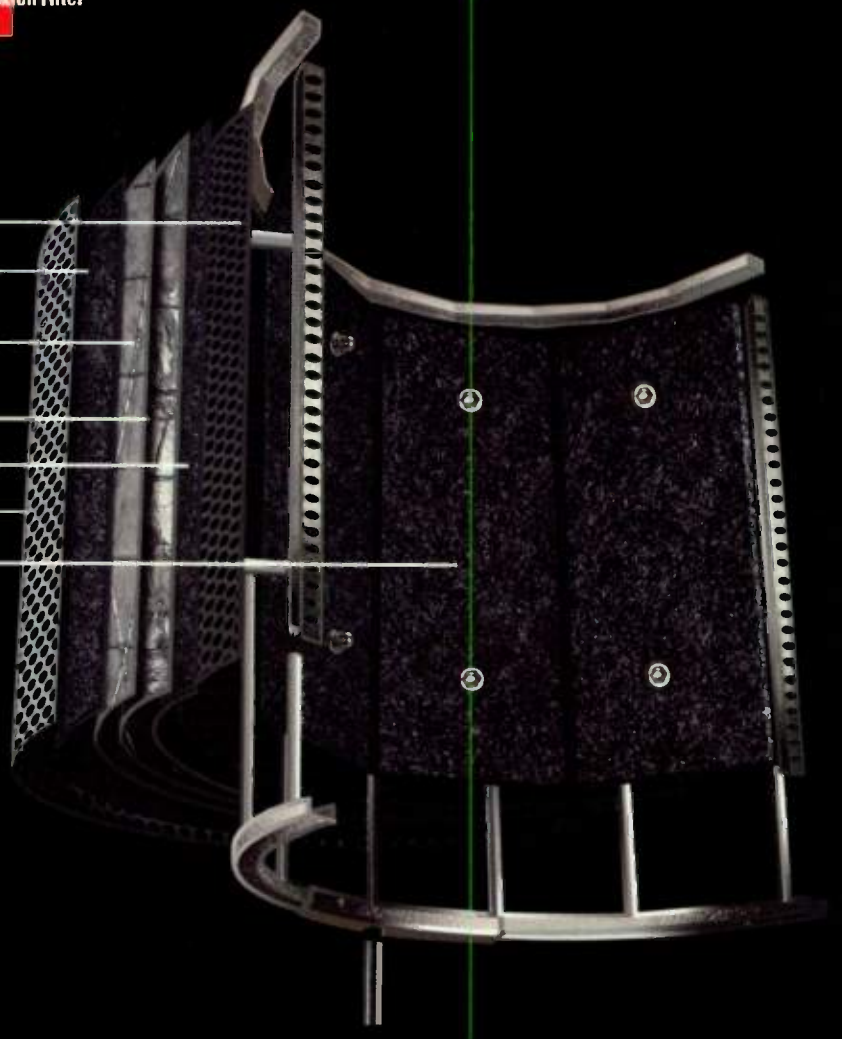
Unfortunately, booking your own tours and hiring booking agents is far from easy. "Don't wait for everyone to help you," Luminati says. "I spent many years trying to get people to get behind my music, to get record labels, management, and booking agents onboard. If I didn't spend all that energy trying to do that and just did it myself like I ended up doing eventually anyways, [success] would have come a lot quicker."

But before you make any moves, ask yourself: Do you have to make music? "We are getting into a realm where artists are making art because they must, and if they can find a way to make money, good for them," Coyne says. "I started to make music because I knew that I was afflicted by it. I knew that if I didn't do it, I was not happy, and I didn't want to be alive, so for me it was either kill everybody around me or do stupid art and music. It was not because I thought I would make money. I'm doing it because if I don't, I go crazy." ■

Kylee Swenson Gordon is a writer, editor, and musician based in Oakland, CA. Her first book, Electronic Musician Presents the Recording Secrets Behind 50 Great Albums, *was released last month.*

More Online
Read interview outtakes.
Emusician.com/september2012

WHY OURS WORK & OTHERS DON'T



- Punched Aluminium diffuser
- Acoustic grade wool
- 2 layers of partially tensioned aluminium foil which help dissipate energy and break up the lower frequencies
- Isolated air gap acts as an acoustic barrier
- Acoustic grade wool
- Rear punched Aluminium diffuser
- High density acoustic fibre board

- Multiple layer technology (Patent Pending)
- The Reflexion Filter is the original portable acoustic mic shield
- Foam alone doesn't work - beware!
- Virtually no sound colouration

Used by professionals the world over including:

JACKNIFE LEE
REM, U2, GREEN DAY, SNOW PATROL, BLOC PARTY

CHRIS PORTER
GEORGE MICHAEL, Sir CLIFF RICHARD, PET SHOP BOYS, TINA TURNER

DON WAS
BOB DYLAN, WILLIE NELSON THE ROLLING STONES, BONNIE RAITT

GIL NORTON
FOO FIGHTERS, PIXIES, GOMEZ, FEEDER, COUNTING CROWS

Exploded view shows the different materials used in the Reflexion Filter Pro and Project Studio Reflexion Filter using our multi layer technology

FINGERPRINT AUDIO

Contact: 512 847 5696
www.fingerprintaudio.com
sales@fingerprintaudio.com

http://www.facebook.com/sEElectronics
http://twitter.com/sE_Electronics
http://www.reverbnation.com/fan/sEElectronics
http://www.myspace.com/sE_Electronics

sE Sound Engineering

Alexandra Ella

Justin Meldal-Johnsen

The Artist as Middleman

BY KEN MICALLEF

BASSIST JUSTIN Meldal-Johnsen's résumé reads like the ultimate session player's dream. His recording chops have graced the work of Beck, Air, NIN, Emmylou Harris, The Mars Volta, Macy Gray, Garbage, Goldfrapp, Black Eyed Peas, Pink, Kid Rock, and dozens of other artists. But unsatisfied with his gun-for-hire existence, Meldal-Johnsen recently infiltrated the studio as a stealth producer. He's been part of major productions for years, and his big ears have finally extended to a place behind the glass. And he's already racking up successes. Meldal-Johnsen produced M83's 2011 electronic opus *Hurry Up, We're Dreaming*, and Neon Trees' pop rock chart topper, *Picture Show*. Meldal-Johnsen is currently producing energetic folk sisters Tegan and Sara, as well as pop-punk playthings Paramore.

Unlike the cash-and-carry, meat-and-potatoes logic required of the session musician, Meldal-Johnsen takes a decidedly cerebral approach to his role as producer. Whether that means creating mad wall collages with M83 or getting all touchy-feely and emotional with Neon Trees, Meldal-Johnsen seeks new ways to inspire musicians to experiment, creating music that he, the band, and the record label can be proud of, and that will bring commercial success.

Most know you as a bassist, not as a producer.
My transition to producer has been under the radar for years because until the M83 record, I hadn't done work that a large body of people would recognize. After that [project], I got calls from interested labels and managers. I've produced three records that are less than a year old now. Before that, I produced maybe eight indie records, including Ken Andrews of Failure, Division Day, Grace Woodroofe (with Ben Harper), and Holly Palmer. I've always exercised those muscles.

When did you begin exercising those muscles?
I've always tried to figure out songs and


Alexandra Ella

texture and space and arrangements. I've spent so much time on the other side of the glass that I couldn't help but be entranced by the process of how to get a record going from start to finish. I've always had this peripheral interest in how to help an artist feel like they are being heard. I don't know if that is an ephemeral concept.

Being a producer is an ephemeral concept. Does it take a certain kind of personality to produce, and what elements are required?
I have always been a good listener and foil for artists, from Beck to Trent Reznor to Air to other people I've played with. In that role, you gain trust. And within that trust, you're plugged into the nuances of someone's creative process. You hear and you see things that others don't see. You begin to understand their aspirations. I've always tried to figure out how to help people get the most distilled version of themselves. That sounds high and mighty, but that's honestly where it's at when I first meet someone. "How can we get to the core of this for them? What were the failings for them in the past?"

How do you get to that core?
A lot of shooting the sh*t and gaining trust. And in doing that, the more willing they become to experiment. For a good producer, it's creating a utopian world where the artist feels they can regain some of the freedom that they may have lost in the past. When I do that early on, I feel like I've got a fast track to finding out the dos and the don'ts.

That sounds political.
It's not about another producer, it's finding out where the artist's records ended up versus where he or she was trying to get. There's many variables in the process. If it involves where someone was last with a producer, fine, but making a record is a two-way street. You can't always fault a producer. There are all kinds of cogs in the works that make an album not go where it's supposed to go. And there's lots of inter-relationship stuff that might not have anything to do with the producer's skill. It may have everything to do with the A&R guy harping on the producer or distractions the artist had with management, ulterior motives of band members, or drama. I try to cut through all of that. I want artists to feel like they're getting something a bit more fully realized. Artists are not going to be willing to experiment in the studio unless they feel like they're acknowledged.

Don't your credits command respect?
No. I have a lot of caché as a musician, but as a producer, people feel they are giving me a chance. For instance, I was able to make Paramore feel comfortable by doing one song first as a trial run. Producers with a lot of experience don't do that. But I still feel young at this, like I have to prove myself. I have no problem with being scrutinized. With a band like Paramore who has sold millions of records, that is fine.

What was your approach with M83?
With M83, it's like, how close can you get to the sun without being burned? They're always trying to push the boundaries of how bold, how epic, how grand, how bright, or how cinematic a song or an album can get without becoming ludicrously overblown. One can only go so far with layering and orchestrations and spiraling ascending melodies until it becomes trite. So with this album, it was all about how to push things to the edge of that feeling of jumping off the edge of the Grand Canyon and flying.

How do you make that idea tangible?
Anthony [Gonzalez] and I began with discussions about regaining one's youth and that surprise of the world and the ambition of being young. Then we sat in a room full of synthesizers trying to out-inspire each other. We created jams and put up rhythms and played to them and co-created upon them.

You played a lot of instruments on *Hurry Up, We're Dreaming*.
We both did. As the creature started to emerge, we felt that we had to do a lot of it with our own hands; otherwise, it would be compromised. I am not a guitar player, but I play the lion's share of guitar on the record. There were a bunch of bad-ass musicians that I brought in, but only for very specific things. Otherwise Anthony and I went as far as we could to play it all. The album became very personal. It was a quest for us to figure out a way to put in audio form the moments when you feel most liberated as a child or when you feel most inspired by the world or the most touched by something ephemeral or spiritual. It was like trying to merge reality with the conceptual.

How did you put those thoughts into action?
We discussed old music, but after a while it was nothing more than us keeping that ethos in mind and continuing to create. One day we got huge poster boards and made two dozen of them and put them on this very high wall in the studio. We wrote the manifesto of each song and what it meant to us on the poster boards. We'd cut things out of newspapers or books and put those on the boards. Or tack photographs or poems or bits of culture and anything inspirational to the boards. Every song would have this collage.

That had a literal impact on the music?
We did it at a juncture where we were slowing down. As we added to the poster boards, they became the bibliography for the rest of the album. That kept us making music from a

LISTEN profile

Jimmy Cliff

A "rebirth" for the reggae icon

BY BLAIR JACKSON

IT'S BEEN eight years since reggae legend Jimmy Cliff's last album—*Black Magic*, produced by Dave Stewart. Since then, he's continued to tour the world, been inducted into the Rock and Roll Hall of Fame and, in 2011, recorded an album that is his best since the '80s—the recently released *Rebirth*, produced by Tim Armstrong, an exceptional guitarist with deep roots in both punk and ska. (He is perhaps best known for fronting the San Francisco Bay Area band Rancid and for co-founding HellCat Records.) That may sound like an unlikely pairing, but it's not.

"I've studied his music and his career and all those records he and his contemporaries made," Armstrong says. "Ska, rock steady, reggae; I love all that. And Jimmy was there from the beginning; he was there in '62 with [producer] Leslie Kong and obviously he's done so much great stuff and been so influential. So getting to work with him was a real honor for me."

Garritan Instant Orchestra is a revolutionary sound library, designed to create full cinematic orchestrations from just a few lines of music.

With pre-packaged combinations and mash-ups, mood-based presets, and orchestral effects, you can evoke ary atmosphere—instantly.

Leading man orchestration on a stuntman's budget.

"...particularly suited for scoring film, video, and games, because it allows you to create quickly finished-sounding work..."
– Electronic Musician, June 2012

If it has a mood, you can capture it.
Get Garritan Instant Orchestra for $150 today at garritan.com/io/em9

makemusic®

to put a guitar through a modular synth, for instance. I want the album to sound very visceral and a little bit less locked down and computerized—more 1981 than 2012, with a nod to 2016. Humans playing textural sounds that can still be heavy and fast, but also shaded.

How do you advise aspiring producers to develop that knack of listening to the artist? And being the middleman between the artist and the label?

You can't put frosting on it: You're the middleman. You don't do this and expect to be some juggernaut of selfish isolation. And you can't just assume that you're walking into circumstances that will go smoothly. You have to always be on your toes. And the way you do that the best is by listening instead of talking.

"A producer is the middleman. You don't do this and expect to be some juggernaut of selfish isolation. You have to always be on your toes. And the way you do that the best is by listening instead of talking."
—Justin Meldal-Johnsen

Listening to the artist or the label?

Both, by all means. It's a very fluid situation, and things are ever changing. You can't rely on being belligerent or bloody minded. You have to find balance at every turn. You don't have to cave to everybody but you have to be confident in your ideas. There's a tripod there: your own confidence with your vision, then the label's vision, and then the artist's vision. And there's a lot of foundational stuff that young producers have to be on top of. Like how to get great takes out of people without relying on Beat Detective or cutting them up. How to maintain a fresh sound. You do that by keeping it old school and keeping alive the romance of live recording and recording off the cuff. On every record, I use rough or demo vocals and guitars. Your job as a producer is to pluck things out of the ether that have life.

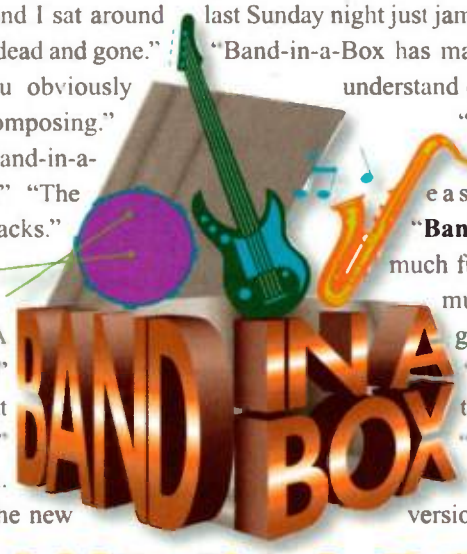
And you find that on the scratch takes?

I always find good stuff on a scratch take. If it's not working, you have to stop and check the last moment where it was working. That might be before you told them you were doing vocal takes for real. You have to make sure they are on that front edge of enthusiasm. Then when you get it, you stop. You have to learn that right amount. I learned that by watching all the producers who recorded me. You have to understand people, and their thresholds and interest levels and stamina levels. It's important to meet or apprentice with or read about people who have made classic records. Because believe me, they know something that you don't. ■

More Online
Read our extended interview with Justin Meldal-Johnsen.
emusician.com/september2012

Can a music program create professional, real-sounding arrangements and solos for your songs from only a chord progression?

"Are you sure it is legal to have this much fun?" "I'm looking for those **perfect band mates** and I just discovered they live in a box." "The soloist sounds amazingly like **real people** improvising!" "The program **sounds so much better** with **RealTracks**... A thousand times, Thank You!" "Band-in-a-Box is some of the **most fun** you can have with a computer." "I can load my **MP3** in and see the chords play on the screen." "My buddy and I sat around last Sunday night just jammin' away..." "As an old BE-BOPPER circa late 40s, most of the cats I played with are dead and gone." "Band-in-a-Box has made me a **much better player.**" "Can't say enough good about your products. You obviously understand our needs exactly." "BB makes it so easy to quickly build an arrangement for composing." "Thanks to BB I can still swing with the help of the **fabulous cats** living inside BB." "Band-in-a-Box was the solution to an old fustration: being a musician. Now I am a musician." "The ease and way to make **high-quality** background tracks." "**RealTracks** is by far the easiest accompaniment software." "This is so "**Band-in-a-Box** is the **holy grail** for buy happiness." "This is absolutely a much fun." "I'm speechless." "Who says you can't whole other level of sophistication." "A must-have item." "**Band-in-a-Box** is now on a coming!" "It blows my mind." giant leap forward""Keep the **RealTracks** realism." "I was absolutely **blown away** at "**RealTracks** add a whole new dimension of **in-a-Box** program is **extraordinary!**" the quality of **Band-in-a-Box**." "Your **Band-**"A fantastic leap forward." "Un. "Your product is **AWESOME! THANKS**" generate **RealTracks** and renders with the new Believable" "I can't believe how fast I can and I'll be singing the praises of version." "They've **outdone themselves** this time, "This new musical concept you **Band-in-a-Box** every chance I get." evolutionary. If it were a living have created is nothing short of species." "I'm awestruck." "Just creature, it would be a whole new as **"Brilliant!"** "All of the new when you think **Band-in-a-Box** is must say, the pedal steel is perhaps instruments are just **smashing.**""I history of this brilliant the greatest accomplishment in the **fantastic** and provide **great** program.""The RealTracks are a great gift to jazz musicians, **inspiration** for creativity." "This is **This changes everything.**" "It's educators, and singers." "Oh, wow. useful piece of software." "I tried **stunning.**" "Thanks for a superbly detection is **amazingly accurate!**" with many audio files and the chord item." "Wow, I'm learning tunes "This is absolutely a must-have Wizard." "It finds the exact chords fast with help of your Audio Chord **"I am blown away!** The jazz/swing to the song... perfectly." "Wow!" **"Awesome."** "Is this cool or what?" RealTracks stuff is amazing." "I'm in seventh heaven" "You won't regret it (and if you do, there's the **30 day money back guarantee**)." "I never thought I'd see the day this was possible." "I know it's been said before, but you guys are **incredible**." "This is **gonna set the world on fire!**" "I'm so stoked about how good everything sounds I can hardly stand it." "This is just killer." "Amazing, simply amazing." "[RealDrums] is really awesome sounding. Good work!" "Many kudos all around." "You never cease to **amaze** me. You got it." **"Wow and Double Wow."** "The **RealTracks** and **RealDrums** sound awesome." "Long live PG Music!" "Mind bending." "I am frankly amazed at most of the styles." "I am absolutely ***Kudos*** to you and your team!" "First time I did a song with **Band-in-a-Box**, **I couldn't believe it!**" "I use it in the classroom and also in creating music in my studio. It is a fantastic piece of music software to own. I am greatly impressed." "I am very impressed with your fantasic ***improvisational*** program." "It's a great educational tool." **"Awesome software at a fantastic price!"**



BAND-IN-A-BOX 2012 for Windows® & Macintosh® with RealTracks

Type in the chords to any song using standard chord symbols like C, Fm7 or Gm7b5/Db; choose a style and Band-in-a-Box does the rest... Generating a professional sounding arrangement of bass, drums, piano, guitar, strings and more. NOW using RealTracks—actual recordings of professional studio musicians!

PG music

Download Now from $129 USD

PG Music Inc. • www.pgmusic.com • 1-888-PG-MUSIC

Our Customers Think So.

Jimmy Cliff

A "rebirth" for the reggae icon

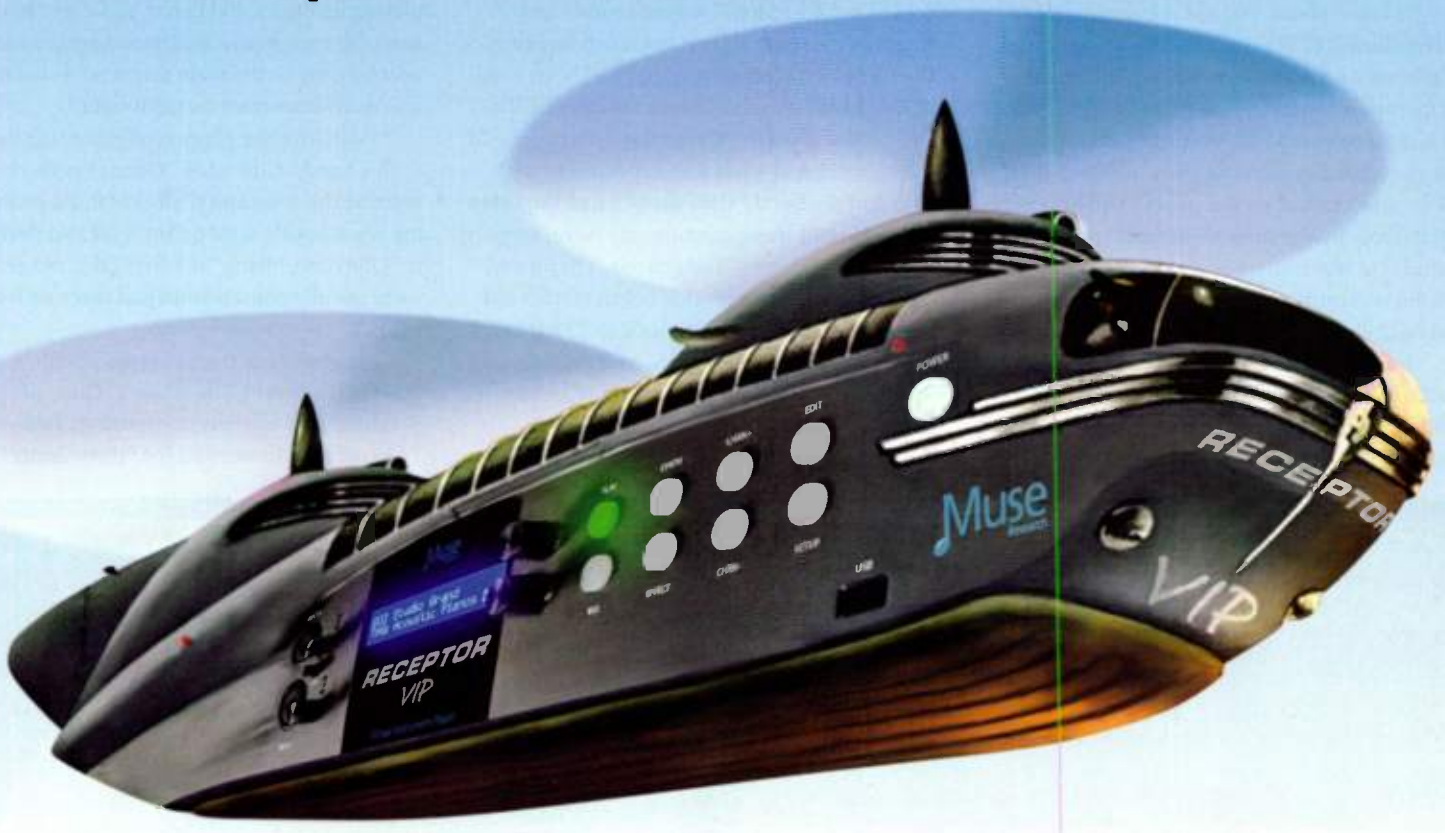
BY BLAIR JACKSON

IT'S BEEN eight years since reggae legend Jimmy Cliff's last album—*Black Magic*, produced by Dave Stewart. Since then, he's continued to tour the world, been inducted into the Rock and Roll Hall of Fame and, in 2011, recorded an album that is his best since the '80s—the recently released *Rebirth*, produced by Tim Armstrong, an exceptional guitarist with deep roots in both punk and ska. (He is perhaps best known for fronting the San Francisco Bay Area band Rancid and for co-founding HellCat Records.) That may sound like an unlikely pairing, but it's not.

"I've studied his music and his career and all those records he and his contemporaries made," Armstrong says. "Ska, rock steady, reggae; I love all that. And Jimmy was there from the beginning; he was there in '62 with [producer] Leslie Kong and obviously he's done so much great stuff and been so influential. So getting to work with him was a real honor for me."

RECEPTOR VIP

The Passport to Your Musical Future



Every musician knows that a great musical instrument transports you to a place that lets your creativity soar. And a great instrument will continue to inspire and guide you year after year on your musical journeys. That's what the new **RECEPTOR VIP** from Muse Research is all about. It helps you sound and play your best now, and it grows and transforms with you in the future.

RECEPTOR VIP from other hardware devices because it runs software virtual instruments and effects, giving you cutting-edge sampled and synthesized sounds, guitar amp models, and superb audio effects. It's based on tour-proven technology used by the world's finest players and biggest bands, but now features an amazingly simple user-interface that you can master in minutes so you focus on what's important: making music.

RECEPTOR VIP will quickly take your music to the next level with a superb set of virtual instruments and effects built-in, activated and ready to play. And should you wish to expand your horizons, NI's **KOMPLETE 8** and dozens of other plugins from the world's finest developer are pre-installed in demo mode, ready to try before you buy.

Take **RECEPTOR VIP** on a test flight at your local Muse Research dealer, or visit **www.museresearch.com** today.

The Passport to Your Musical Future Awaits!

Muse Research

Already own a Receptor? Contact us about our trade-in program!

www.museresearch.com

"I knew about Tim via Joe Strummer of The Clash," Cliff says. The Clash was a huge influence on Armstrong's ska-punk outfit Operation Ivy and subsequent groups, and HellCat released two albums by Joe Strummer & the Mescaleros in the early 2000s. "Then Tim and I talked on the phone, and his energy felt good. By the time we actually met in the studio to work on a song he wrote called 'Ruby Soho,' everything felt so good I thought we should continue."

In its original version on Rancid's 1995 album *...And Out Come the Wolves*, "Ruby Soho" is very Clash-like, but when Armstrong and Cliff first got together at the historic Sunset Sound Factory Studios in May of 2011, "I played him 'Ruby Soho' on my acoustic guitar, thinking it was a song we could in do as a sort of late-'60s reggae—almost skinhead reggae—vibe," Armstrong says. For the occasion, Armstrong had assembled some of his favorite musicians, known collectively as the Engine Room, "and when Jimmy heard those guys put it down, he *really* liked the vibe and the energy."

The group consists of several longtime musical associates of Armstrong's: bassist J. Bonner and drummer Scott Abel were key members of the L.A. reggae/ska/punk band The Aggrolites (who recoded for HellCat). Organist Dan Boer also played some with the Aggrolites and with another ska-rooted group, Go Jimmy Go. And Armstrong says he's known Kevin Bivona, who played piano, guitar, and did some engineering on the Cliff album, "since he was 17 and joined The Transplants [one of Armstrong's former groups] and we went on the Warped Tour. So these are cats I've know for a long time, who are students of reggae are very respectful about it."

Indeed, in backing Cliff, the Engine Room went for "old-school" reggae sounds and textures more often than not, even favoring the same early-'60s organ that had been used at Dynamic Sound in Jamaica during Cliff's late-'60s and early-'70s heyday. "That's one of the things I really liked about working with Tim and the band," Cliff says. "I had forgotten what some of those instruments were; some of those old keyboards and sounds. They'd say, 'Well, you used *this* kind of organ on this old track,' and I was like, 'OK, let's go!' That band was a lot of fun to play with. And even though it might sound like an older style of reggae, it's fresh for a younger audience today."

Typically, Cliff had simple guitar-and-voice or piano-and-voice demos for his songs and then Armstrong "would figure out on an old Fender acoustic how the arrangement was going to be, and I'd show the guys and we'd start working out the rhythm—playing it over and over until you've got the bass, guitar, piano, organ and drums all locking in one bubble, one rhythm. So we'd work that out, and meanwhile Jimmy would be chillin'. And once we were totally locked in and rockin' with one cohesive sound, then Jimmy would come in and he might say, 'Why don't we try this a little slower,' or maybe 'Bring it up a little bit,' or he would say, 'Let's change the key.' Whatever Jimmy wanted, we didn't hesitate. You want to try every idea."

The album was cut almost completely live, with the Engine Room set up in one of Sound Factory's mid-sized Studio A ("It's legendary; The Doors recorded there!" Armstrong crows), while Cliff was in an iso booth—known as "the Piano room"—just to Armstrong's left, in full visual contact with the whole band, laying down vocals as they tracked. "Since we recorded it live," Armstrong notes, "there was a certain amount of bleed going on, with piano mics picking up drums and guitar, and everything is sort of in everybody else's mics, so there was no overdubbing on the main instruments later. So it was really important we get it right."

"I still love the process of recording live with a band," Cliff adds. "Once everybody learned the song and really *got* it, I'd go into my vocal booth, we'd count it off and that was it." One tune, "Bang" is a first take. Others were usually chosen from just three or four takes.

One of the key tracks on the album, a powerful cover of The Clash's "Guns of Brixton," had a different evolution, however. The night of the session for "Ruby Soho," Armstrong relates, "We were all in the studio just jammin'and having fun and we started playing 'Guns of Brixton.' Jimmy was killing it with the nyabinghi [a Jamaican drum] and J's wife was in there filming it. We were super-happy and fired up. The next day, before Jimmy came in, we looked at the footage and we thought it was awesome, so we took that original free-form 'Guns of Brixton' jam, set a tempo to that, and we tracked it for real. So when Jimmy came in, we had 'Guns of Brixton' already rockin', and he loved it! I've got the acoustic Fender, and then that electric is me with a '71 Gretsch Country Club—I'm going for sort of a Western showdown thing."

Handling the miking, and manning the studio's famous API console was lead engineer Clinton Welander, who proclaimed recording Cliff and the Engine Room "probably the most fun sessions I've ever been involved in." Not surprisingly, the Engine Room band utilized the API's much-loved preamps and EQs, while Cliff's vocal went through a custom Sunset Sound preamp.

As for mics to capture Cliff's lead vocal, Armstrong says, "Sometimes Jimmy sings

"I still love the process of recording live with a band. Once everybody learned the song and really *got* it, I'd go into my vocal booth, we'd count it off and that was it."

—Jimmy Cliff

EASTWEST

INTRODUCING

HOLLYWOOD ORCHESTRAL WOODWINDS

From ACADEMY AWARD, C.A.S. (Cinema Audio Society), BAFTA, and EMMY award-winning sound engineer SHAWN MURPHY, who has recorded and mixed the scores for more than 300 feature films including Indiana Jones and the Kingdom of the Crystal Skull, Star Wars: Episode II - Attack of the Clones, Star Wars: Episode III - Revenge of the Sith, Star Wars: A Musical Journey, Jurassic Park, Jurassic Park The Lost World, Harry Potter and the Prisoner of Azkaban, Titanic, Minority Report, The Bourne Ultimatum, Saving Private Ryan, Munich, The Passion Of The Christ, X-Men: The Last Stand, and Ice Age, etc., Hollywood Orchestral Woodwinds is the third installment in the Hollywood series, and was designed to be the most detailed collection of orchestral woodwind instruments ever assembled.

Hollywood Orchestral Woodwinds includes: Alto Flute, Bass Clarinet, Bass Flute, Bassoon, Clarinet, Contra Bass Clarinet, Contra Bassoon, Eb Clarinet, English Horn, Flute, Flute 2, Oboe, Piccolo Flute.

More information at soundsonline.com/Hollywood-Orchestral-Woodwinds or soundsonline-europe.com/Hollywood-Orchestral-Woodwinds

really loud, like on 'Cry No More,' so we had a [Shure] SM7 for that kind of stuff, and for the more intimate songs, a [Neumann] U47 going through a [Chandler] TG-1 co0mpressor; so two different sounds. John [Morrical, who mixed the record at L.A.'s East West Studios' on a Trident board] said he was using the U47 the most when he mixed."

Armstrong's many guitars went through one of two different amps, each with two mics—his Fender Twin had a Shure SM53 and AKG C12A, and his Fender Blues Deluxe had a Neumann U67 and a Sennheiser 421. Bonner's bass took a Sound Factory DI (with a Jensen transformer) and was miked at the amp with a Neumann U67 and a Yamaha NS10 woofer (to capture sub information). The "secret" vintage organ (which Armstrong swore me not to reveal, under penalty of death) had two built-in speakers—one of which took a U87, the other a Shure SM57.

According to Welander, Scott Abel's vintage Gretsch kit was miked with a Shure SM91 inside the kick, a Neumann U47 fet and an NS10 woofer outside; SM56 mics above and below the snare; a Sony ECM-50 lavalier on the hi-hat ("because it completely rejects everything else, so you have more control," the engineer says); either 421s or U67s on the toms, depending on the tune; a Telefunken 251 and a Coles 4038 to capture the inside of the kit from different spots; a mono Sony C37A as an overhead; and an RCA 44 ribbon for a room mic.

Once the tracking sessions were over, there were what Armstrong calls instrumental "touchups" and background vocal and horn overdub sessions at a private studio in Laurel Canyon called Canyon Hut; those were engineered by mixer John Morrical.

Months later, with the album long-finished, Armstrong still can't believe his good fortune to work with one his heroes. "The best part of the day was lunchtime at Sunset Sound Factory. There's no other place you'd want to be. We'd gather around the picnic table and we'd sit there and eat lunch together, and I was telling the guys in the band, 'Don't ask him too many questions!' Because we were all curious, of course. 'Be cool!' And then we'd start asking questions and the stories would just come pouring out. We were in heaven," he laughs.

The end result is a vital, contemporary album that hearkens back to Cliff's classic sound and overflows with the pointed social consciousness and humanity that put him on the map more than four decades ago. "It's me," he says simply. "I don't sit there and say, 'I want to send this message.' It's just what I'm sensitive to. I just write what I feel. I'm at the center of my music, but at the same time, I'm tuned into the echoes of the people." ■

Blair Jackson is a frequent contributor to Electronic Musician *and* Mix.

More Online
Read interview extras with Jimmy Cliff.
Emusician.com/september2012

Remastered. Ready to perform.

MIXCRAFT 6

BRAND-NEW VERSION

for Microsoft Windows®

Mixcraft 6 is your music production dream come true, instantly turning your computer into a fully-stocked professional recording studio.

- Record and create an unlimited number of audio and MIDI tracks.
- Over 6000 professionally produced music loops.
- Arrange, edit and create videos.
- Includes 11 virtual instruments and 25 high quality effects.
- Pro features include ReWire hosting, support for unlimited hardware inputs and outputs, multi-take loop recording, support for multi-channel VSTis, time stretching and pitch shifting, and much more.

Learn more at www.acoustica.com.

Mixcraft 6. *Now it's* ***ON!***

Antony and the Johnsons

Cut the World

SECRETLY CANADIAN

IT'S A no-brainer to consider arranging Antony Hegarty's lush, meditative pop for a full orchestra, but to actually do it is feat. Recorded with the Danish National Chamber Orchestra in 2011, *Cut the World* is a memento to grandeur, to be sure, but never veers into the Wagnerian bombast that might tempt anyone else blessed with access to a full symphony. The best pieces come from *The Crying Light*, signaling the touch of avant-classical composer Nico Mulhy, who worked on the original album. BILL MURPHY

Neneh Cherry and The Thing

The Cherry Thing

SMALLTOWN SUPERSOUND

In her first release in 13 years, Cherry's vocals tear through a vibrant, often chaotic, and always entertaining avant-garde adventure with Scandinavian jazz trio The Thing, who take their name from a piece by Cherry's father, world/free-jazz trumpet great Don Cherry. Energetic and extravagant, the collaboration—a collection of covers and original tracks—illustrates how perfectly things can gel with just three instruments, extraordinary talent, and personal connection.

CRAIG DALTON

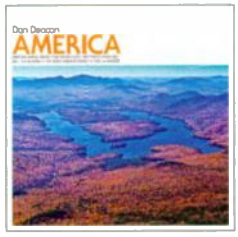
Shawn Lee

Synthesizers In Space

ESL

On Shawn Lee's umpteenth album, the prolific multi-instrumentalist/producer sounds like he recorded aboard a spaceship while tripping on acid. Space is the central theme, but it is the percussion element that drives the album—rather than the implied keys of the title. Lee floats, gravity-free and hallucinating, around his self-contained studio, picking up random objects and turning them into percussion instruments. Whether it's via shakers or synths, Lee will send you into orbit.

LILY MOAYERI



Dan Deacon

America

DOMINO

Dan Deacon can change sonic topography violently, but his third album surveys a coherent horizon rather than dives off a cliff. The composer has never explored oscillator ensembles and mallet patterns with more unity. Opening with five empowered motorik pop songs, the album culminates in a 21-minute suite melding 22 players and waves of hypnotic stasis. For every circuit's grainy squelch, there's melodic orchestration; ring modulation and cartoon-colored syncopation weave within legato vistas.

TONY WARE

Dirty Projectors

Swing Lo Magellan

DOMINO

As willfully way-out as David Longstreth tends to get with his avant-pop melodies, his songs with Dirty Projectors always possess an underlying sensibility that's familiar, gripping and bittersweet. *Swing Lo Magellan* has its moments of self-indulgence—the de-tuning electric guitar of "Maybe That Was It," for example—but the title track, with its dusty attic sound, is three minutes of folk-rock genius, while the opener "Offspring Are Blank" tackles hard psychedelia and layered vocals with a Lennon-like vengeance.

BILL MURPHY

Michael Kiwanuka

Home Again

INTERSCOPE

Although at the low end of his 20s, Michael Kiwanuka has aged two decades on his debut, *Home Again*. The British folk-soul-jazz singer/songwriter's vintage vocal style is over-polished to perfection under Band of Bees' Paul Butler's production chops. Brushed drums, super-crisp strings, and immaculate woodwinds smooth out Kiwanuka's already neutral sentiments. One almost wishes a mishap on the affable fellow, just to give him some edge. *Home Again*'s graceful, angle-free sounds work wonderfully, but for environmental purposes only.

LILY MOAYERI

Baroness

Yellow & Green

RELAPSE

Emerging within the Southern post-hardcore metal vanguard (Mastodon, Kylesa, Torche), Savannah, GA's Baroness sloughed off much roughly hewn sludge/speed-metal snarl by 2009's *Blue Record*. Increasingly progressive in the psychedelic sense, this third album, a double LP, is a tidal listen that bellows without growling, and is as headier as it is heavy. The expansive mix is bass-anchored, overlaid with pulling leads deluged with tone, but never too saturated to obscure melodic flares and dissonant lucidity.

TONY WARE

"I was suspect at first, but after a few minutes with the Recoils I realized how much difference they made. They work."

~ Al Schmitt

(Barbra Streisand, Ray Charles, Quincy Jones, Madonna)

"With the Recoils I immediately noticed improvements in low end clarity – to the point that I no longer needed a sub. Incredibly, high frequency detail and image localization also improved."

~ Chuck Ainlay

(Dire Straits, Vince Gill, Lyle Lovett, Sheryl Crow, Dixie Chicks)

"The Recoil Stabilizers are great! A huge difference from regular foam pads. They sound more stationary and connected. I'm quite happy with them."

~ Elliot Scheiner

(Steely Dan, Fleetwood Mac, Sting, The Eagles, Queen, REM)

"My nearfields sound better on the Recoil Stabilizers. It's a great product."

~ Daniel Lanois

(Peter Gabriel, U2, Bob Dylan, Emmylou Harris, Robbie Robertson)

"With Recoils, when I listen to my recordings elsewhere, the results are more like what I hear when I record."

~ Ed Cherney

(The Rolling Stones, Bonnie Raitt, Jackson Browne, Eric Clapton)

"With Recoils the low-end is more defined and I hear fundamentals that I never thought were there. Recoils brought new life to my nearfields—they have never sounded so good!"

~ Bil VornDick

(Bela Fleck, Alison Krauss)

"It really is amazing what a simple little thing like the Recoil Stabilizers can do to a system. Suddenly everything got clearer, punchier and more solid."

~ Frank Filipetti

(James Taylor, Foreigner, The Bangles, Elton John)

"The Recoils cleared up a cloudiness in the bass and mid bass that I had been battling in my studio. This is an affordable and very effective problem solving product. I love these things!"

~ Ross Hogarth

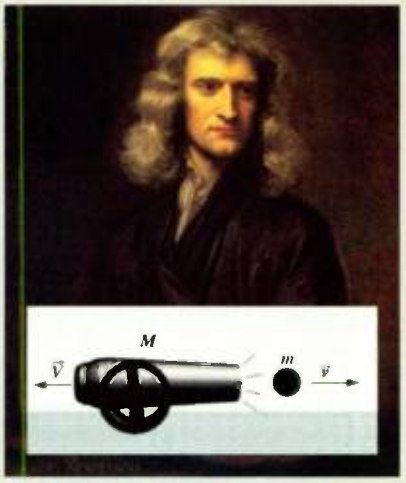
(Ziggy Marley, Melissa Etheridge, Keb' Mo', Jewel)

"I immediately noticed a huge improvement in the spaciousness of the sound field in my mixes. I love my Recoils ... from now on, I'm not going to do a mix without them!!!"

~ Bruce Swedien

(Quincy Jones, Michael Jackson, Jennifer Lopez, Sir Paul McCartney)

...Had Newton been an audio engineer, he would've used Recoils!

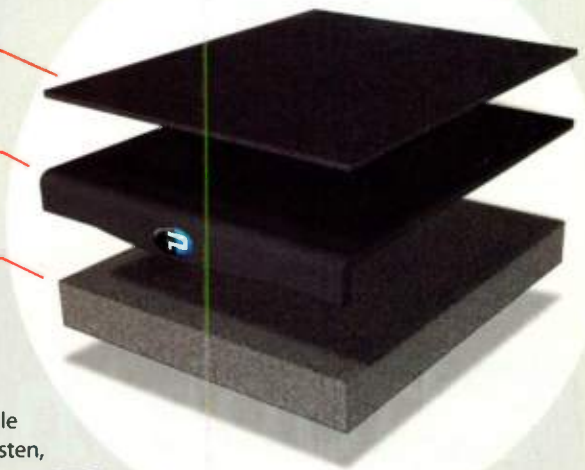


You've bought your new monitors, you put them on your desk and start to mix. However when you listen in your car or on other systems you notice that your mixes are not translating well – they don't sound the same as they did in your studio. Why?

Newton's third law of motion states "Every action is accompanied by a reaction of equal magnitude in the opposite direction."

Your loudspeaker works like a piston, constantly pushing and pulling air as the cone is thrust back and forth. The same energy that pushes against the air also vibrates into the desk, causing resonance. This 'comb filtering' effect makes it difficult to mix as it amplifies some frequencies and cancels out others.

Some would say "just isolate the loudspeaker from the desk with a foam pad" but by doing so, you introduce a new problem—your speaker is now swaying back and forth unhindered on the foam, just as Newton said it would. Energy that could be producing a crisp kick or accurate bass is dissipated into the foam and is lost.



Thin, high friction solid rubber pad *cemented to the platform, securely connects the speaker with minimal vibrational loss.*

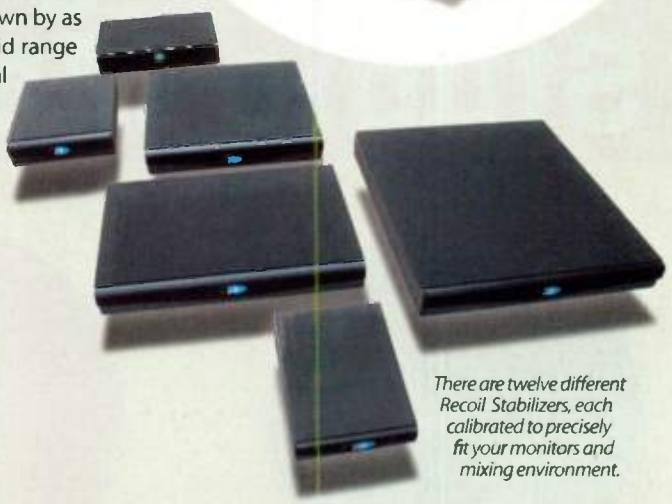
Massive 1/4" laser cut steel plate, *precisely radiused to create an extremely rigid, non-resonant platform for optimal speaker performance.*

Open-cell foam pad *decouples the speaker platform from the desk to eliminate resonance that causes frequency cancellation.*

Enter the Recoil Stabilizer™... a revolutionary device that at once isolates the loudspeaker from resonance while providing a massive platform that stabilizes it. At first listen, you will hear the bass tighten up and reach down by as much as an octave. As you listen closer, the mid range will solidify and the top end detail will reveal itself. Simply put, the phase shift and cancellation that have caused inconsistencies in your mixes are eliminated and you can finally hear what your speakers were designed to do.

The Recoil Stabilizer*...
Newton knew it all along!

*Patent pending



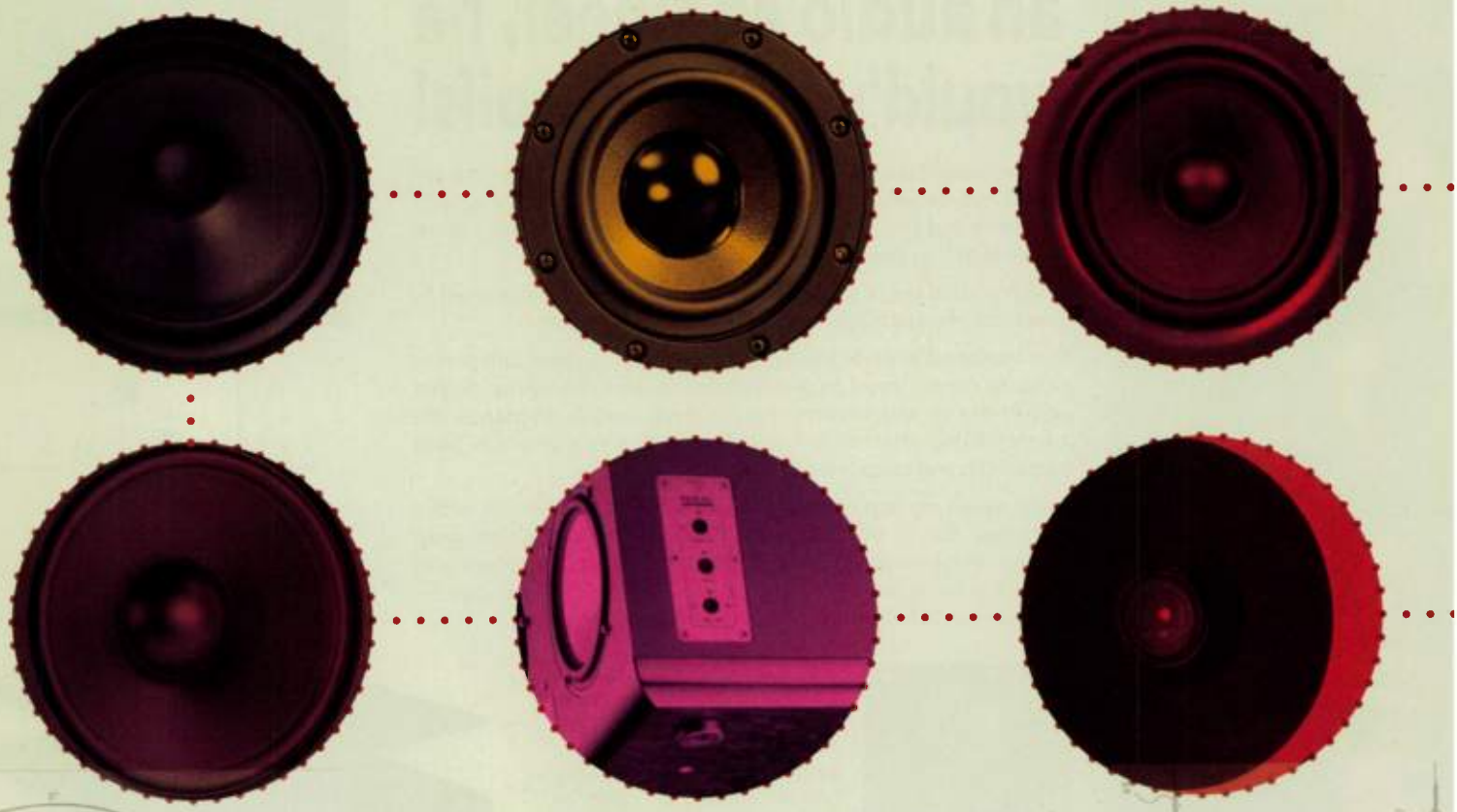
There are twelve different Recoil Stabilizers, each calibrated to precisely fit your monitors and mixing environment.

PRIMACOUSTIC®

... take control of your room!™

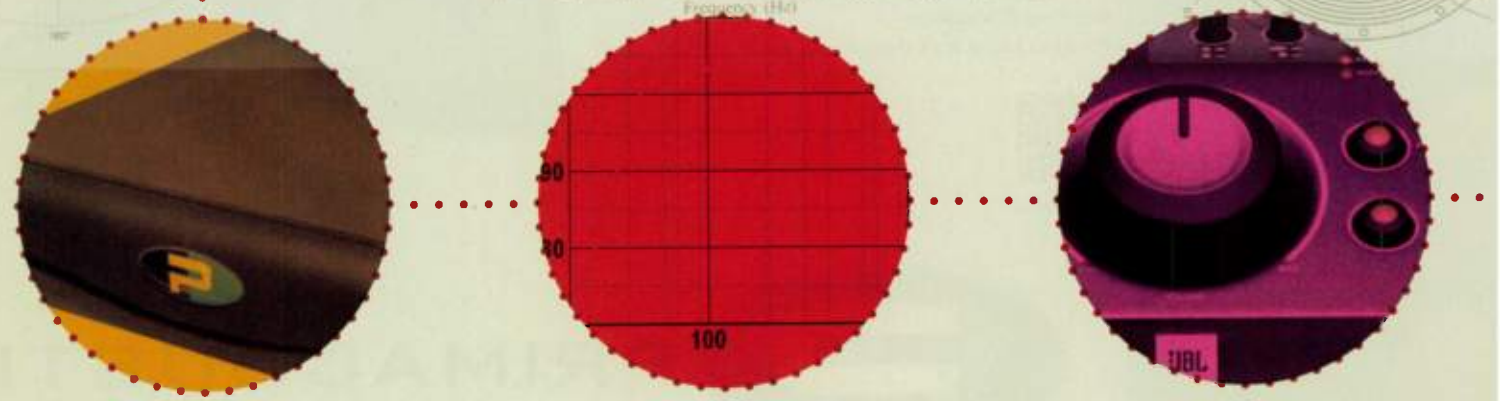
A division of Radial Engineering Ltd. - 1588 Kebet Way, Port Coquitlam BC V3C 5M5

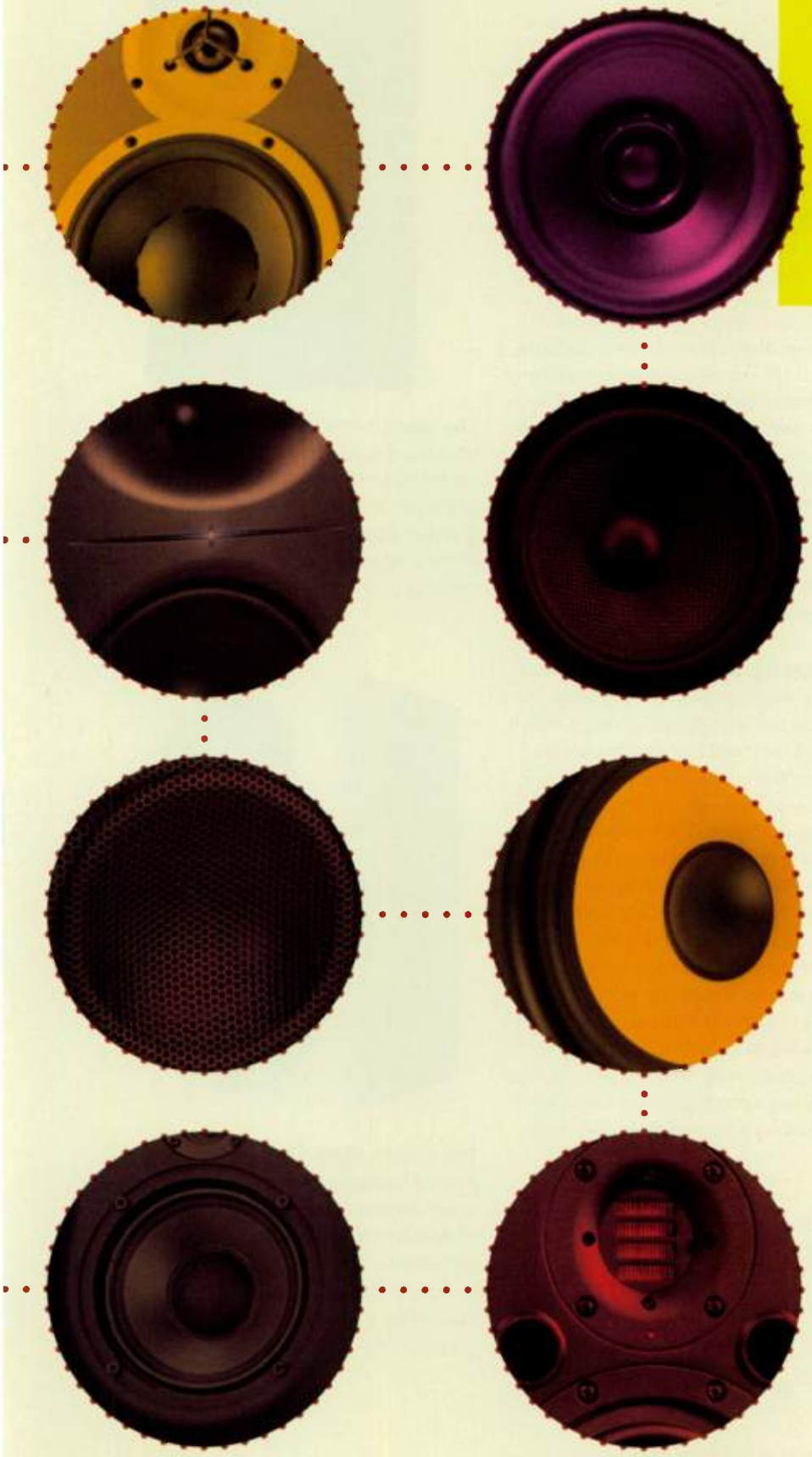
www.primacoustic.com



Roundup

Choosing and Using Studio Monitors





LUST

Speakers are crucial components of your studio—do right by them, and they'll do right by you

BY STEVE LA CERRA AND CRAIG ANDERTON

THERE'S ONLY one piece of studio gear you use every time you work: monitors. Every signal you hear passes through them, so the impact of studio monitors on your recording and mixing is readily apparent. Despite the evolution, and in some cases, revolution, of audio technology, speakers still operate as transducers pushing air (though a manufacturer may employ multiple drivers). Choosing a pair of monitors can be a daunting task, but we're here to help you make an intelligent decision.

Let's get started! Most home- and project-based studios employ nearfield monitors—speakers intended for placement atop mixing consoles, desktops, or on stands. There's no strict rule for distance from the listener, but nearfields are generally engineered to sit roughly three to eight feet from the listening position. Note that if you're going to use stands, don't skimp on the quality; furthermore, we suggest placing the monitors atop some sort of isolation platform (*e.g.*, Auralex MoPADs or Primacoustic Recoil Stabilizers—see Figure 1 on page 50) so energy isn't transferred from the speakers or the stands or desk.

Fig. 1. Primacoustic's Recoil Stabilizer increases speaker focus by minimizing resonant coupling, while providing a stable base that reduces the recoil caused by the forward energy of loudspeaker motion.

Understanding Specs and Their Importance Although specifications can help narrow your choices, they don't tell you how a monitor *sounds*—so take them with a grain of salt. But before examining speaker specs, let's distinguish between active and passive monitors. Active monitors have onboard amplification so you won't need an external power amp; passive monitors require external amplification.

Neither design is inherently better. If you decide on passive monitors, your choice of power amplifier will have a profound effect on how they sound (and possibly your budget). Power amps are the Rodney Dangerfield of studio gear—they don't "get no respect" because they don't seem to do anything particularly impressive. And ideally, they indeed do nothing except perfectly amplify the signal coming from your mixer or DAW, but in reality they can add nonlinearities. Don't expect to get great results from a pair of $1,000 monitors connected to a $39 power amp.

Because active monitors have built-in power amps, that choice has been made for you, and the manufacturer has (hopefully) optimized the amp for the speaker. Active monitors may have multiple amplifiers, possibly one for the woofer and another for the tweeter. This is known as biamplification. (Triamplification uses separate amps for low-, mid-, and high-frequency drivers.)

A biamped system places the crossover at line level, before the power amps, as this enables the designer to increase efficiency by allocating power where it's needed most. Consider a system with a 100-watt amp powering the woofer and a 30-watt amp for the tweeter; this is a reasonable combination because a woofer requires more power to do its job (move a large mass of air) than does a tweeter. Placing the crossover before the power amp means it is never subject to high voltages and heat (thus increasing reliability), which would be the case in a passive speaker where the crossover accepts the power amp's output. Biamplification also reduces Intermodulation Distortion (IMD), and allows the manufacturer to build in protection techniques to avoid amp and speaker damage if you get overzealous on the volume control. On the other hand, active monitors have no upgrade path; you can't change to a better power amp once finances allow.

Here are some of the specifications you'll encounter in your research to find the ultimate monitor speaker.

• **Frequency Response** This is an analysis of frequency versus amplitude (see Figure 2). Don't confuse this with *frequency range*, which tells you the lowest and highest frequencies a monitor can reproduce, but doesn't provide a tolerance. A small monitor may have a frequency range extending down to 30Hz, but the amplitude at that frequency might be –15dB—making that 30Hz spec essentially fictional.

Frequency response with a tolerance (for example, ±3 dB) or graph helps indicate the speaker's overall accuracy. Frequency response can vary when your listening position changes from on-axis (directly in front of the monitor) to off-axis (when you are listening off to the side). If you need a wide "sweet spot" (perhaps to accommodate many listeners in the control room), then off-axis response becomes more

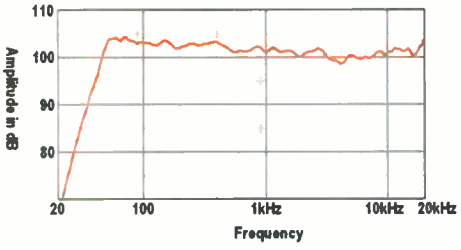


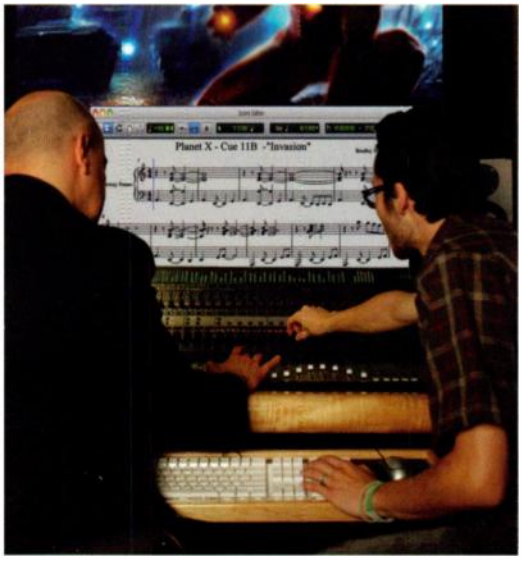
Fig. 2. A typical speaker frequency-response curve isn't flat, and rolls off at lower frequencies.

The Mackie HR824 has been a studio standard since the '90s, but is now updated to the HR824mk2. It's THX pm3 certified, meaning that these speakers are suitable for anyone seeking THX certification for his or her studio. mackie.com

The Fostex PM0.4 is a reasonably priced, compact bi-amp speaker but the most striking feature is that it's available in multiple colors—black, white, red, violet, and yellow. It's designed with wall mounting in mind, hence the emphasis on visuals as well as sound. fostex.com

ACADEMY of ART UNIVERSITY®

FOUNDED IN SAN FRANCISCO 1929 BY ARTISTS FOR ARTISTS



TAKE CLASSES ONLINE OR IN SAN FRANCISCO

Acting*
Advertising
Animation & Visual Effects
Architecture
Art Education
Art History
Fashion
Fine Art
Game Design
Graphic Design
Illustration
Industrial Design
Interior Architecture & Design
Landscape Architecture
Motion Pictures & Television
Multimedia Communications
Music Production & Sound Design for Visual Media
Photography
Web Design & New Media

ENROLL NOW

EARN
YOUR AA, BA, BFA, MA, MFA OR M-ARCH ACCREDITED DEGREE

ENGAGE
IN CONTINUING ART EDUCATION COURSES

EXPLORE
PRE-COLLEGE SCHOLARSHIP PROGRAMS

WWW.ACADEMYART.EDU
800.544.2787 (U.S. Only) or 415.274.2200

79 NEW MONTGOMERY ST, SAN FRANCISCO, CA 94105

Accredited member WASC, NASAD, CIDA (BFA-IAD, MFA-IAD), NAAB (M-ARCH)

**Acting degree program is not currently available online.*

Visit www.academyart.edu to learn about total costs, median student loan debt, potential occupations and other information.

important.

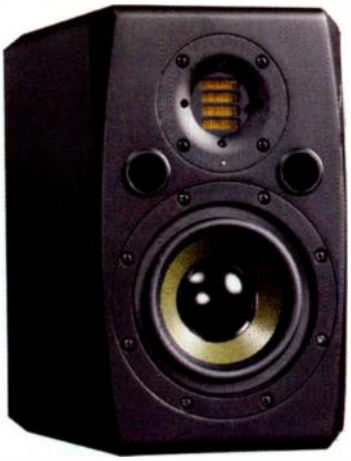
Comparing monitors strictly by frequency response is of limited usefulness because frequency response changes with placement, which is beyond the control of the speaker manufacturer. In theory, the human ear can hear from 20Hz to 20kHz, so we'd like a speaker to cover at least this range, but smaller speakers tend to roll off the bottom end. You can expect a monitor with a 6-inch woofer to bow out around 50Hz.

• **Maximum SPL** This represents the maximum volume level a monitor can achieve, but does not necessarily indicate the conditions under which that volume is achieved. Is the value peak or continuous? What's the distortion at that level? Some manufacturers may add a distortion component to the spec, such as "108dB SPL @ 1% THD," which is a bit more helpful.

• **Sensitivity** This spec is quite meaningful because it describes a passive speaker's efficiency—the amount of power the speaker requires to achieve a certain volume level. A spec of 92dB SPL at 1 watt/1 meter says that the speaker will produce a sound pressure level of 92dB, measured one meter away with 1-watt input. To increase the volume level 3dB, you'd need to double the power. In our example, we'd need 2 watts to produce 95dB SPL, 4 watts to produce 98dB SPL, 8 watts to produce 101dB SPL, etc. This helps give you an idea of how much power your amplifier needs to be able to produce.

• **Power handling** The amount of power a speaker can handle is measured over time. Power-handling measurement practices can vary, so the more meaningful spec is *AES power handling*, which is defined as filtered pink noise input for a period of two hours.

• **Impedance** For a passive speaker, this is the *average* resistance, expressed in ohms, that the speaker presents to the power amp, because a speaker's resistance varies with frequency. As impedance drops below 4 ohms, some amps may be able to develop more power, but as the impedance gets lower the amp begins to see what looks more and more like a short-circuit—and amps don't like short-circuits. Most monitors have impedance ranging



ADAM's SX1 nearfield monitor delivers the "ADAM sound," and features ADAM's X-ART (eXtended Accelerating Ribbon Technology) tweeter, but packs it into a remarkably compact enclosure suitable for smaller studios.
adam-audio.com

Event's 2-way 20/20 monitors (which are still in production) were some of the early entries in affordable, high-quality monitoring. The 2030 updates the concept with three drivers and high- and low-frequency amps.
eventelectronics.com

The MSP Series from Yamaha has been very popular for studio monitoring, so they downsized both size and price for the MSP3. It too offers accurate sound, but fits in a much smaller space.
yamaha.com

Although KRK is known for making a variety of speakers, the Rockit line holds down the value end of the spectrum, while retaining many of the "bigger brother" features (front-firing bass port, soft-domed tweeter, and glass aramid composite yellow cone).
krksys.com

PMC's AML2 5.1 Surround System features compact, 2-way active monitor designs, employing their unique ATL design and Bryston power amplifiers.
pmc-speakers.com

Dynaudio Professional, part of the TC Electronic family, has come up with a new approach for the DBM50—a speaker that's truly designed for desktop monitoring, from its jaunty enclosure angle to an optional remote.
dynaudioprofessional.com

sE Electronics' Munro Egg's distinctive shape is striking, but it's for a reason: The company claims it virtually eliminates diffraction and resonances. The system also comes with a free-standing control unit.
seelectronics.com

from 4 to 8 ohms, and most power amplifiers do not have any problems driving this range of impedances. This spec is irrelevant in an active system because the manufacturer has already matched the amp to the speaker(s).

Creature Features There are as many ways to produce a loudspeaker as there are manufacturers producing them. Materials used in the construction of individual drivers include paper, plastic, Kevlar, carbon fiber, aluminum, titanium, beryllium, and unobtainium. (Okay, maybe not the last one.) Woofers are almost always cone-type piston drivers but tweeters can be dome, inverted dome, horn loaded, or ribbon.

There's no iron-clad rule that any one type is better than another, just as there is no general rule stating that a three-way design is better than a two-way design. In fact, many people believe that for a given price point, a two-way design represents a better approach because the cost is divided among a lesser number of components. Overall sound quality is less about a particular type of design than the care with which that design is implemented, although there are also some features that can help a monitor perform at its best in your room.

High- and *low-frequency trim controls* are very important when tuning the monitors to your control room. A speaker intended for use several feet from a rear wall will overemphasize bass if it's placed against a wall; a low-frequency trim control can help correct this imbalance. If your listening area is very absorptive or reflective, a high-frequency trim can help counteract effects of the environment.

A speaker's *dispersion pattern* may be intended for vertical orientation. If you plan to turn the box on its side (horizontal orientation), find out if the pattern will change. It may be possible to remove the tweeter and turn it 90 degrees to maintain the dispersion pattern, even with the monitor turned on its side.

A feature that can be very helpful—especially for those of us who are impatient or lack the tools to perform room analysis—is some form of *built-in automatic room correction*. Exclusive to active speakers, this function incorporates a signal generator and measurement system within the speaker(s). Place a calibration microphone at the listening position, and put the system into test mode. The speakers

Fig. 3. JBL's MSC-1 is an accessory device that, after being calibrated with a computer, corrects for acoustical problems at lower frequencies.

emit a reference signal, which the microphone captures. A microprocessor analyzes the result, then automatically applies corrective equalization to the monitors to compensate for room deficiencies—it's a slick and useful concept that works much better than the old "use a graphic EQ with lots of bands" compensation approach (Figure 3).

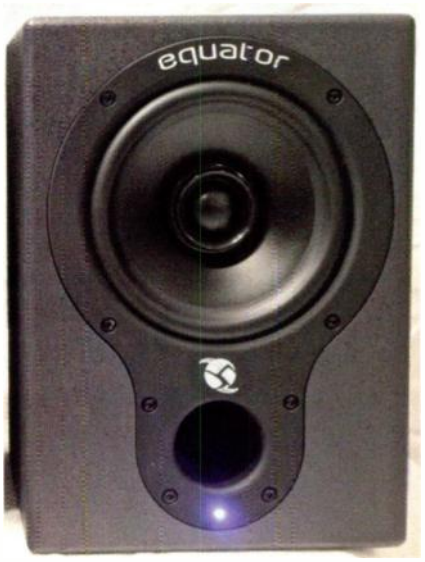
Other less-sexy but equally useful features for active boxes include *multiple input connectors* (such as XLR balanced and RCA unbalanced), along with a switch that lets you choose an operating level to match your mixer or interface (–10 or +4), thus avoiding unnecessary noise. With passive speakers, look for binding-post inputs with standard spacing so you're not limited to a particular cable or connector type; avoid spring-clip terminals.

Convenience features include a *front-panel power switch* and indicator (a surprising number of active models have the power switch on the rear, making it difficult to reach) and *volume control*. That last one is deceptively important because there may be situations where you're using an interface that lacks a monitor level control. The ability to link volume control between two active cabinets is a great help—you'll never have to worry if their levels are mismatched.

Most active speakers provide some sort of *overload and/or thermal protection*, generally a good idea. Passive speakers can also include protection, in some cases using an LED to warn you that there's a problem. Don't let a lack of protection circuitry in a passive speaker be a deal-breaker because if you really need it, you can always put a fuse inline with the cabinet's positive input terminal.

M-Audio's BX5 D2 is a bi-amped design, with Kevlar woofer and 1" silk-dome tweeter. A unique pinhole power LED makes finding the sweet spot easy.
m-audio.com

JBL's LSR2300 Series is a bonafide system: LSR2328P bi-amp monitor with 8" woofer (LSR2325P with 5" woofer for smaller spaces), LSR2310SP sub for response to 20Hz, and tight integration with the MSC-1 speaker controller/room-mode corrector.
jblpro.com



Sure, they make all kinds of quality speakers—but Equator's D5 studio monitors, which cost less than $300 per pair, have taken the audio world by storm.
equatoraudio.com

Ear Candy.

Two 312 discrete mic preamps
plus our new analog to digital converter.

The A2D from API.

It's a sight for sore ears.

www.apiaudio.com
301.776.7879

api

Meet My Knuckles A speaker cabinet's construction can tell you a lot, even if you can't see inside the box. Solid construction is a must. Rap on the cabinet with your knuckle and listen; you should hear a dull thud and no ringing or note. This indicates that the cabinet is well damped and will not produce a strong resonance.

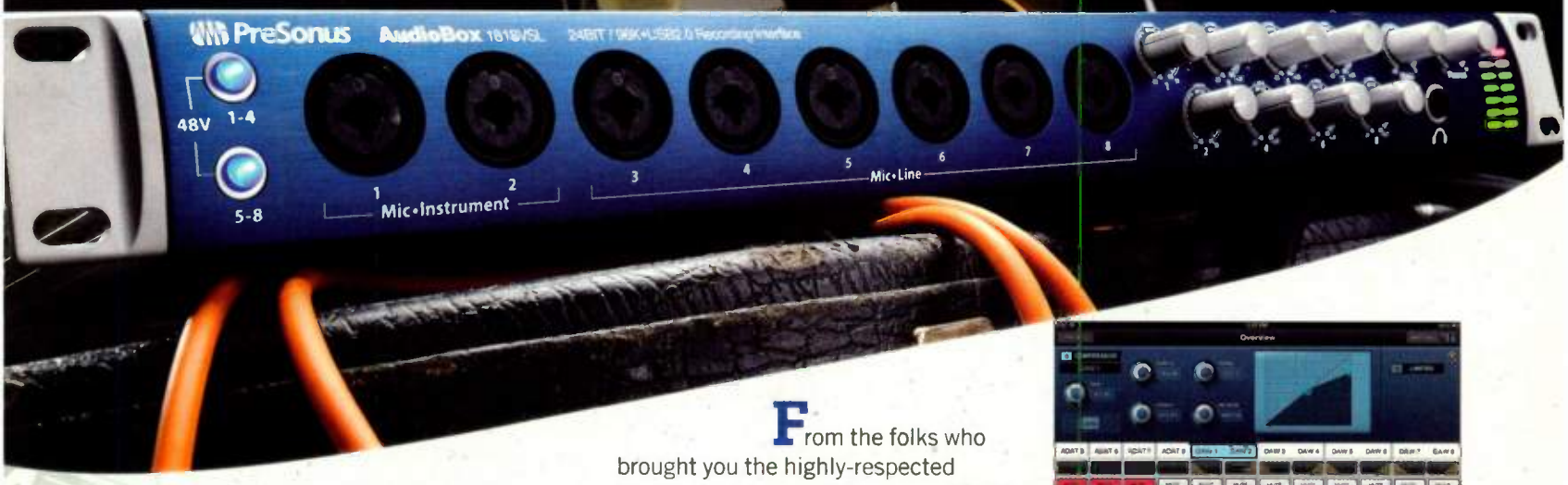
The front baffle may be "stepped" to compensate for the fact that the acoustic center of the woofer and tweeter are probably not physically aligned. A driver's acoustic center is generally at the voice coil; due to the size differential between a typical woofer and tweeter, mounting them on the front baffle puts the voice coils in vertical planes relative to your ears, creating a time delay that can produce phase issues or (in severe cases) comb filtering. A stepped baffle corrects this problem, while a co-ax driver avoids the issue completely. Active monitors may employ DSP to correct this problem electronically.

Although you can research specs and features to the point of exhaustion, the bottom line when choosing any monitors is the how they sound. So how do you determine if they sound "good," and if "good" means "accurate?" Start by calibrating your ears, then listen to the following important characteristics.

- Listen to expensive monitors, even if you can't afford them, so you have a reference target for your purchase.
- Fatigue changes your perception of how a monitor sounds, so be sure your ears (and brain) are fresh.
- You'll need recordings with which you are intimately familiar. They need to be CD quality; MP3s are not acceptable. A simple recording of the human voice can be very revealing, because we're all highly familiar with this sound.
- Listen to commercial releases that you've heard over multiple audio systems, and recordings you've recently engineered.
- At a comfortable volume level, listen for sounds you haven't noticed. For example, good monitors may reveal an orchestral bass drum sound you never heard before because inferior monitors didn't have sufficient bass response.

Focal's SM9, winner of a 2012 MIPA award, offers a unique take on speakers: It can serve as either a three-way or two-way monitor, thus allowing for different perspectives on the same mix. focal.com

PreSonus™ AudioBox™ 1818VSL.
The thoroughbred USB 2.0 interface that's more than just a one-trick pony.



Because the 1818VSL's Virtual Mixer has a whole StudioLive Fat Channel of EQ, compression, and limiting plus reverb and delay effects, you can use it live on stage as a one rack space StudioLive mixer with iPad® control!

From the folks who brought you the highly-respected FireStudio series interfaces, comes the same robust design and pristine sonics in a USB 2.0 design.

Same Class A, high-voltage, XMAX™ microphone preamps that can render the most delicate musical details.

Top-quality digital converters with –114dB dynamic range and JetPLL™ Synchronization to ensure optimal converter performance, better stereo separation and increased transparency.

And big-boy features like Sync (Word Clock) Out, 8-channel ADAT I/O, and S/PDIF I/O.

Monitor with natural-sounding effects and signal processing.

You'll make dramatically better recordings when you can hear real-time reverb, compression, and EQ in your headphones while tracking.

Easy to do if you have a digital mixer or outboard effects processors.

Impossible if you try to rely on your DAW effects plug-ins due to excessive latency (delay) that makes you sound like you're playing in a tunnel.

So we sliced up a StudioLive™ 16.0.2 digital mixer and put its Fat Channel processors into the AudioBox 1818VSL interface — and then added reverb and delay. Now you can monitor with effects…free from audible latency.

The interface you can also use as a live performance mixer.

On your laptop screen, the 1818VSL's 26 x 8 Virtual Mixer looks a lot like VSL* on a StudioLive digital mixer. And it is. Complete with scene save and recall, and 50 signal processing pre-sets.

Now, with AB1818VSL Remote for iPad®, a free download from the Apps Store, you can mix live while adding both effects and signal processing to your PA and monitor!

Get full info on our website and then visit your PreSonus dealer soon.

PreSonuSphere 2012
Second Annual Users' Conference
September 28-29, 2012, Baton Rouge, LA
http://presonusphere.presonus.com

PreSonus
Baton Rouge • USA
www.presonus.com

*Virtual StudioLive. Our remote control program for Mac and PC. ©2012, PreSonus Audio Electronics. All Rights Reserved. XMAX, FireStudio, StudioLive, and AudioBox are trademarks of PreSonus Audio Electronics. Weather in Baton Rouge at time of making this ad: a sizzling 95°. But nice by September for PreSonuSphere.

• Bass should be tight and well defined (not sloppy or muddy), and you should be able to distinguish the pitch of each bass note.

• High-frequency sounds should be crisp, but not piercing or shrill.

• If the speaker has a grille, listen with and without the grille, observing whether or not the sound changes.

• Recordings with wide dynamic range should be presented as such; dynamics should not be compressed.

• If you plan to evaluate many different models, compare no more than two pairs at a time, and take notes.

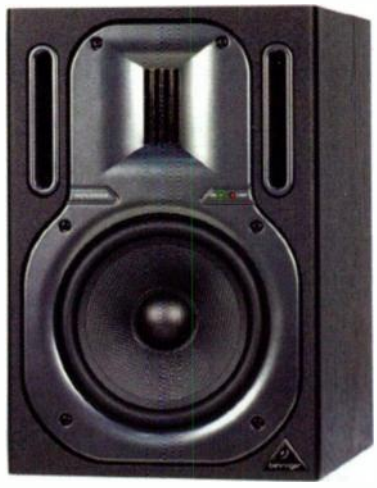
• Try to evaluate speakers in a room similar to your control room environment (that means no noisy music stores), including a work desk or mixing console if necessary—both of which have a huge impact on the sound of monitors.

• If possible, avoid listening in a room full of demo speakers because the drivers and boxes from the unused speakers can resonate at various frequencies, coloring the sound of your audition. The ideal situation would be a vendor allowing you an in-studio trial or a rental where the fee applies to the purchase price.

• If possible, do a mix on the speakers and find out if that mix translates well to other systems. If an in-studio trial won't fly, try to find a friend who has the monitors you are interested in purchasing, and spend a few hours listening to them.

There's one final, important caution: Don't be seduced by hyped highs and lows, because they'll wear you down over the course of a long workday. You want a speaker to be honest, not flattering. It's more important to know *exactly* what you're tracking than it is for the monitors to make you feel like you're listening through rose-colored earmuffs. ■

Steve La Cerra is an independent audio engineer based in New York. In addition to being an Electronic Musician *contributor, he mixes front-of-house for Blue Öyster Cult and teaches audio at Mercy College White Plains campus.*



The Truth series from Behringer has been updated, with a wider-than-usual "sweet spot." The B3030A shown here includes a ribbon tweeter, woofer with Kevlar cone, and limiter for low- and high-frequency overload protection.
behringer.com

If Your Mix Sounds Good on These, It'll Sound Good on Anything

HS80M

HS50M

HS50M
- 5" white polypropylene cone
- ¾" dome tweeter
- 70-watt biamplified power
- XLR and ¼" connectors
- Room Control and Frequency Response Switches

HS80M
- 8" white polypropylene cone
- 1" dome tweeter
- 120-watt biamplified power
- XLR and ¼" connectors
- Room Control and Frequency Response Switches

HS10W
- 8" long stoke 120-watt woofer
- Dual XLR and ¼" inputs
- 3 balanced XLR outputs (Mix, L&R)
- Phase switch
- Low/High cutoff

HS10W

HS Series Powered Monitors

The new HS Series powered monitors were designed to be true stucio reference monitors in the tradition of the famous NS10MS. That means, mixes that sound good on Yamaha HS speakers will sound good on anything. In fact, that's the ultimate test of a reference monitor. Even better than that, HS series speakers not only sound good, they look great, too.

The HS10W powered subwoofer complements the HS speakers and easily handles today's bass-enhanced music or the most dramatic surround effects. The HS10W subwoofer uses a bass reflex design cabinet that maintains high efficiency and low distortion. You can combine HS50Ms or HS80Ms with the HS10W subwoofer to create different 2:1 (stereo) and 5:1 surround sound systems. So check out the new standard in near-field reference monitors at a Yamaha dealer near you.

The New Standard in Near-Field Monitors

YAMAHA

 www.4wrd.it/hsem

Join us on Facebook http //4wrd.it/MPFB

Peavey's MuseBox packs the power of a computer dedicated to musical applications.

Peavey MuseBox

Tone module meets processor meets guitar rig meets drums

BY CRAIG ANDERTON

SUMMARY

STRENGTHS: Processes and mixes two audio signals and virtual instruments. Roadworthy, compact. Useful mix of plug-ins and instrument/processor presets. Can expand with additional plug-ins. Painless user interface.

LIMITATIONS: Controlling with external computer is slow compared to onboard editing. One headphone jack. Expandability limited to plug-ins adapted to the MuseBox platform.

$1,399.99 MSRP, $1,000 street
peavey.com

APPARENTLY, MUSEBOX couldn't decide what it wanted to be, so it decided to be as much as possible. A Muse Receptor offspring, it's basically a computer disguised as a roadworthy, compact 2U half-rack module that offers two audio inputs with processing, two channels of virtual instruments you drive via the MIDI input (USB or 5-pin), and the ability to mix all signal sources and process the mixed output.

Like Receptor, the MuseBox architecture runs plug-ins—six instruments and 13 processors, although most are multi-purpose, so they do more than you might initially think. You can't just install any plug-ins you want, but MuseBox is expandable with additional Peavey-authorized plug-ins that load from a CompactFlash card port.

Inside and Out MuseBox runs Linux on a dual-core processor, with 2GB RAM and an 8GB solid-state drive. The VGA video out and four USB ports allow hooking up a monitor and mouse, then accessing the internal software to re-order plug-ins, open plug-in GUIs, and more. You can also run Mac/Windows software and control MuseBox via Ethernet, but the software is more sluggish than running from the MuseBox itself.

Two front-panel mic/instrument Neutrik combo input jacks have associated level controls, along with switchable +48V for the pair. Or, use two rear-panel TRS 1/4" line inputs. Two knobs provide parameter navigation/tweaking, while eight switches cover edit and setup. For monitoring, a front panel headphone jack supplements the two rear panel 1/4" unbalanced outs; there's also a single- or double-footswitch jack.

Using It Guitarists and bassists can use the included version of ReValver HP (and multiple other processors) to create a portable guitar rig—while also feeding in a mic for vocal or instrument processing. Keyboardists can split/layer the two virtual instruments for a very capable tone module, and drummers can hook up a drum controller—instant electronic drum "brain." But MuseBox really shines when you take advantage of all of the above; for example, a duo with a singing guitar player and keyboardist wouldn't need anything more than MuseBox, a MIDI controller, and P.A. system. (Note that it takes a few seconds to load instruments and presets, as the RAM has to be flushed and reloaded.)

MuseBox is also a versatile studio tool, with *hundreds* of quality instrument presets—drums, keyboard, bass. brass, pads, loops, sound effects, you name it. You can even use a synth controller that generates sound, and patch its audio outs into the audio ins while driving the internal sounds via MIDI. Furthermore, as most DAWs have the ability to use external processors as inserts, you can bounce your tracks through the wide variety of processing; there are hundreds of presets, and like the virtual instruments, they're tagged into categories so you don't have to hunt too hard to find them.

While it's useful in the studio, I see MuseBox's "killer app" as onstage—few devices offer this kind of power, at this price, and can handle both solo musicians and small ensembles. Peavey's record of tech innovation has sometimes flown under the radar, but MuseBox is their latest example of tech innovation in a powerful, intuitive package. ■

WHO SAID THREE'S A CROWD?

INTRODUCING THE NEW EVENT 2030.

EVENT®

eventelectronics.com/2030

The AudioBox 1818VSL interface includes the AudioBox VSL mixer application.

PreSonus AudioBox 1818VSL

Integrated software/hardware audio interface for stage or studio

BY CRAIG ANDERTON

SUMMARY

STRENGTHS: Cost-effective. Combines a sophisticated virtual mixer with interfacing capabilities. Stage/studio friendly. Fat Channel effects strip. All-metal enclosure. XMAX preamps live up to their rep.

LIMITATIONS: Single headphone out. Digital outputs don't have Fat Channel effects. Can't enable per-channel phantom power.

$629 MSRP,
$500 street
presonus.com

ADDING DSP to an interface isn't new, but the AudioBox 1818VSL does so in a uniquely PreSonus way by essentially cross-breeding a computer interface with a StudioLive mixer.

The Interface This solidly built, 1U USB 2.0 interface provides two mic/instrument ins, six mic/line ins, ADAT, and co-ax S/PDIF. Individually assignable outputs include eight line outs, ADAT, and coax S/PDIF; the S/PDIF out can mirror the Main mix. The ADAT I/O offers eight channels at 44.1/48kHz and four at 88.2/96kHz (The unit tops out at 96kHz.) Additional outs include two monitor outs and a single headphone out; both have level controls, as do all inputs.

Phantom power is enabled in two groups of four (1–4 and 5–8). There's also 5-pin MIDI I/O, and word clock sync out. The power supply is a global (100–240V) "line lump" type.

The Software The AudioBox VSL (Virtual StudioLive) cross-platform software offers a virtualized "Fat Channel" effects suite (identical to the StudioLive 16.0.2 mixer version) for the analog and digital ins, as well as all audio outs. The effects roster includes lowcut filter, phase reverse, compressor with separate limiting option, and 3-band EQ. Upper and lower EQ bands are switchable from peak to shelf; the middle band offers a Q switch (high or low). You'll also find mono delay, stereo delay, and reverb effects that can insert into two effects slots for the four stereo analog outs.

The software's GUI looks like the VSL app for StudioLive mixers—it's essentially a complete virtual mixer that controls the 1818VSL interface. The software incorporates different views, pages, sends, plenty of presets (or make your own), and stores "scenes" that take a snapshot of the mixer settings. A free app allows for iPad wireless remote control.

Sound, Studio, and Stage Features mean nothing without sound quality; the AudioBox's XMAX Class A, all-discrete preamps with 30V rails are getting widespread recognition for their excellent quality (just search "XMAX" on forums), and the Fat Channel effects are equally favored by users.

PreSonus claims "virtually latency-free monitoring," and while this may get the skeptics' attention, it's true. (Line 6 did something similar with ToneDirect monitoring.) As a result, there are three main applications. One is using the outs for cue mixes and monitoring with effects, which will make many musicians happy—especially the temperamental vocalists who want reverb, compression, and EQ in their cans.

Another application is live performance with laptop-based acts. You can process inputs on the way in to your DAW, and process outs going to the house; with the VSL mixer app and your DAW's mixer, you don't need external processors, mixers, or preamps. (Note that the 1818VSL comes bundled with Studio One Artist.)

The third application is recording with effects. Being able to apply limiting for live recordings is invaluable, but the effects are good enough that if you want to record with, say, compression on the bass, you won't have to re-create the sound while mixing.

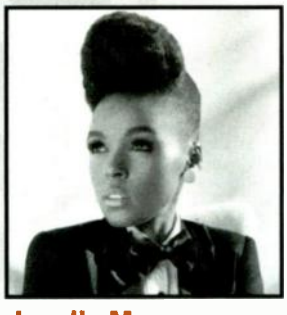
So here's the bottom line: Couple the quality interfacing with the mixing, live monitoring, presets, and even great documentation, and you have quite the deal—especially at this unexpectedly low price. ■

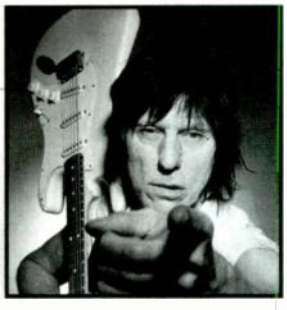
$150,000
IN CASH AND PRIZES

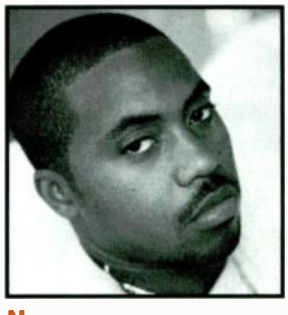
INCLUDING A GRAND PRIZE OF $25,000
CASH AND $20,000 IN PRIZES
22 CATEGORIES AND 68 WINNERS

ISC JUDGES INCLUDE:

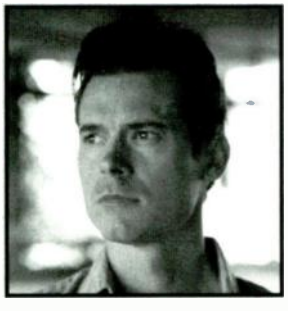

Tom Waits


Janelle Monae


Jeff Beck


Nas


Tegan & Sara


Ketch Secor
Old Crow Medicine Show


Derek Trucks &
Susan Tedeschi


Mark Foster
Foster The People

ADDITIONAL JUDGES INCLUDE: McCoy Tyner • Bernie Taupin • Duran Duran • Bruce Hornsby • Black Francis (The Pixies) • Suzanne Vega • Martina McBride • Michael W. Smith • Wynonna • Darryl McDaniels (Run D.M.C.) • Anthony Hamilton • Avicii • Robert Smith (The Cure) • Keane • Jeremy Camp • Basement Jaxx • Bill Evans • Anoushka Shankar • Los Temerarios • Brian Setzer • Alejandro Sanz • Gerald Casale (Devo) • Monte Lipman (President, Universal Republic Records) • Dan McCarroll (President, Capitol/Virgin Label Group) • Ed Vetri (President, Wind-Up Records) • Richard Stumpf (President, Imagem Music US) • Jonas Nachsin (President, Roadrunner Records) • and more...

Marshall AMPLIFICATION · Lowden GUITARS · Berklee COLLEGE OF MUSIC · Grooveshark · PreSonus · sonicbids · FIRST AID FOR THAYERS Vocal Power Pack DIVAS, BELTERS & SCREAMERS

WWW.SONGWRITINGCOMPETITION.COM

Fig. 1. Damage offers lots of cool-looking screens, so it's hard to decide which ones to show. This shot displays part of two instruments: the top one is set to the Stage page, and the lower to the EQ/Filter page.

Heavyocity *Damage*

Cinematic percussion library

BY CRAIG ANDERTON

SUMMARY

STRENGTHS: Superb sound quality and production. 30GB of material (uncompressed). VST/AU/RTAS, 32/64-bit. Lots of realtime manipulation options. Useful processing. Easy to use on a basic level.

LIMITATIONS: Exploiting *all* of the included features means a learning curve.

$339 MSRP
native-instruments.com

ATTENTION, SOUND designers: I know you have to meet a deadline, and don't have time to read this review. So, here's the short form: *You want this. Damage*, distributed by Native Instruments, is an instrument for Kontakt 5 (full version or the free "player") that includes hard-hitting loops and percussion kits. I expect to be hearing both in a lot of movies.

Get Looped There are two loop flavors. Loop Menu presets are sorted into four construction kit-type categories with acoustic, industrial, "mangled" pop, and "tech" inflections, but which never stray far from mayhem. Each has a "full" mapping that fills the keyboard with loops, along with three additional mappings of individual loop elements. The full mappings facilitate quick soundtrack assembly, while I found the elements useful in more standard musical applications.

Single Loops deconstruct the loops into slices triggered by MIDI notes, like REX files. You can play the individual slices from the keyboard, or drag the MIDI pattern into your DAW, then stretch or re-arrange slices.

Get Hit *Damage* has 58 percussion kits, arranged in five groups: Epic Organic Drums, Ethnic Drums, Metals, Hybrid FX Kits, and Damage Kits. The last two have slightly different interfaces (described below) than the first three.

Get Crazy If *Damage* stopped here, it would still be a way-cool sounding library. But it's a *virtual instrument*, and each of the loops and kits has three pages of additional processing.

The main page has five master effects (distortion, lo-fi, reverb, delay, and compression) and a four-stage amp envelope. Another page, EQ/Filter (Figure 1), offers three-band parametric EQ, a "Punish" knob, highpass filter, and lowpass filter (both with resonance controls). With kits, these controls can apply to a complete preset as well as individual drums.

As to differences among the third pages, with Loop Menu presets, this page provides eight effects, enabled/disabled by eight MIDI notes, whose parameters you can program—*very* useful. With Single Loops, a Loop Modifier page provides realtime loop modification options, played by MIDI notes—randomize, reverse, drop, or freeze slices; you can also pan individual slices, and do other tricks. It's deep.

For some kits, the third "Stage" page lets you move individual drums around in a soundstage with 35 discrete positions. This feature goes *way* beyond panning, as ambience comes into play when the instruments are moved "further away." It's brilliant. Other kits include an effects-programming page that is configured like the one in Loop Menu presets.

The main page for kits includes a mixer section with sliders for Close (miking), Room, and Hall except for the Hybrid FX and Damage kits, where most kits replace the mixer with an Amp Sequencer (basically a step sequencer for gating; you can select the sequencer patterns with MIDI).

Get Damaged *Damage* is *inspiring*. The more time you invest in learning its features—especially realtime manipulation—the more amazing the results.

If you need cinematic percussion, *Damage* is a must-have. But I wouldn't be surprised if someone wrote Peter Gabriel-meets-Trent-Reznor music around it, and took over the world. ■

LUST new gear

1

Best Service

Peking Opera Percussion

Sound library/instrument

$139

HIGHLIGHTS Drum and percussion instruments used in traditional Chinese Opera • 3GB library includes contemporary Chinese percussion instruments • Best Service Engine 2 provides an easy-to-use interface and realtime control over essential parameters • playable MIDI templates include the intricate rhythm patterns of traditional Chinese opera

TARGET MARKET Recordists and songwriters seeking unusual percussion sounds

ANALYSIS One way to differentiate recordings is to use novel sounds; while this library is useful for Chinese-related soundtracks, it can add exotic flavors to any type of music.

soundsonline.com

2

Lauten Audio

FC-387 Atlantis

Large-diaphragm condenser

$1,599

HIGHLIGHTS 31.25mm dual large-diaphragm pressure-gradient transducer mic • multiple switches for functional versatility • polar-pattern switch offers cardioid, omnidirectional, or figure-8 patterns • solid-state FET internal preamp • –10dB and +10dB switch • voicing switch provides three timbres (Gentle, Neutral, and Forward) • individually hand-tuned capsule

TARGET MARKET Engineers who benefit from having a single mic suitable for multiple sound sources

ANALYSIS It's getting to the point where it's not enough for a mic to offer a single "sound." Atlantis' configuration options place it in a new generation of versatile mics.

lautenaudio.com

3

Native Instruments

The Giant

Virtual piano

$119

HIGHLIGHTS Virtual piano instrument based on the Klavins Piano Model 370i, the world's biggest upright piano • compatible with Kontakt 5 and the free Kontakt Player • 40 production-ready presets • Includes two versions: "Day," for multiple genres and styles, and "Night," featuring unconventional samples suited for atmospheric scores, sound design, and avant-garde productions

TARGET MARKET Keyboard players who want a huge piano sound for performance or recording

ANALYSIS You could never own dozens of physical pianos, let alone one like "the Giant"—but sampling technology makes accessing these sounds possible.

native-instruments.com

4

Hercules

DJControl Instinct

Budget controller

$129.99

HIGHLIGHTS Bright orange and red backlighting makes controls easy to identify, even in low-light conditions • two pressure-detecting jog wheels allow scratching without latency, scrolling within tracks, and pitch-bend control • weighs less than 3 pounds • two RCA outs and one 3.5mm stereo mini-jack out • independent 3.5mm out for previewing tracks • DJUCED bundled DJ software • USB port for Mac/PC connection

TARGET MARKET Budding laptop DJs, particularly those requiring compact, low-cost setups

ANALYSIS DJControl Instinct opens up the world of DJing to a much wider audience, yet it's certainly no toy.

hercules.com

All prices are MSRP except as noted

5
Heil Sound
Pro Set 3
Headphones
$109

HIGHLIGHTS Unique driver-mounting system provides high outside-noise rejection • 40mm neodymium magnets and voicecoils • lightweight, ergonomically-designed cushioned headband • detachable cable design; ships with three cables to accommodate an assortment of outputs • high SPL-handling capability • folds for compact transport • replaceable ear cushions

TARGET MARKET Touring pros, musicians, and broadcast/recording studios

ANALYSIS Heil Sound has built no-nonsense headsets for the amateur/ham-radio market for decades; the Pro Set 3 brings the same durability and articulation to pro-audio applications.

heilsound.com

6
Source Audio
Dual Expression Pedal
Footpedal controller
$149

HIGHLIGHTS Durable cast-aluminum housing • dual TRS expression isolated outputs allow controlling two effects units simultaneously • compatible with any effect with a TRS expression input • range-adjust knob • 1/8-inch, 4-conductor output compatible with all Soundblox/2/Pro pedals and Hot Hand • includes 1/4-inch TRS connector cable and 1/8-inch Sensor Output cable

TARGET MARKET Keyboard and effects control for stage or studio

ANALYSIS An expression pedal is necessary to get the most out of effects and keyboards. Source Audio's take differs from the norm, as it allows controlling two effects simultaneously.

sourceaudio.net

7
Elysia
nvelope 500
Stereo dynamics processor
$1,049

HIGHLIGHTS Provides direct control over a signal's envelope by shaping the attack and sustain intensity • Dual Band mode offers individual frequency controls for attack and sustain • true dual-mono or linked stereo operation in Full Range, Dual-Band or EQ mode • 2-space 500 Series format

TARGET MARKET Recordists requiring a high-end, compact dynamics processor capable of handling various types of signal sources

ANALYSIS The days of the traditional compressor with limited options are numbered, as companies like Elysia create hardware units with more transparency and variability, such as the nvelope500's impulse-shaping abilities.

elysia.com

8
Cascade Microphones
Fat Head II
Active/passive ribbon mic
$599

HIGHLIGHTS Internal switch chooses passive or active mode • active mode requires phantom power and adds up to 25dB gain • high-gain, low-noise differential amp circuit • ribbon is isolated from the mic preamp for less ribbon-loading coloration • handles 135dB SPL • passive mode supports high-gain preamps • low-impedance output allows long cable runs • ribbon element is resistant to phantom-power damage

TARGET MARKET Those desiring a ribbon mic with two distinct identities

ANALYSIS Fat Head II is part of a "ribbon resurgence" that encourages variations on standard designs.

cascademicrophones.com

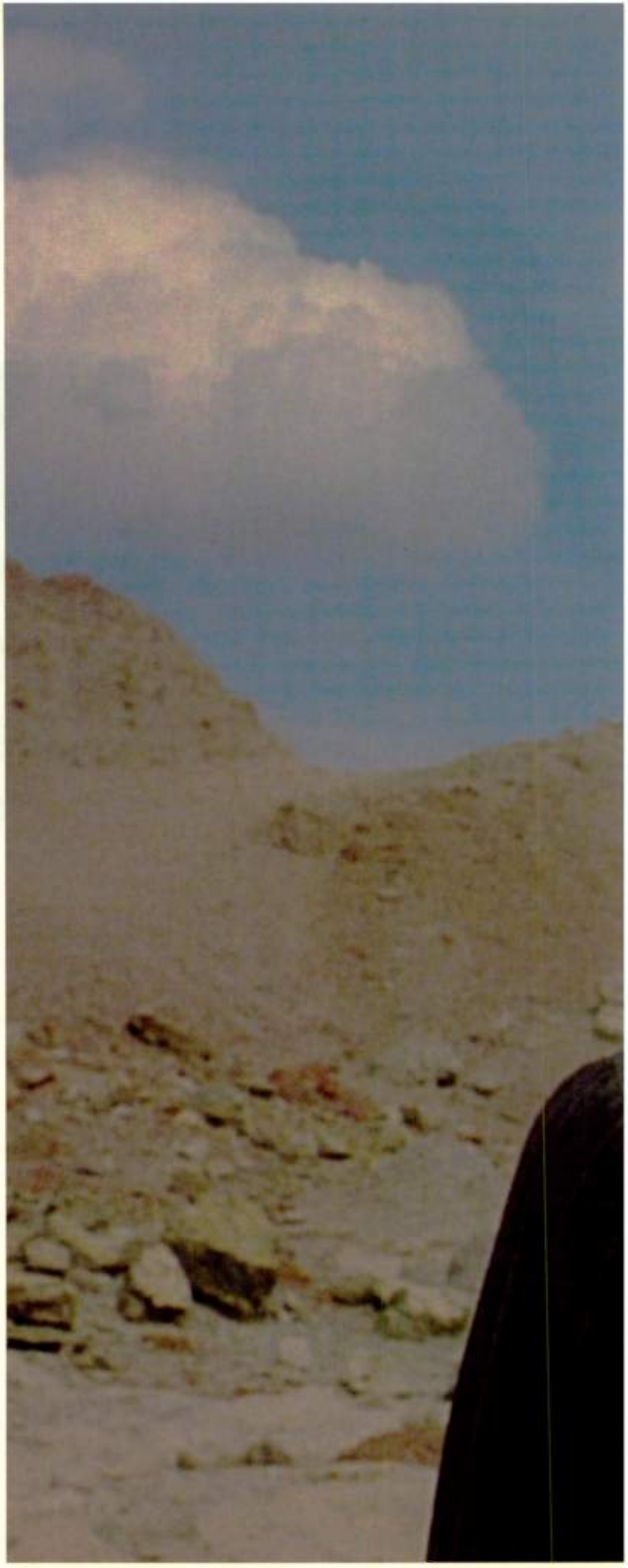
LEARN

master class

Scoring Americana

Acoustic instruments tied to American folk traditions can be effective tools for film scoring—whether the project is traditional or completely original

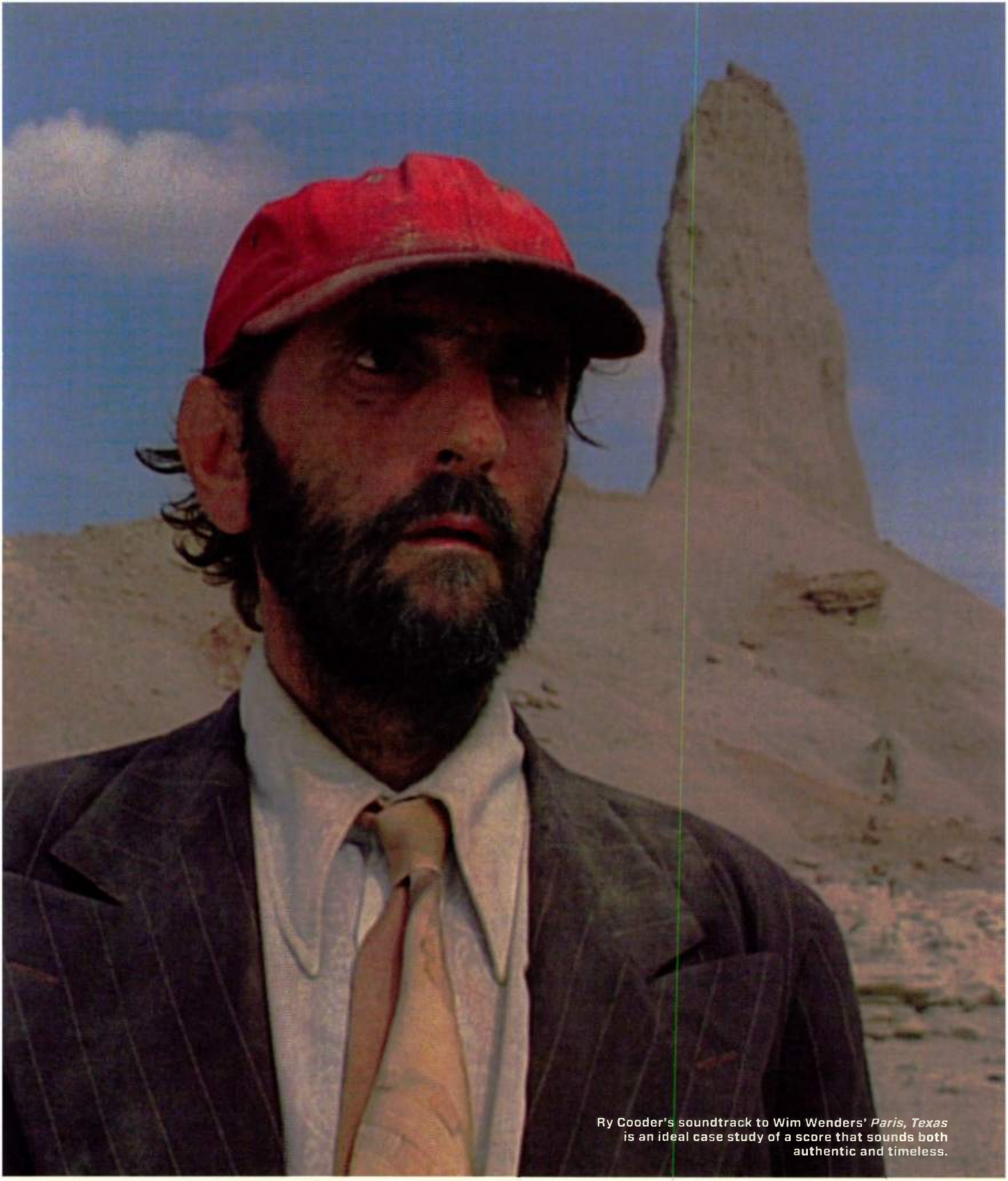
BY EMILE MENASCHÉ



THINK ABOUT the phrase "music for film" and it's likely that the sounds coming to mind are either symphonic or electronic. Your imagination may conjure up sustained strings, cymbal washes, timpani, majestic horns, and their electronic equivalents: synth pads, stabs, kick drums with enough rumble to give a subwoofer a hernia, and—my personal favorite—the throbbing synth bass. Thanks to sample libraries, digital composers (most of whom seem to be keyboardists) have easy access to thousands of such sounds.

But playing non-keyboard instruments—and more important, knowing how to write for them—can lead to plenty of scoring opportunities. Even better, your ability as a player (or the ability of good session players you hire) can make a much stronger emotional connection than any sampled sound.

Because they're so strongly rooted in our collective frame of reference, instruments from our acoustic traditions can bring the audience into a story with an immediacy that orchestras and electronica can't match. They work well in foreground and background, solo and as part of an ensemble, and in both traditional and non-traditional settings.



Ry Cooder's soundtrack to Wim Wenders' *Paris, Texas* is an ideal case study of a score that sounds both authentic and timeless.

Instruments from our acoustic traditions can bring the audience into a story with an immediacy that orchestras and electronica can't match.

So where are they best used in film? The obvious answer might seem to be a setting that calls for folksy instruments: a western or other American period piece, for example, or something set in the country. That may be true on the surface, but it doesn't describe their full potential.

While many of the ideas I'm about to discuss apply to any instrument and idiom, I'm going to illustrate this concept by using acoustic guitar, mandolin, banjo, fiddle, harmonica, and bass as the main members of our scoring orchestra. You could include flute (or a folk equivalent like tin whistle), hammer dulcimer, ukulele, Jew's harp, and yes, even some keyboards. Because these instruments have all been used in various forms of American roots music, I like to think of this approach as "scoring Americana." But as you'll see, specific genre matters less than the relationship between the sounds, parts, and the onscreen action.

What Does *That* Sound Mean? When you're being considered for a film score, one of the first things you should ask the director and producer is what they want the music to evoke. Are they looking to convey the internal feelings of one character, set an overall mood of the scene as it relates to the complete story, or tell the audience that they're looking at a specific historical time and place? The answer should lead to two practical follow-up questions: How "authentic" does each cue need to sound? And what does "authentic" even mean?

Ry Cooder's soundtrack to Wim Wenders' *Paris, Texas* makes a good case study. (See "Hear It" on page 73 to learn where to listen to much of the music discussed here.) Check out the piece "Brothers," which starts with a spacious fingerstyle guitar part followed by a

Sound Ideas!

To take full advantage of your acoustic soundtrack, it's important that the players produce great tone, and that you deliver a mix the client can really use.

1) If you're recording session players, start by asking them how they've recorded in the past. This is especially important if you've never (or rarely) recorded the instrument in question, but even if you *have* recorded a particular kind of instrument many times, it's a good idea to at least try it the player's way. Remember, with acoustic instruments, the sound is a combination of the instrument itself *and* the player's technique. Two people might sound completely different on the same model of guitar or fiddle.

2) Control dynamics—but don't overdo it. Almost everything we hear these days seems to be compressed flatter than week-old beer. Big dynamic peaks don't work well in soundtracks—they always seem to cut through at the wrong time—but a pumping compressor may be worse. So unless you're instructed otherwise, go light on the limiting, knowing that the music editor will probably apply more dynamic control in post.

3) Print with and without effects. That "cathedral of doom" effect may actually sound really good on your guitar, but too much echo can tie the filmmakers' hands. Remember, the film scene itself may have some ambience. So avoid using time-based effects on track inserts and apply them using sends and returns. Print a version with the mix you like, but then use your DAW's buses to print *stems*—separate audio files with the dry mix and for each effects return. As long as these files have the same start time and length, the music editor will be able to load them and create his or her own blend.

4) Offer to print individual tracks. Speaking of stems: If you're mixing multiple instruments, ask if the filmmakers want separate audio files for each one—in addition to the entire mix. This way, they can adjust the balance as needed without making you go back and remix.

5) And incidentally . . . Because a film's theme music and underscore are part of a larger artistic statement, they don't necessarily have to reflect the same era and setting of the film's story. That's not the case with incidental music, which is designed to sound like music the characters onscreen are either hearing or playing.

Incidental music is really about believability. The instrumentation and sound should reflect the scene as accurately as possible. So if a character is listening to country radio in the 1940s, the guitar shouldn't be recorded direct. (Acoustic pickups were decades away.) You should never hear an electric bass. (It was invented in the 1950s.) And the mix should be mono! But period accuracy should be within reason—in other words, I don't think you're going to get away with using 30 seconds of incidental music as an excuse to go buy some tube mics and an old reel-to-reel machine. But, nice try!

Products on command, knowledge on cue.

www.BandH.com

A wealth of options at the tip of your finger. Find exactly what you need through advanced search filters and Live Help. With in-depth product demos, podcasts, and customer reviews, you'll know exactly what you're getting. Knowledge is expansive. Get more of it at B&H.

Download from Android Market

Available on the App Store

Subscribe to the B&H catalog
www.BandH.com/catalog

Visit Our SuperStore
420 Ninth Ave, New York, NY 10001
800-947-5509
Speak to a Sales Associate

B&H PHOTO - VIDEO - PRO AUDIO
The Professional's Source™

Tenor banjo was used to contrast 5-string banjo in "Dueling Banjos" in *Deliverance*.

strong slide guitar theme. As the piece evolves, Cooder's guitar gets some support from droning strings and percussion. But it's the slide that stands out—and that's also the voice that carries over to the even simpler piece, "Nothing Out There."

Made in 1984, *Paris, Texas* isn't a Western or a period piece. It's not set in the woods. It's a contemporary look at themes of dislocation and loneliness. The action moves from the desert to big cities like Los Angeles and Houston. Yet the score sounds both authentic and timeless—it works as well today as it did nearly 30 years go. (Compare that to Vangelis' synth-y score to *Blade Runner*—it's cool, but sounds oh-so early '80s.)

Cooder's approach influenced my score for James Spione's *American Farm* (2003), a feature-length documentary about changing times at a family farm in upstate New York. The documentary includes contemporary scenes of the farm and interviews with the farmer and family members discussing times past and present. For the contemporary scenes, we used mostly solo guitar playing single-note melodies to underscore the beauty and emptiness of the land. The film used more structured music to recall the farm's earlier, happier history. Here, the guitar moved to the background to support a fiddle melody. When we returned to the present, the guitar was sparse again: It was like a link to the past music that was down to a small remnant. (You can hear examples on the film's trailer at youtu.be/OOd-VyBtTLE.)

You can create something new by contrasting familiar points of reference, especially if you're willing to study the sounds and styles of the past, as well as keep current. Cooder drew from Blind Willie Johnson's classic "Dark Was the Night, Cold Was the Ground," in *Paris Texas*, evoking that song's feeling without paying too much homage to it. Had he gone too far into any particular blues style, he'd have disconnected the characters from their onscreen reality. In the same way, you might try scoring an urban character by using a solo guitar (or harmonica, or whatever instrument you choose) against, say, a pre-recorded drum loop or a synthesizer bed. The guitar might represent the character's internal thinking, the percussion might be the world around him.

Stylistic juxtapositions can also produce comic results. Carter Burwell's use of banjo, ukulele, jaws harp, and yodeling in parts of his *Raising Arizona* score is a great example of how effective the "fish out of water" approach to arranging can be. The overall score itself isn't rootsy or traditional, but those down-home instruments reinforce the absurd fantasy world that the Coen brothers created in the film.

Get Real! If, however, the setting is supposed to be more rooted to clearly defined time and place, the instrumentation and playing style should be more accurate and idiomatic. It doesn't necessarily have to be *exactly* from the film's era, but it should be close enough to convince the audience.

Jay Ungar's famous score for Ken Burns' *The Civil War* is based on a piece Ungar wrote in 1982 called "Ashokan Farewell." Although it wasn't written specifically for *The Civil War*, the waltz—which is based on a Scottish lament—sums up the whole period without being tied to a single point of view (the way something like "Battle Hymn of the Republic" might have been). In the best-known recording, a plaintive violin goes solo for about a minute before a guitar comes in for gentle support. It's as simple as arranging gets, but it's incredibly effective.

No matter what, it pays to do some research. I faced this when scoring a documentary series called *Our Island Home*, set in Virginia's Barrier Islands. The producer wanted banjo. I play the guitar. No problem: Borrow a banjo and play it. Heck, even a sample *could* work.

But the banjo wasn't there to be a sonic texture—it needed to remind people of the culture of those islands. My first attempts sounded like a guitarist playing the banjo. Fail!

Homework time. Should the part be played on the five-string or four-string banjo? Bluegrass style or folk style? I had to learn how to tune the instrument—five-string banjos are usually tuned to open *G*, and the short fifth string is the highest. I had to get used to playing with metal fingerpicks, which contribute a lot to the trademark sound. But once I got those details down, it worked. I didn't have to play like Earl Scruggs, but it helped to sound at least like I'd *heard of* Earl Scruggs.

Mandolin is another instrument that found its way into *Our Island Home*. It's tuned in fifths (*G*, *D*, *A*, *E*, low to high, just like a violin) using unison pairs of strings—making it a great tool for writing violin parts. It's bright sound works well for intricate lead lines, but it's also a great rhythm instrument thanks to its percussive attack. Most

players choose a small pick using an alternating picking motion for single-note phrases and a snapping downbeat motion for rhythmic chords. Mandolins don't have much natural sustain, so players hold long notes using a tremolo technique.

For fiddle, the most authentic sound may not come from a traditionally trained player. You (or your session player) should avoid smooth classical bowing techniques in favor of rougher attack of the folk fiddler. Slides, drones, and double stops are also really effective. You might also want to minimize vibrato, saving it up to add drama to the longer notes.

Breaking the Mold If you plan to use acoustic instruments (or their electric counterparts, for that matter), it also pays to experiment some non-standard techniques—in other words, to break all the established rules. I've played the guitar with pencil erasers, used banjo to play a blues, created beds by scratching a violin bow between the bridge and tailpiece, used a cello to fake upright bass (and a bowed bass to play cello parts)—and they've all worked.

Alternate tunings can be especially effective. On guitar, open tunings evoke folk styles and can be used for both slide and standard playing. Modal tunings like DADGAD evoke more exotic sounds. Tuning a step or two below concert or using a capo way up the neck can change the character and tonality of the instrument in a range of interesting ways. And did you know that banjo players will tune the *B* string down to *B*-flat for minor chords?

Finally, it's always fun to get your hands on the less-common members of an instrumental family. Viola play many of the same parts as violin yet can sometimes lend a richer timbre; 12-string and baritone guitar can be nice alternatives to the standard six-string. Grab a string and a broomstick to make a washtub bass. (You can fix the pitches with your DAW!) Tenor banjo offers a good contrast to the 5-string banjo—something used to great effect in "Dueling Banjos," which appeared in the soundtrack for *Deliverance*.

HEAR IT!
Spotify users can check out a playlist I've created called "Scoring Americana" at tinyurl.com/scoring-americana to hear some examples from well-known film scores. Links to other music examples will be listed in the text, as well.

Play it Up How good do you have to be to play these acoustic parts yourself? That depends on context. I reserve featured parts for the instrument I play best: guitar. I'll play banjo, harmonica, and mandolin in an ensemble setting, but only after I bone up on the correct techniques (and consult with friends who can tell the difference). Simple piano or accordion parts are no problem, but more complex ones get farmed out to session players. I played the viola and violin as a kid and can still find my way around. I've used them to help write better idiomatic parts for session players, but I've also recorded them with the help of Melodyne, which can at least help with pitch accuracy. (Which leads me to an aside: Grab that instrument you played in school and practice it a little. You may never get really good again, but you'd be surprised at how useful it can be.)

A pitch-to-MIDI program like Melodyne can also be a lifesaver if you don't have access to a lot of acoustic instruments. Try improvising a violin part using an instrument like guitar—just try to be conscious of the violin's natural range and tuning. Record (or import) it into Melodyne and export the results as a MIDI file. Use the MIDI file to trigger a sampler. It may take some editing, but you'd be surprised at how well that works.

Recording quality is just as critical in film scoring as it is in any kind of session. There's no one correct approach here; it's up to you and—even more important—the director, producer, or music editor who'll have to incorporate your music into the film's overall soundtrack.

When you're asking a solo instrument to support a stretch of onscreen action, the more faithfully you can capture all the subtle characteristics of that instrument, the better.

Sending a pickup through a DI and directly to disk works—you can hear that all over TV music—but if you want to draw upon the instrument's full emotional power, good microphones are more effective. Consistency is important, especially if you're recording a series of similar cues for a film score. Any one instrument's tone shouldn't change radically from cue to cue unless it's in a completely different mix. So take note of mic positions and preamp settings and be disciplined about returning to them for every session.

On an instrument with a broad frequency spectrum like the guitar, it pays to capture the lows and low midrange of the body, especially when you're recording a sparse part. When it comes to melody, finger-style parts seem to blend better than flat-picked parts. While others may prefer small-diaphragm condensers and/or ribbon mics, I find large-diaphragm condensers very effective, especially on solo melody parts. Try a brighter mic like the AKG 414 (cardioid) pointed toward the neck and use a warmer mic like the Audio-Technica AT4047 to capture the body.

Strummed chords can benefit from a brighter sound. You can change the tone without moving mics by simply switching to

Read your copy of *Electronic Musician* the way you want!

Electronic Musician is now available in print or can be found in your iTunes store. Choose your subscription to Electronic Musician today – print OR digital!

Electronic Musician defines the technology, techniques, and creativity that today's musicians need to stay at the top of their game—both in their home studios and on stage. Choose your subscription method and gain access to the #1 resource for musicians who want to record, produce, and perform better music.

Go to **www.myemmag.com** for a print subscription

For the iPad version you can either search in your iTunes store OR go to **www.emusician.com/ipad**

a lighter pick. You might also mix in some DI sound from the pickup. (But if you do, record it on its own track and only add as needed.)

Unfortunately, even if you've got a lot of experience with guitar, it may take some experimenting to get good sounds on other acoustic strings. Banjo can be especially hard because it can sound harsh, especially when close-miked. Some people use condensers, but you might instead start with a dynamic like the Shure SM57, 12 inches or more from the instrument, pointing between the player's right hand and the neck.

On mandolin, small-diaphragm condensers capture the attack nicely, but you can also get pretty good results with a large-diaphragm condenser, positioned about a foot away, or a combination of mic and pickup. Ukulele can be recorded in pretty much the same way, though you might move the mics a little closer to capture the instrument's intimate character.

Fiddle can sound really scratchy and nasal when it's miked too closely, but that might be just what you want for a folksier sound. For more bow attack and a bright tone, try a condenser 8–12 inches away, above and pointing at the bridge. For a warmer, richer sound, move the mic two or more feet from the instrument.

Assuming you're not going for an electric Chicago blues sound, harmonica should be recorded with the mic on a stand, and the player standing at least a few inches away. Don't eat the mic: You might get a little more breath than you want (though this is easily edited with a DAW).

Finally, there's no reason you can't use your acoustic instruments with digital tools. Years ago, I read something in Jeff Rona's "Reel World" *Keyboard* magazine column that has really come in handy a few times. When working with samples, Rona recommended layering one track of a real instrument to give the part more life. I've tried this with bowed strings a few times to great effect; just one track of real violin on top of a bed of string samples makes the whole thing seem more realistic.

The Heart of the Matter Overall, scoring with acoustic instruments adds one very important factor—the emotion of performance. Cooder explained it well in a 1986 *Los Angeles Times* interview about his *Paris, Texas* score. "You have to find the 'sound' that fits the film and you've got to agree on that sound," he told Robert Hilburn. "I can only do the film if his musical vision fits mine. If a director called and said, 'I expect to hear 100 accordions here,' I'd say, 'Skip it, I can't do it.'"

This rings true whether you're writing for picture or composing for a sound library. If you're doing what you think will be "stock" Americana—competent blues, country, folk, or whatever—it's probably going to fall flat. The music has to connect to you, and you have to believe that it connects to the action onscreen. When it does, the audience will feel it. ■

Emile Menasché recently scored the documentary Incident in New Baghdad, *which was nominated for a 2012 Academy Award.*

iRecord
iMix
iMaster

yourTunes

RECORD your tunes with the STT-1 Origin Channel Strip. Your choice of Tube or Solid State mic preamplifiers. Capture your sound just the way you hear it.

MIX your tunes through it using the parametric equalizer and opto compressor to tweak your sound. Once again, your choice of Tube or Solid State. Change the order of the signal chain with a button push: EQ>Comp or Comp>EQ.

MASTER your mix using the opto compressor that is identical to our TCL-2 and the Dove Topology Constant Amplitude Phase Shift Circuit EQ filters that are identical to our NSEQ series mastering products.

It's yourTunes

Millennia
Music & Media Systems

www.mil-media.com
530-647-0750

PAR REVIEWER'S PICK 2005
Readers' Choice AWARDS

Accelerate your inspiration — with the MOTU Studio

Run Digital Performer and MachFive 3 on the latest quad-core iMac, record and monitor with the studio-grade MicroBook II, then add the latest advances in studio technology.

Apple iMac
The all-in-one that's one of a kind

Apple introduced the first iMac more than a decade ago. And the design philosophy remains the same: an all-in-one that's as powerful as it is beautiful. The new iMac features nearly twice the processing speed, advanced graphics, and ultrafast Thunderbolt I/O. Choose a 21.5-inch iMac with a 2.5GHz or 2.7GHz quad-core Intel Core i5. Or expand your view with a 27-inch iMac featuring a 2.7GHz or 3.1GHz quad-core Intel Core i5. For processor-intensive virtual instruments and plug-ins, Turbo Boost 2.0 automatically increases the speed of the active cores — up to 3.8GHz, so your MOTU studio sessions go smoother and faster.

Novation Impulse
The professional USB/MIDI controller (25, 49 or 61 keys)

The Novation Impulse features a precision, semi-weighted keyboard, 8 drum pads and a full control surface. It comes with Novation's award-winning Automap (version 4): the original, most powerful, and now easiest control software to use, which makes getting hands-on with Digital Performer and your plug-ins fast and simple.

MOTU MicroBook II
Studio-grade personal recording

Connect a premium mic, a guitar, and a keyboard, and start tracking with sound quality that rivals audio interfaces costing hundreds more. The amazing and compact MicroBook II delivers studio-grade features and sound.

MOTU

ToonTrack EZmix 2
Multi-effect mixing tool

Craft great mixes quickly with ToonTrack EZmix 2. Simply insert the EZmix 2 plug-in on any track in Digital Performer, and indicate what kind of signal you're processing: drums, vocals, guitar, or even the master fader. Then choose from a wide selection of pre-configured signal chains that apply an optimized, completed effects process for the selected material. Got an ambient vocal track? EZmix 2 can instantly give you a compressor, parametric EQ, tape delay with mix control, reverb with mix control, and finally a limiter already optimized for that "radio ready" sound. You'll love how much faster you achieve results!

Shure Beta 181 Stereo Set
Ultra-compact side-address instrument mics

Designed for discrete placement and control in live or studio environments, the Sweetwater-exclusive Beta 181 Stereo Set includes interchangeable cardioid, supercardioid, omnidirectional, and bidirectional capsules for superior versatility. The small-diaphragm design provides superior audio with consistent, textbook polar response in a form factor small enough to get close to the source in the tightest conditions.High SPL handling, ultra-smooth frequency response, and interchangeable polar patterns make this the perfect stereo mic pair for any technique in the book. This must-have mic bundle comes with two mic bodies and eight capsules in a custom case.

Genelec 8040A
Active bi-amplified studio monitor

With performance comparable to much larger systems, but in a compact package, the bi-amplified Genelec 8040A is ideal for use in MOTU studio situations where wide frequency response is needed but space is limited. Use the 8040A for nearfield monitoring in project/home studios, edit bays, broadcast and TV control rooms, and mobile production vehicles.

Sweetwater®
Music Instruments & Pro Audio

Value Added Reseller
Professional Audio

(800) 222-4700
www.sweetwater.com

FedEx Ground FREE SHIPPING
NO MINIMUM PURCHASE
ON MOST ORDERS. CONTACT US FOR MORE INFO.

Tame Your Noisy Gear!

Silence solutions for the solo artist/engineer

BY MICHAEL COOPER

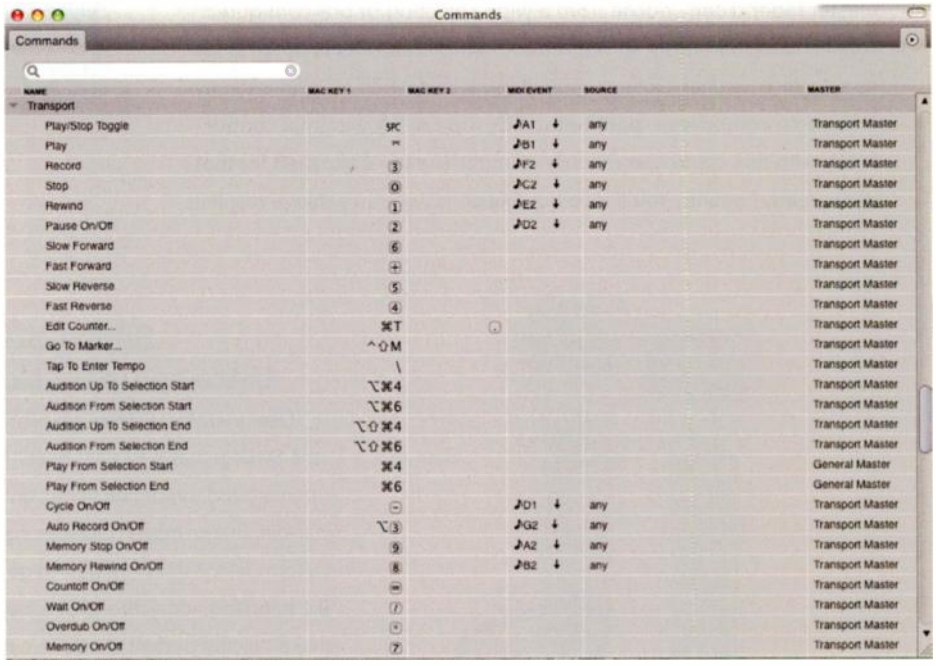


Fig. 1. You can map MIDI Note On events to hundreds of respective functions in Digital Performer's Commands window, empowering you to record remotely.

THE SOLO recording artist cum audio engineer has a vexing dilemma: How can he operate his DAW's controls while keeping noise in his control room from leaking into his microphones? The best solution is to place all equipment with fans in an iso box or separate machine room. But that's not always feasible.

Fortunately, there are other ways to stop noise in its tracks. Use these techniques to ditch the din.

Go Remote Set up your mic and tweak preamp and compressor settings in your control room until your sound is dialed in and all the levels look good. Then move the mic to another room, and use a remote controller to operate your DAW and record your track.

Remotes come in wired and wireless flavors. You may already own a wired remote: your MIDI keyboard. (The "wire" is the MIDI cable.) In fact, any MIDI device can act as a remote controller for a DAW that allows you to map MIDI commands to its transport and other functions. For example, you can assign Note On events triggered by different keys on your MIDI keyboard to prompt Digital Performer (DP) to respectively record, stop, rewind, play, create a new take, and so on (see Figure 1).

Another wired solution is to use a QWERTY-keyboard extender to operate your DAW from afar using keyboard shortcuts. Gefen (gefen.com) makes high-quality keyboard-extension cables.

I use the Frontier Designs TranzPort wireless controller to remotely overdub myself in DP from one of my tracking rooms. The TranzPort not only controls DP's transport functions, it also provides rudimentary level meters. Unfortunately, the TranzPort is a discontinued product, but you might be able to find a used unit on eBay.

> If you absolutely must record with a microphone in your control room, you'll of course want to turn your reference monitors all the way down and listen with headphones.

Use Microphone Nulls If you absolutely must record with a microphone in your control room, you'll of course want to turn your reference monitors all the way down and listen with headphones. Choose a directional mic to record your track, and position it so that its null point is aimed at the noisiest piece of gear in your studio. For example, point the rear of a cardioid mic at the equipment in your rack that has the loudest fan. If you're using a bi-directional mic, make sure the side of the mic (90 or 270 degrees off-axis) is pointing at the offending noise.

Fig. 2. The sE Electronics Project Studio Reflexion Filter creates a controlled acoustic environment around your microphone, shielding it from noise and excessive room ambience.

Set Up in an Acoustic Shadow High frequencies have short wavelengths that don't readily wrap around corners and large objects. You can take advantage of this fact by setting up your mic in the acoustic shadow provided by a wall or large furniture; that is, position the mic behind the barrier and out of the direct line of sight to the noise source.

For example, if your control room has an alcove deep enough that you can't see your noisy gear while standing in it, try placing your mic in there (pointing out into the room). Sit or stand outside the alcove, facing the mic. The mic will capture what it's pointing at (you or your instrument), but it will be shielded in the alcove from noise emanating from around its corner. Just be aware that bass frequencies are usually boosted inside an alcove, so it's not a great solution for recording bright tracks.

If you've got the coin, invest in one of the excellent mobile products designed to create an acoustic shadow around your mic. The sE Electronics Project Studio Reflexion Filter (see Figure 2) and Acoustics Science Corporation Studio Traps are excellent choices.

You can create a makeshift acoustic shadow on the cheap by placing a large, solid music stand in the line of sight between your mic's head capsule and the noise source. Secure thick acoustic foam or other highly absorbent material to the stand on the side facing the microphone. It's a dirt-cheap way to take a stand against noise. ■

Michael Cooper (myspace.com/michaelcooperrecording) is a mix and mastering engineer and a contributing editor for Mix *magazine.*

Correcting the Old-Fashioned Way

A look at manual rhythm-and-pitch correction

BY MIKE LEVINE

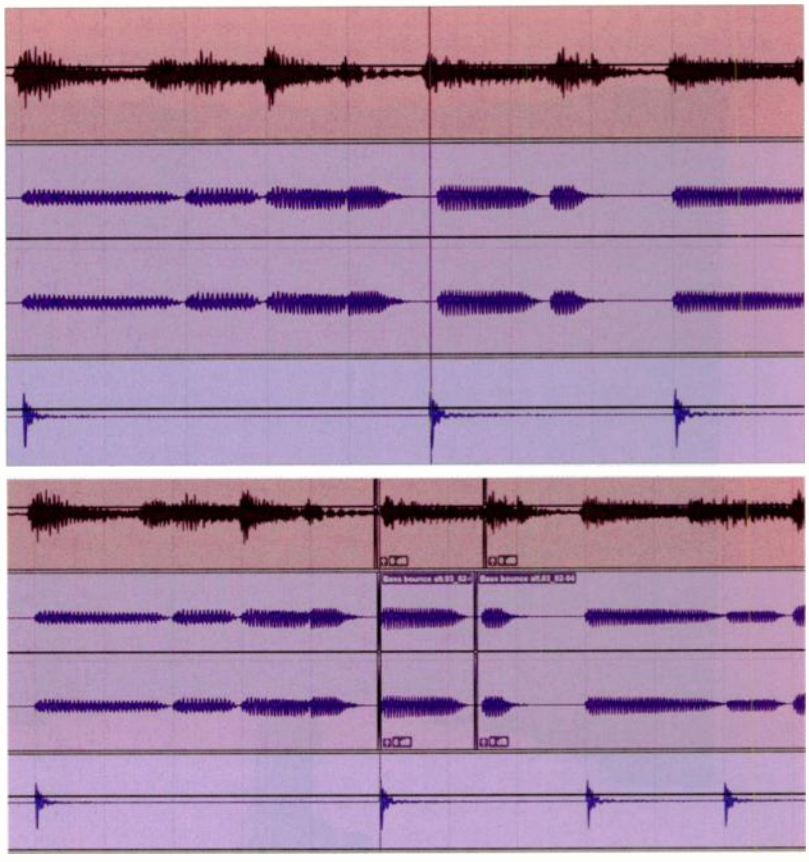


Fig. 1a (top). Here's a downbeat on which the bass (the purple stereo track in the middle) is hitting late, and the rhythm guitar (red track on top) is a tad early.

Fig. 1b (bottom). The guitar and bass have been corrected here (notice that they have crossfades at their boundaries), so that they line up with the kick (bottom track, in blue).

CORRECTING RHYTHM and pitch has become a routine element of music production. There are plenty of pitch-correction applications on the market (Antares Auto-Tune and Celemony Melodyne, among others), and many DAWs offer built-in tools for correcting pitch, rhythm, or both. (For example, MOTU Digital Performer has Audio Pitch Correction and Beat Detection Engine, Cakewalk Sonar X1 has V-Vocal for pitch and Audio Snap for rhythms, and Pro Tools has Elastic Audio and Beat Detective.)

Even with these tools available, there are times when it's easier just to perform a quick manual correction using basic editing features or standard pitch-change plug-ins, instead of breaking out the heavy artillery, no matter which DAW you use. And if your DAW doesn't have built-in correction, the manual methods I'm about to outline can be even more useful.

Beat Not Neat Let's start in the realm of rhythm. If you want to quantize a song's entire multitrack drum part, you'll need a dedicated feature such as Pro Tools' Beat Detective or Elastic Audio, Digital Performer's Beat-Detection Engine, or Logic's time-stretching feature. But in a situation where there are a just few spots where some of the musicians were not locked in rhythmically, you can make corrections quickly and easily with basic editing techniques.

Most pop, rock, or country songs have numerous beats on which the kick, bass, and rhythm guitars are all supposed to hit together. But when dealing with live musicians, there will often be two or three instances in a take in which the players land on the beat far enough apart that the effect is noticeable (see Figure 1a).

First, put the tracks that need correction next to each other in your DAW window that displays track lanes. Enlarge the lanes vertically, and zoom in horizontally on the waveform until you can clearly see the beginning of the beat in question. In many DAWs, if you place the cursor at a specific spot, or make a selection starting at that spot, you get a vertical line that goes across all the track lanes. You can use this as a reference point if you click it at the point in the timeline where you want all the musicians to hit. If you don't have this feature, just eyeball it, using an instrument that landed on the beat correctly as your reference point. If you played to a click, you could also use the beat on the DAW's grid as your reference.

Going one track at a time, select the beginning and end of the note or chord that hits in the wrong spot, separate it, and then drag or nudge it closer to the correct spot. As long as you're zoomed in enough, eyeballing should work fine. If you can extend the borders of the neighboring notes cleanly, do that, then crossfade around the boundaries of the note you separated and moved (see Figure 1b).

Be careful: The act of separating and moving a note or chord can cause it to sound unnatural—either before or after the separation. Crossfading at the boundaries makes transitions sound better; if there isn't enough clear audio to crossfade, try putting a short fade at the beginning or end of the note you're moving. Even if the new transition

THE JOHN LENNON
SONGWRITING CONTEST

ENTER
your original songs
Top Judges • Big Prizes • Win $20K

www.jlsc.com

Sponsored By:

NEUTRIK · avid.com · Gibson · Epiphone · Musician's Friend
audio-technica · sonicbids · Roland · creativeallies artist, meet artist · NAMM believe in music
DIGITAL MEDIA · DISC MAKERS · Ampeg · MACKIE. · BOSS

sounds odd when it is soloed, it often gets covered up once you put the other instruments back in. So make sure to audition the edit in the mix before deciding that it didn't work.

Relief Pitcher Let's talk about pitch. If you have just a couple of out-of-tune notes in a track, you might not want to treat the entire track with a pitch-correction plug-in, which can affect the overall timbre. If your DAW doesn't have a feature that lets you easily quantize the pitch of selected notes, and there are only a few problem spots, consider using your good old destructive pitch-shifting plug-in (such as AudioSuite in Pro Tools, or the rendered plug-ins in DP; see Figure 2).

Like with manual rhythm correction, you need to select and separate the bad note. Gauge whether it sounds flat or sharp; you could even run it through a tuner to see exactly how far off it is.

Next, set your pitch shifter to compensate (it will usually be a small amount, much less than a full semitone), and perform the shift. Listen to it; if the correction is too little or too much, undo it, change the setting slightly, and try again.

A static note is the easiest kind to pitch-shift. If a note is bending or sliding out of tune, it's a lot harder to get the pitch shift to sound natural. You could isolate the out-of-tune section and correct that, but the transition will likely be too obvious. Be particularly careful when working with vocals; because they're mixed louder than other mix elements, their imperfections will stand out more. ■

Mike Levine is a New York-based musician, producer, and music journalist, and the former editor of Electronic Musician.

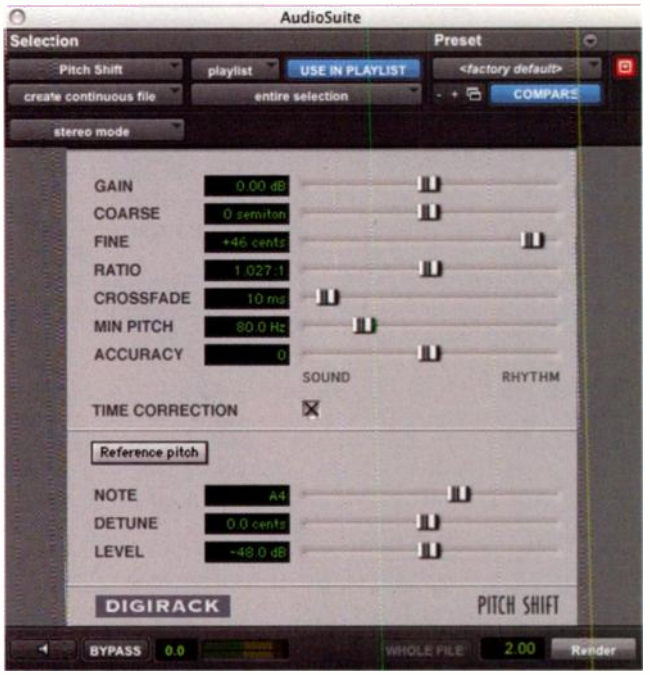
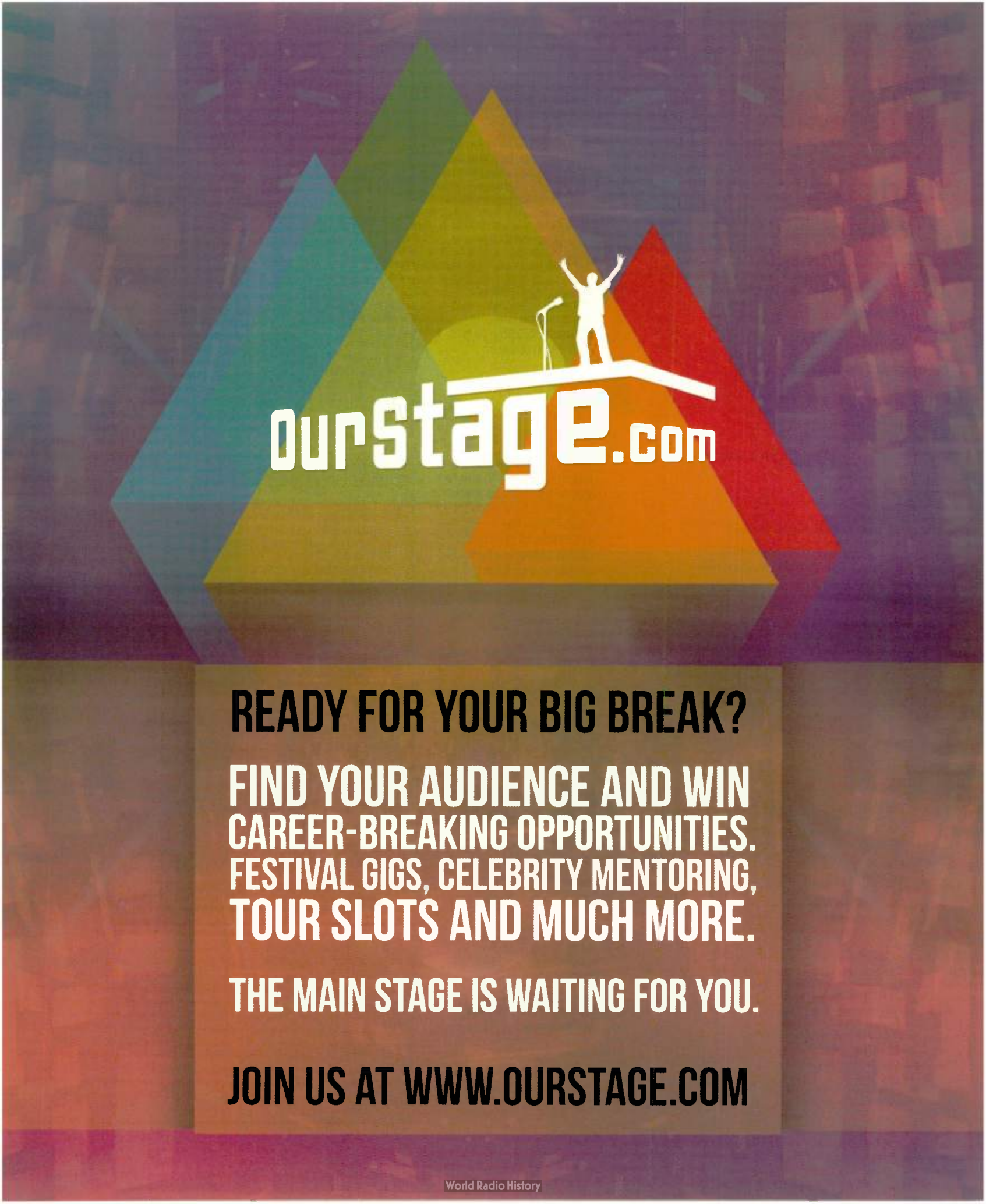


Fig. 2. The out-of-tune note has been selected, and is about to be corrected using Pro Tools Pitch Shift plug-in, which is a destructive plug-in.



LEARN power app

Adobe Audition CS6

Transfer clips seamlessly among different editing environments

BY CRAIG ANDERTON

OBJECTIVE

Apply waveform editing to multitrack project clips

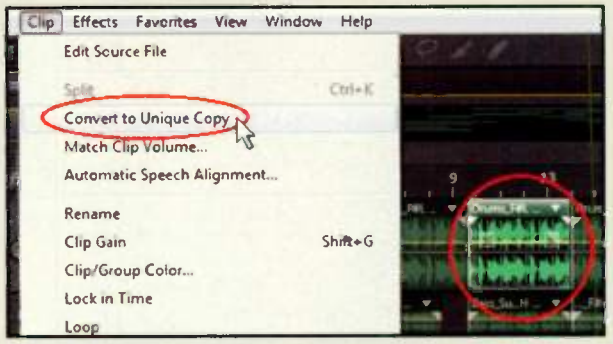
BACKGROUND

Adobe Audition has one editor for detailed, waveform-oriented editing, and another for multitrack projects; files can transfer seamlessly between the two environments. This configuration allows processing multitrack project clips with noise reduction, pitch changes, phase correction, spectral-view editing, and other sophisticated editing processes prior to returning the clip to the multitrack project.

TIPS

- Step 2. Alternately, double-click on a Multitrack Editor clip to select it for editing and automatically switch to the Waveform Editor.
- Step 5: The clip will be selected in the Multitrack Editor, and its duration is automatically selected as a Time Selection.

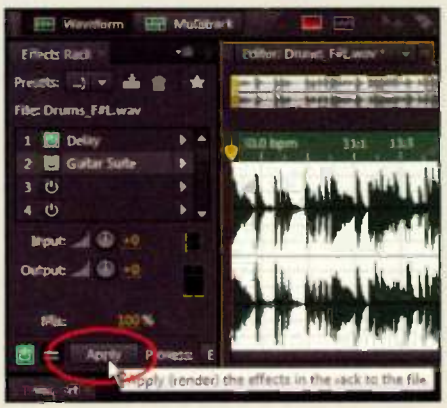
Step 1 Click the clip to select it for editing. If the clip is a copy and edits should apply to that specific clip, go Clip > Convert to Unique Copy.



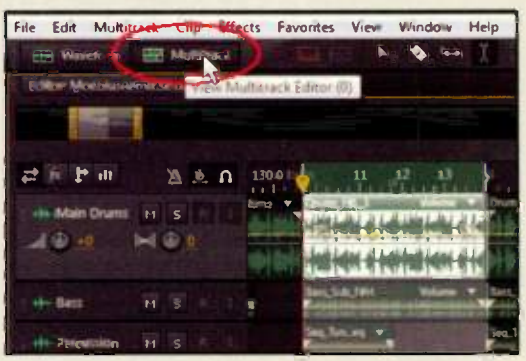
Step 2 Click the Waveform tab to switch from the Multitrack Editor to the Waveform Editor.

Step 3 The Waveform Editor will open to the file you selected, but if you click the Editor panel's drop-down file menu, you'll see all Multitrack project files, and you can select any of them.

Step 4 Make your desired edits from the Effects menu, or by applying effects from the Effects Rack.



Step 5 Click on the Multitrack Editor tab to return to the Multitrack project; the original clip will be replaced with the edited clip.



CLASSIFIED ADVERTISEMENTS

CATEGORIES

INSTRUMENTS

STUDIO FURNISHINGS

PARTS/ACCESSORIES

EDUCATION/TUTORIALS

TALENT & EMPLOYMENT

Buying or selling instruments through our Classified Ads offers you convenience, a big marketplace, and a wide range of instruments and prices. Electronic Musician suggests the following guidelines to help the buyer and the seller in these transactions: 1) Get a written description of the instrument, which should include the serial number. 2) Get front and back photos of the instrument. 3) Get a written purchase agreement, with a 24-hour approval clause allowing the buyer to return the instrument for a full refund if it does not meet his/her reasonable expectations.

INSTRUMENTS

STUDIO FURNISHINGS

PARTS / ACCESSORIES

JustStrings.com

World's Largest Selection of Guitar & Bass Strings!

www.juststrings.com (800) 822-3953

ACOUSTIC PRODUCTS & SERVICES

BLOWN SPEAKERS?

SPEAKER REPAIR CENTER

Reconing is an art form at Parts Express

- Fast turnaround
- Guaranteed satisfaction
- Over 40,000 speakers restored by our technicians

Get an instant repair quote at:

parts-express.com/src

1-800-270-7964

725 Pleasant Valley Dr., Springboro, OH 45066

Acoustics First®

www.acousticsfirst.com

Materials to Control Sound and Eliminate Noise™

Toll Free 888-765-2888

High-end acoustics for serious professionals

REALTRAPS is the premier source for high performance acoustic treatment. Our customers include Bob Katz, Barry Gibb, Charles Dye, Tony Maserati, Nile Rodgers, Bob Clearmountain, Butch Vig, and many others. Whether you're a seasoned pro, or a hobbyist wanting the very best acoustics possible, REALTRAPS has the ideal solution.

Please see our web site for a wealth of product information, demo videos, and amazingly clear explanations of acoustics.

www.REALTRAPS.com

Call Toll-Free: 866-732-5872

EDUCATION / TUTORIAL

BAND-IN-A-BOX IMPROVEMENT PRODUCTS***

"You can put a Better-Band-In-Your-Box."

"Norton Music (since 1990)"

www.nortonmusic.com

BE A RECORDING ENGINEER

ONLINE COURSE

from AIA

BRAND NEW online practical training in Multi-track Recording. Join our successful working graduates or build your own studio. Diploma/Career guidance. Registered School

FREE INFO: Audio Institute of America

814 46th Ave, San Francisco, CA 94121 www.AudioInstitute.com

TALENT & EMPLOYMENT

Personal Assistant: New York City-Highly intelligent, resourceful individuals with exceptional communication skills sought to undertake research projects and administrative tasks for a successful entrepreneur. We welcome applications from writers, musicians, artists, or others who may be pursuing other professional goals in the balance of their time. Excellent compensation including benefits. Resume to: mupany@gmail.com

To advertise with us, contact:

Michelle Eigen 650 238-0325

michelle.eigen@musicplayer.com

ATM510 Cardioid Dynamic Handheld Microphone

Audio-Technica

Now available

Audio-Technica's ATM510 cardioid dynamic workhorse features extremely natural vocal reproduction, super-durable construction, a rare-earth magnet for high output, and internal shock mounting for reduced handling/stage noise. $10 rebate on mics purchased between 7/1/12 and 12/31/12.

MSRP $169; $99 Street

pro@atus.com

www.audio-technica.com

PLAY-IT DIRECT

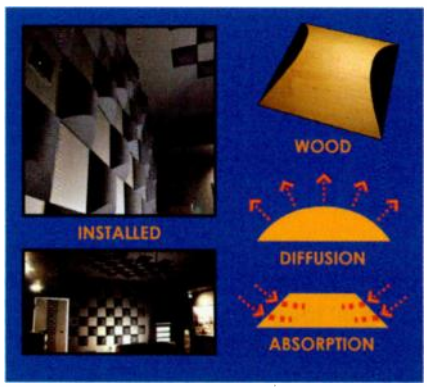
play-itdirect.com

Your local CD and DVD replicator with offices in NYC and on Long Island.

Play-It Direct: one stop production services for world class quality CD and DVD Duplication and Replication, Graphic Design, Printing, DVD authoring and CDROM programming, all under one roof. Think of us as your personal production team. Choosing Play-It means: Unparalleled 1 to 1 service - Strict attention to detail - Competitive pricing!

800-815-3444

www.play-itdirect.com



TUBETRAP Studio Acoustics

ASC

Available Now

100% Handmade in USA

CoolTraps look hot and sound even better. Created for Yamahas's Live Sound Truck, ASC Abfusers deliver a real-time mix of treble range absorption and diffusion. 12x12x4, 1 lb, easy install, fun patterns, colors and you'll make slap-backs disappear in a sparkle.

SRP: $496 16/box incl. delivery, 32 sq. ft. coverage, fabric finish, wood available.

www.acousticsciences.com

800-ACS-TUBE (272-8823)

Chromaphone – Creative Percussion Synth

Applied Acoustics Systems

Available Now

Chromaphone combines acoustic resonators to create drums, percussion, mallet, string, and synth-like instruments. Drum skins, bars, marimbas, plates, strings, and tubes form pairs that get sparked into life by a configurable mallet and a flexible noise source.Chromaphone's preset library includes a wide range of expressive and responsive instruments that span from warm and mellow pitched percussions for melodies to punchy one-shots and kits for rhythm tracks.

SRP: $199

www.applied-acoustics.com

888-441-8277

Five Stellar Reasons to Steal Music

BY CRAIG ANDERTON

Granted, most *Electronic Musician* readers don't steal music because supporting artists is the right thing to do. But why go against the "greed is good" ethic that's so popular these days? If you've been reluctant to steal music, these handy tips will help you get with the program!

1

Contrary to what you've been told, stealing is good!
Admit it: When someone broke into your apartment and stole your guitar, your first thought was, "Cool! After saving up all those bucks for all those years, I'm *so happy* someone else can now enjoy my classic archtop Les Paul!" Besides, if stealing isn't good, then how do you explain our banking system? *Gotcha!*

2

Just say that you're tired of buying CDs that have only one good song.
And you would be *so* right. Until a company comes up with a simple, easy way to purchase individual songs online (and thinking *way* out of the box here, maybe even a computer company instead of a record label!), vote with your dollars. Or lack thereof.

3

Remember, record companies rip off artists anyway.
So show your solidarity with giant multinational corporations by following their example, and having the courage to take the moral high ground. They shouldn't be all alone in their never-ending struggle to rip off artists, and *you can help!*

4

It's a way to honor Steve Jobs' memory.
Steve Jobs was one of the true visionaries of our time. Surely he would not have created the iPod if he didn't intend for you to fill it up with music, and if you have to steal the music to fill it up—well, not doing so only dishonors his memory. Shame on you.

5

You really can't afford to buy music anyway.
We understand. Somewhere in the poorest part of Appalachia, little Bobby is going to bed hungry—hungry to hear classic music like "Yummy Yummy Yummy, I've Got Love in My Tummy." While stealing music won't help little Bobby, we know that you certainly *would* forward that song to him if only you had his email address. If he had email. And a computer. Dinner would be nice, too. ■

MOTU
motu.com

Introducing...

TRACK 16

16 x 14 desktop studio interface with mixing and effects

- **Hybrid connectivity** — connects to any Mac or PC with USB or FireWire.
- **8 x 6 analog** — includes 2 mic ins, 2 guitar, and balanced line ins/outs.
- **Studio-grade audio** — record with clean, transparent mic preamps and professional balanced connectors.
- **One-touch operation** — just tap the input or output you want to control. Backlit buttons are easy to see in dark studios or stage environments.
- **Optical I/O** — stereo TOSLink, 8-ch ADAT, or 4-ch SMUX @ 96K.
- **MIDI I/O** — connect any MIDI gear.
- **CueMix software** — control 8 mixes and FX with simple tabbed interface.
- **Across-the-board compatibility** — works with your favorite audio apps.
- **Tuner, oscilloscope and more** — real-time FFT, spectrogram waterfall, X-Y phase analysis, and other tools.