

electronic MUSICIAN

RECORD • PRODUCE • PERFORM

EMUSICIAN.COM



NewBay 02.2012
\$5.99 CAN \$6.99
02>
0 71486 01017 3
A MUSIC PLAYER PUBLICATION

*****AUTO**S-DIGIT 50036
*BXNXXLM *****
*0304884 0# EMQA 0304884 R 1103
JAT EOM 2 FEB12 0001 #148 #14246
RON CARLSON
103 TAMM ST
BOONE IA 50036-3616

CASIO®



XW-P1

PERFORMANCE SYNTHESIZER

NAMM BOOTH #5900

© 2012 CASIO AMERICA, INC. All rights reserved.

www.casiomusicgear.com

History in the making.



Tempest is an analog drum machine, the first full collaboration between legendary instrument designers Dave Smith and Roger Linn. If “analog drum machine” conjures up images of the pre-programmed, set-and-forget beat boxes of the past, rest assured: Tempest is nothing of the sort. Its innovative, performance-oriented operating system gives you an extraordinary level of control to create, edit, arrange, and manipulate beats in real time as they play. It is a revolutionary new musical instrument.

To see and hear what Tempest is really about, visit www.davesmithinstruments.com.

Tempest. Made to be played.

Dave Smith
INSTRUMENTS

with *Roger Linn*
DESIGN



Visit us at NAMM, booth 5400.

Sweetwater®

Has Your New Gear! For The New Year!



Misa Digital Kitara
Innovative MIDI controller with multi-touch input and built-in synthesizer!

EXCLUSIVE!



BOSS MICRO BR BR-80
Take an 8-track recording studio with you anywhere, complete with COSM effects!

NEW!



NEW!

Focusrite Scarlett 2i2
Vibrant Focusrite preamps provide a solid front end for this compact USB audio interface!



NEW!

Chameleon Labs TS-1 MKII
Small-diaphragm tube microphone with interchangeable capsules for maximum recording versatility!



Need more than just recording gear?

Call Sweetwater for all your live sound and musical instrument needs!



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



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



FREE Tech Support
Get professional SweetCare support, 24/7.

* Please note: Apple products are excluded from this warranty, and other restrictions may apply. Please visit www.sweetwater.com/warranty for complete details.

NEW!

Avid Pro Tools 10

The latest version of the industry-standard recording software adds over 50 new features and enhancements for unprecedented performance in your studio!



HOT!

Alesis IO Dock

Turn your iPad into a portable music creation studio with pro-quality audio, MIDI, and video connections!

NEW!

Propellerhead Balance with Reason Essentials

Compact audio interface with "Clip Safe" technology for no-clip recording, plus Reason Essentials production software!



NEW!



PreSonus Studio One 2 Professional

PreSonus's DAW software has taken the world by storm, and v2 adds built-in pitch correction with Celemony's Melodyne!

NEW!

M-Audio Fast Track C600

Innovative audio interface with hands-on transport control plus built-in DSP for adding delay and reverb to your monitor mixes!



NEW!



Native Instruments Komplete 8 Ultimate

Over 240GB of world-class content — more instruments, sounds, and effects than ever before!

Sweetwater

Music Instruments & Pro Audio

(800) 222-4700

Sweetwater.com

A Better Way to Buy Guitars

Sweetwater **Guitar Gallery**

Sweetwater.com/guitargallery



electronic MUSICIAN

COVER FEATURE

36 **2012 Editors' Choice Awards** Every year, *Electronic Musician* scours through the hottest gear debuts of the past 12 months, and then tackles the extremely difficult task of narrowing the list down to the 30 greatest innovations. This month, we honor the best new production tools for musicians.



LISTEN

- PROFILES** 16 **of Montreal** Kevin Barnes talks about striving for sonic clarity within dense musical arrangements on the confessional, uneasy *Paralytic Stalks*.
- 24 **Little Willies** Like-minded musical souls Norah Jones, Lee Alexander, Jim Campilongo, Richard Julian, and Dan Rieser pay tribute to country classics on their second project together, *For the Good Times*.
- 28 **Korn** For *The Path of Totality*, their tenth album, the nu-metal band embarked on a new path—collaborating with leading dubstep and electronic producers from Skrillex to 12th Planet.

PLAYLIST 34 Music reviews from *Electronic Musician* contributors

LUST

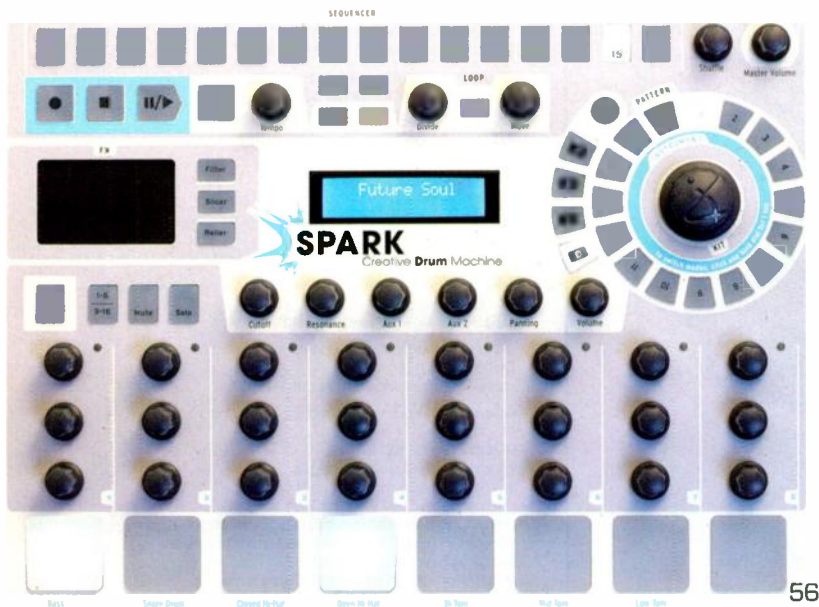
- REVIEWS** 52 **TASCAM TA-1VP** Vocal processor/channel strip
- 56 **Arturia Spark** Creative drum machine

NEW GEAR 58 Production tools to help you make better music

SPECIAL FOCUS 62 **Tuners** From iPhone apps to solar-powered goodies, eight ways to keep your intonation on track

02.2012

contents



56



LEARN

- MASTER CLAS** 64 **Live Sound 101** Learn how to get the most out of a small P.A.—from gain staging to speaker configuration.
- TECHNIQUES** 76 **Career** Build and engage your Facebook fanbase
- 80 **Production** Avoid data meltdown!
- 84 **Composing** Jingle Punks share secrets for standing out
- 88 **Mixing** Make your home studio more ergonomic
- 94 **Power App** Make drum parts more percussive in Ableton Live

DEPARTMENTS

- 10 **Community**
- FIRST TAKE** 14 **deadmau5** electrifies San Francisco
- CRAIG'S LIST** 98 **Five Tips** for NAMM Newbies



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 (c) 2011 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 Bleupip International, P.O. Box 25542, London, ON N6C 6S2. Periodicals Postage Paid at San Bruno, CA, and at additional mailing offices.

EXECUTIVE EDITOR Craig Anderton
canderton@musicplayer.com

EDITOR Sarah Jones
sjones@musicplayer.com

MANAGING EDITOR Debbie Greenberg
dgreenberg@musicplayer.com

CONTRIBUTORS
Kent Carmical, Jon Chappell, Michael Cooper,
Steve La Cerra, Craig Dalton, Reek Havok,
Carl Jacobson, Ken Micallef, Bill Murphy, Phil
O'Keefe, Gino Robair, Barbara Schultz, Bud
Scoppa, Tony Ware

ART DIRECTOR Patrick Wong
pwong@musicplayer.com

STAFF PHOTOGRAPHERS
Paul Haggard phaggard@musicplayer.com
Craig Anderton canderton@musicplayer.com

GROUP PUBLISHER Joe Perry
jperry@musicplayer.com, 770.343.9978

ADVERTISING DIRECTOR, NORTHWEST,
MIDWEST, & NEW BUSINESS DEV.
Greg Sutton
gsutton@musicplayer.com, 925.425.9967

ADVERTISING DIRECTOR, SOUTHWEST
Albert Margolis
amargolis@musicplayer.com, 949.582.2753

ADVERTISING DIRECTOR, EAST COAST & EUROPE
Jeff Donnenwerth
jdonnenwerth@musicplayer.com, 770.643.1425

SPECIALTY SALES ASSOCIATE, NORTH
Contessa Abono
cabono@musicplayer.com, 650.238.0296

SPECIALTY SALES ASSOCIATE, SOUTH
Donovan Boyle
dboyle@musicplayer.com, 650.238.0325

PRODUCTION MANAGER Beatrice Kim

MUSIC PLAYER NETWORK

VICE PRESIDENT John Pledger
EDITORIAL DIRECTOR Michael Molenda
SENIOR FINANCIAL ANALYST Bob Jenkins
PRODUCTION DEPARTMENT MANAGER Beatrice Kim
DIRECTOR OF SALES OPERATIONS Lauren Gerber
WEB DIRECTOR Max Sidman
MOTION GRAPHICS DESIGNER Tim Tsuruda
MARKETING PROJECT MANAGER Tyler Reed
MARKETING DESIGNER Joelle Katcher
SYSTEMS ENGINEER John Meneses
ASSOCIATE CONSUMER MARKETING DIRECTOR
Christopher Dyson

NEWBAY MEDIA CORPORATE

PRESIDENT & CEO Steve Palm
CHIEF FINANCIAL OFFICER Paul Mastronardi
CONTROLLER Jack Liedke
VICE PRESIDENT, PRODUCTION & MANUFACTURING
Bill Amstutz
VICE PRESIDENT, DIGITAL MEDIA Joe Ferrick
VICE PRESIDENT, AUDIENCE DEVELOPMENT
Denise Robbins
VICE PRESIDENT, CONTENT & MARKETING
Anthony Savona
VICE PRESIDENT, INFORMATION TECHNOLOGY
Greg Topf
VICE PRESIDENT, HUMAN RESOURCES Ray Vollmer

REPRINTS AND PERMISSIONS

For article reprints please contact our reprint coordinator
at Wright's Reprints: 877.652.5295

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,
978.667.0364,
emmag@computerfulfillment.com

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

Follow us on



PowerTools... for Power Keyboard Players!

Radial ProD8

8-channels with reversible rack rails to let you set up the ultimate tour rig and wire it your way. The touring standard rack DI.

Radial JDI Duplex

A stereo 'Swiss Army Knife' of direct box connectivity with world renowned Jensen™ transformers for optimum tone.

Radial JD6

Maximum connectivity with unmatched audio performance. The JD6 is your perfect studio interface for keyboards.

Radial ProD2

Industry standard stereo DI for keyboards. Compact and rugged enough to handle the road.

Radial JDI

World's finest passive DI! Jensen™ transformer equipped, the JDI is the favorite direct box of top keyboardists and engineers everywhere.

Radial passive DI boxes deliver the wide frequency response and headroom needed to properly handle today's ultra dynamic digital keyboards. The magic is in the transformers we use... unlike active DIs that square wave when hit hard, our high performance transformers naturally round out the tone, introducing a natural compression that is often described as vintage sounding. And with isolation, you immediately eliminate hum and buzz caused by ground loops. Plenty of great models to choose from for mono, stereo and full scale touring rigs.

Radial - the world's finest direct boxes!



Radial Engineering Ltd.
1588 Kebet Way, Port Coquitlam BC V3C 5M5
tel: 604-942-1001 email: info@radialeng.com



radialeng.com

"Radial direct boxes make everything I put through them warm, punchy and clear. They are great DIs!"
~ Chick Corea

"My Radial DIs produce pure, transparent sound with full dynamics and do not color my keyboards."
~ Chuck Leavell
(The Rolling Stones)

"The JDI is the cleanest, warmest and best (!!) I've found for plugging my organ in direct."
~ Joey DeFrancesco
(Hammond B3 legend)

"Once you hear the difference between a Radial DI and the others, you'll never go back. After over 300 U2 shows around the world, they have worked flawlessly."
~ Terry Lawless
(Keyboardist & programmer - U2)

"My Duplex is musical and transparent and with me everywhere I go. Thanks Radial for a superior product."
~ Tom Coster
(Santana, Joe Satriani)

Copyright © 2011 Radial Engineering Ltd. All rights reserved. Specifications and appearance may change without notice.

Enjoy the new standard.

A NEW GENERATION.

Representing a new generation of portable recording, the H2n is Zoom's most innovative handheld recorder to date. We've packed ground breaking features into an ultra-portable device.

NEW MICS, NEW SOUND.

The H2n features our best microphones yet and is the only portable recorder with five studio-quality mics on-board.

THE FIRST PORTABLE MID-SIDE RECORDER.

Used for many years in film and broadcast, Mid-Side recording combines a uni-directional Mid mic that captures sound directly in front of you and a bi-directional Side mic that captures sound from your left and right. By increasing or decreasing the level of the Side mic, you can control the width of the stereo field which gives you incredible flexibility over your recordings.

YOU STILL GET X/Y...

And with Zoom's X/Y stereo condenser mics, you'll get great recordings with natural depth and accurate imaging every time.

COMPLETELY SURROUNDED.

Using the H2n's Mid-Side and X/Y mics together in 2 or 4-channel mode, you can create stunning 360° surround sound recordings.

20 HOURS OF BATTERY LIFE.

The H2n provides over 20 hours of continuous operation on just two standard AA alkaline batteries! This astonishing feature enhances the H2n's flexibility and convenience.

WE'VE GOT YOU COVERED.

Never again will you have to worry about losing recorded data to unexpected errors. Whether you experience battery loss or an accidental power-down, the H2n's Date Recovery function will automatically restore your data the next time it's powered on.

PLAY BACK AND LISTEN.

Ensure your recordings are being captured just the way you want. The H2n's built-in reference speaker allows you to listen to your recordings with exceptional clarity.

Zoom H2n Handy Recorder
A new standard in portable recording.



insight

Best of the Best

FOR 20 years, *Electronic Musician* has recognized the best new music-production technology with our annual Editors' Choice Awards. This is one of our toughest—and favorite—issues to produce: It's certainly a daunting process to narrow down hundreds of worthy new products to a select few, but at the same time, it's an affirmation that innovation is everywhere in our industry, from inspiring debuts from small startups to game-changing tools from industry giants.

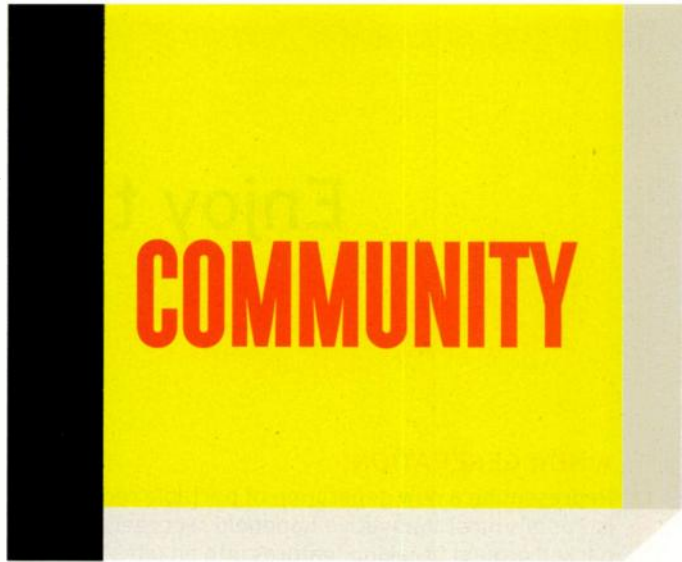
To that end, we've taken a slightly different approach to the awards this year. We've dispensed with old-school award categories (no more rigid definitions like "best speaker under \$200"), and put more emphasis on real-world applications, and the things that make each tool truly unique.

And we had some fun while we were at it.

Starting on page 36, we honor the best products in 30 new categories (with—we couldn't resist—a couple of ties). We know that all "best-of" lists are open to debate, so we'd like to hear from you. What were your favorite product debuts in the past year? Email us at ElectronicMusician@musicplayer.com.



SARAH JONES
EDITOR
sjones@musicplayer.com

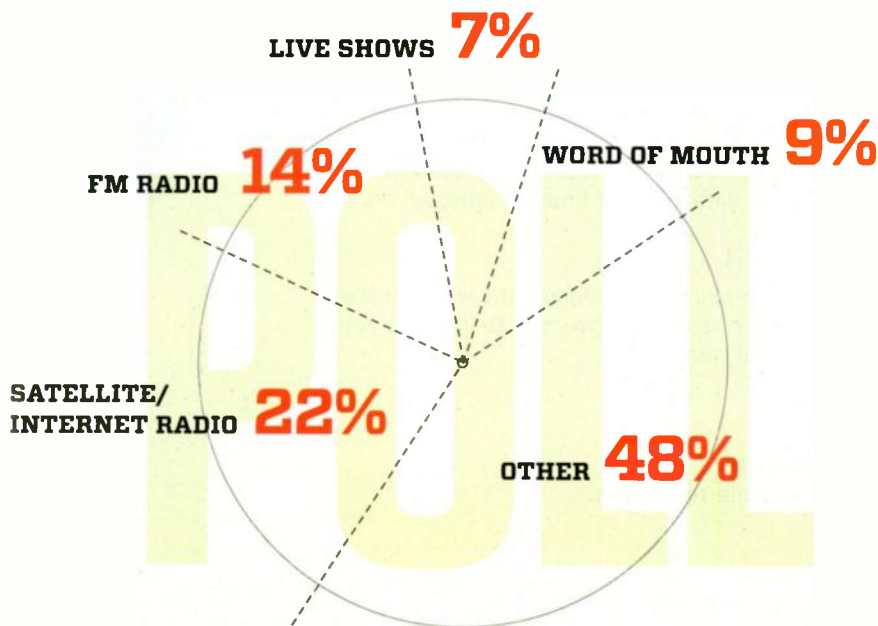


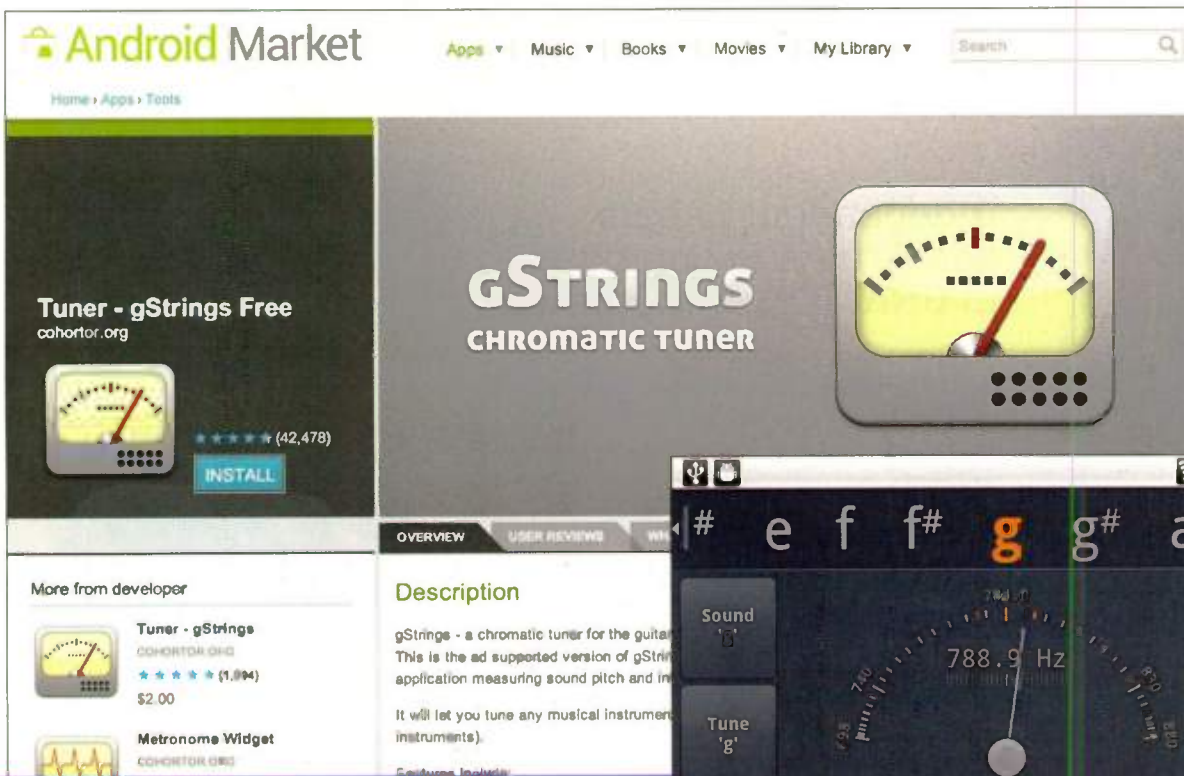
"AL GORE INVENTED DUBSTEP."

The Antlers, on Twitter, December 2, 2011

The Electronic Musician Poll

WHERE DO YOU DISCOVER THE MOST NEW MUSIC?





Freebie of the Month gStrings Tuner Android app

This chromatic tuner app for Android phones can be used with any acoustic instrument. The interface adopts a very clean-looking and readable "virtual VU meter," with a needle that shows whether you're flat, sharp, or dead-on. Other modes include orchestra tuning (user-redefining of frequencies); just, Pythagorean, meantone, and comma temperaments; a variable-range nonlinear scale; microphone-sensitivity adjustment; a pitch pipe (tone generator); and more. The free version has all the features of the full app but includes ads. If you fork over \$2, the ads go away.



DIG MY RIG

My live rig: Macbook Pro, Furman PL-8 Series 2 power conditioner, M-Audio Profire 2626, Presonus Digimax D8, Glyph GT 050 320 GB, Pro Tools 9, and Black Lion Audio digital cables. It works great anywhere with a pair of Direct Sound EX-29 Extreme Isolation Headphones!

The rest of the rig includes an ART S8 3-way, 8-channel microphone splitter (x2), Pro Co 16-channel XLR snake with 4 TRS returns, Hosa 8-channel XLR snake (23.1 feet x 2), and two 9.9-foot Hosa 8-channel XLR snakes.

This setup connects to any P.A. and records up to 16 tracks simultaneously, without interfering with front-of-house or monitor mixes.

We recorded most of the audio for a local music TV show called *The Green Couch Sessions*. It ran for one season on the NBC affiliate WDAM in Hattiesburg, MS. It was filmed in HD and multitrack recorded.

Ryan Royals
Rec Room Recording Service
www.facebook.com/recroomrecording

BY THE NUMBERS

Winter NAMM 2012



90,114 registrants

1,417 exhibitors

90 countries represented

84 dB average noise level



43 years that the Fernand L. Petiot All-Industry Marching Band has opened the show

1 Gene Simmons impersonator



Independent Labels and Artists Recognized in GRAMMY Nominations

A2IM, the American Association of Independent Music, announced that for the second year in a row, more than half of the nominations for the 54th Annual Grammy Awards have been earned by independent music labels and artists—a total of 194 out of 387 non-producer nominations.

“The music of independent labels and artists offers cultural diversity and breaks new ground for music fans,” says Jim Mahoney, A2IM Vice President, adding that the nominations represent “a true sign of the continued strength, presence, and the importance of independent music.”

Mahoney applauds the recognition of the entire independent label community: “Independents come in all shapes and sizes, business models, and musical genres. For every independent, garnering a Grammy nomination is a reward and testament to the tremendous contributions that independents offer to music fans and reflects the hard work music labels poured into supporting these great artists.”

The 54th Annual Grammy Awards will take place on Sunday, February 12, 2012. For a full list of A2IM member nominees, visit [www.a2im.org/downloads/54thAnnualGRAMMYA2IMNominees\(2\).pdf](http://www.a2im.org/downloads/54thAnnualGRAMMYA2IMNominees(2).pdf).



YOUR TAKE

What is the most profound lesson you've learned in the studio?

Here's our favorite response. Chris Melville wins an autographed copy of Alan Parsons' *Art & Science of Record Production* DVD set. Thanks, Chris!



I THINK the most profound lessons come through experience, listening, and understanding. My most profound lesson is through listening to musicians who really use rhythm in amazing ways, like Stevie Ray Vaughan's "Life by the Drop," Prince's *Musicology*, James Brown's "Out of Sight," and D'Angelo's *Brown Sugar*. The placement of bass and hi-hats on some of these recordings, and the way the vocals have a chance to float but in fact are locked so tightly to the rhythm, are testaments to these artists' talent. They're such solid works of art that they stand up to decades of listening.

CHRIS MELVILLE
VIA EMAIL



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 Auralex PlatFeet, rigid foam blocks that slide under each foot of your mic stand, snare drum, or floor tom to improve clarity and reduce feedback. Contest open to U.S. residents age 18 or over.

THIS MONTH'S QUESTION: **HOW DO YOU REFERENCE YOUR MIXES?**
Send your answers to ElectronicMusician@musicplayer.com.



FEEDBACK

HOW MUCH GEAR IS TOO MUCH?



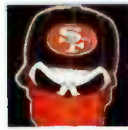
Tim Nickless

No such thing as too much gear! I always want more.



Robert J MacKenzie

Never such a thing! That's why God created credit cards.



Shawne Maynard

When the gear becomes the focus and the music is lost.



Philip Henry

You officially have too much gear when you can't find your mic and you just bought it.



Steve Henshaw

I'll let you know when I have it.

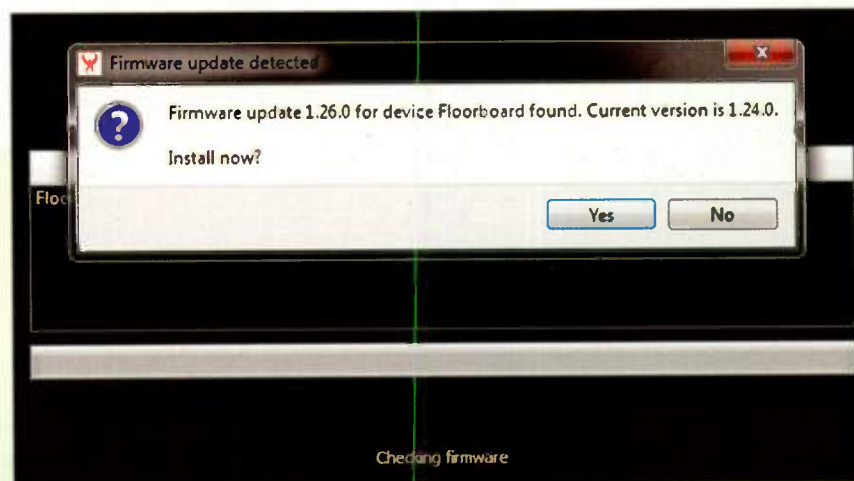
ask!

A lot of gear these days suggests or even requires checking for firmware updates before installing software updates. However, I've heard that if you do firmware updates incorrectly, you can really screw up your gear. Is that true, and if so, what's a "correct" firmware update procedure?

A. SCHRADER
PORTLAND, OREGON
 VIA EMAIL

A firmware update modifies gear at a very fundamental level, sometimes including the section that "wakes up" the gear when you turn it on. If this becomes corrupted, in addition to introducing possible operational issues, the gear may not function at all. Although in many cases you can simply try again if a firmware update doesn't work, it's important to make sure any firmware update completes successfully.

The most important factor is to avoid interrupting power going to the device performing the updating (usually a computer) and the device being



updated. For a successful software update, use an uninterruptible power supply to power your computer and the device being updated. (Note that these days, updates are often performed by loading a file from an SD card or USB thumb drive, which can simplify matters compared to using a computer.) With battery-powered gear, check that the batteries are fully charged; a laptop can also be a good choice

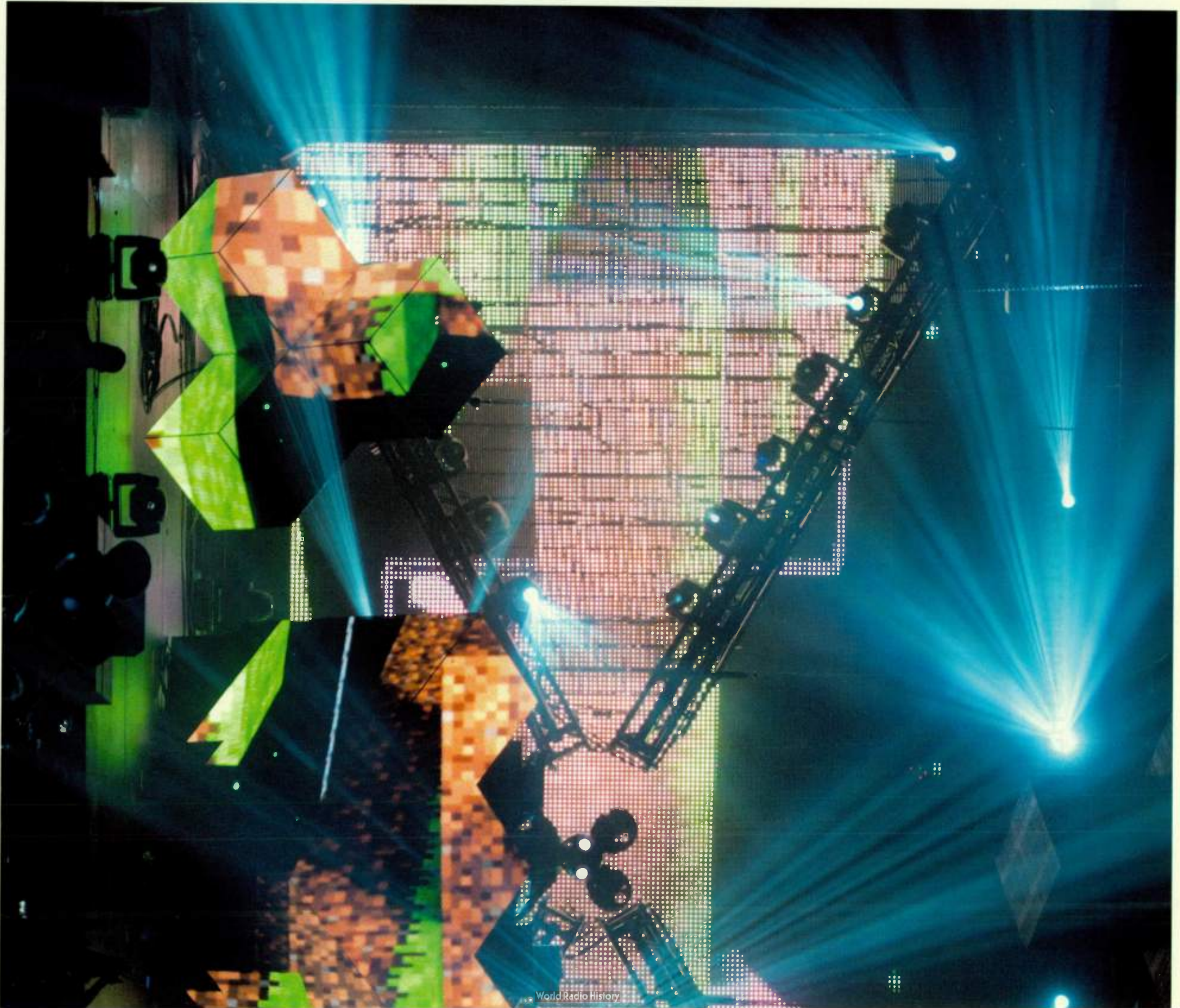
for updating if its battery is charged, as the updating process usually takes only a few minutes and you won't have to worry about the power to the laptop being interrupted.

Regarding the connection between devices (typically USB), make sure the cable is plugged in tightly, and the device being updated is sitting securely on a surface and can't be accidentally moved. Don't trip over the

cable, either—and if you have pets, don't let them in the same room where you're updating gear. One good jump on a table at an inopportune time could mean the end of the update.

Finally, read the instructions *twice*—once before performing the update, then while performing the update. Follow these instructions to the letter; one misstep could mean trouble.
THE EDITORS

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





**DEADMAU5
ELECTRIFIES THE BAY**
SAN FRANCISCO, CA
OCTOBER 29, 2011

Progressive house, techno, and electro are all terms that have been used to describe Deadmau5's hard-driving brand of electronica. Under that "other" famous mouse head is Joel Zimmerman, a Toronto-based producer who doesn't stop at creating, mixing, and mastering his music—he manages nearly every aspect of his skyrocketing career, right down to the graphic design of his album covers and stage set. Last fall, at the Bill Graham Civic Center, he commanded a packed house of feverish fans, from his first bumping beats until well into the night.

PHOTOGRAPH BY STEVE JENNINGS



of Montreal—Clockwise from top: Kaoru Ishibashi, Nicolas Dobbratz, Dottie Alexander, Davoy Pierce, Clayton Rychlik, Bryan Poole. Center: Kevin Barnes



LISTEN

of Montreal

Kevin Barnes experiments with microtonality, organic arrangements, and physical effects on *Paralytic Stalks*

BY TONY WARE

THERE'S BALANCE to be found in going to extremes. At least that's what's been discovered by Kevin Barnes—the priest, the agitator, the savant, the umami at the heart of florid freakbeat superstructure of Montreal. Acting as a role-play exercise and a confessional framework, of Montreal has allowed Athens, GA-based Barnes to indulge all manner of affectations as both an analog pop curator and a digital funk Svengali since he began recording in 1997. And of Montreal persists as a compelling look into the evolution of a home recordist in the nonlinear era.

The constantly oscillating aperture of Barnes' mind has captured snapshots of the project across nearly a dozen full-lengths, ranging from collated '60s-informed psychepop to aroused synth-pop. On the last of Montreal album, 2010's *False Priest*, Barnes solicited the production assistance of Los

Angeles, CA-based Jon Brion (Fiona Apple, Kanye West, Spoon), traveling to Ocean Way Recording in Hollywood. Now on this 11th effort, *Paralytic Stalks* (Polyvinyl Records), Barnes has returned to self-production and to a more reflective mode, both in terms of lyrical content and incorporating Brion's lessons on inserting extended tonality into a mix.

"This album is more connected to who I am as a human being, and how I wanted to make an album that is more transportive, less digestible, with both more frequency information and more clarity," says Barnes. "The spirit of this album is more serious, but also more fun as an art form, because it's full of all these spontaneous impulses and hands-on imperfections."

The sessions for *Paralytic Stalks* began, like the majority of of Montreal albums since 2005's *The Sunlandic Twins*, in Barnes' Sunlandic home studio. Whereas before 2005

Barnes followed a more traditional trajectory of composing acoustic demos before heading into the studio assisted by the band to record. From *The Sunlandic Twins* through 2008's *Skeletal Lamping* of Montreal indulged a progressively more virtual recording element. His workstation became used more and more to sequence processed harmonies and soft-synth textures, compiling albums one layer at a time. Initially working with Propellerheads Reason slaved to Steinberg's Cubase, Barnes moved to Apple Logic Pro for 2007's *Hissing Fauna, Are You The Destroyer?* and he has remained loyal to his Mac ever since, using it as a means to quickly accumulate and deconstruct facets of his fertile, sometimes perverse imagination.

The core of Sunlandia's compositional tools are tethered through an Apogee Symphony I/O with Symphony 64 PCI card, an Apogee Big Ben master clock, a Tube-Tech MP 1A 2-channel

tube mic preamp, a Tube-Tech CL 1B compressor, the Chandler Limited TG12413 Zener Limiter, a Summit Audio TPA 200B, the Universal Audio UAD-2 Quad DSP accelerator package, a Lawson L251 tube mic, beyerdynamic M130 and M160 ribbon mics, Royer SF12 and R122V mics, and a Toft Audio ATB24 mixing console.

With a few multipurpose microphones around the room, Barnes explored studies in positive distortion. Inspired by '70s-era Neil Young meets Fairport Convention, he varied his distance from the mic to capture both an intimate overdrive and a more sparse living quality across multiple takes of both vocals and Ampeg Portaflex-fueled Rickenbacker bass.

"I've never looked for more than a couple of decent microphones because I'm more interested in capturing the performance than the perfect shimmer," says Barnes. "I throw something up for tracking and it needs to be able to stay there for awhile, because I've been a lot more with layering live takes. For several albums I was plugging into a DI, but now I'm combining live signal with that for a fuller chain.

"And I've approached my voice as more of an instrument on this album," he continues. "I'm interested in experimenting with microtonality, working in a semitone range, using vocals that are slightly off-key with each other to create a phasing effect. There are moments where I had to fight my Beatles-esque instincts all over the album. Like on the song 'Spiteful Intervention,' there are these block harmonies with all the parts off from each other, and it creates this pulsating, freaked out sound from what is the most personal melodic instrument."

Barnes hasn't made any major investments in studio gear since recording *False Priest*, but he did receive arrangement insight working with Brion, who re-introduced this more organically conjured instrumentation to Barnes' process, as well as a greater appreciation for the bookends of the stereo space.

"Jon [Brion] helped me to visualize a broader, less-boxy landscape musically," says Barnes. "Before, I was just creating counter-melodies on top of countermelodies, making mixes where elements were fighting each other in the same frequency range. He helped me see that if there are things in the über-high and über-low ranges—even just a tambourine or some Little Phatty Moog subbass, it doesn't have to be melodic—it takes the pressure off the midrange by keeping your mind busy with



other things. And there was a time that if I wanted fuzz bass I'd record it; I wouldn't care how it muddied things up. Now I recognize it might be better to try something like comping clean bass and a fuzzed guitar; I'm more open to finding a less-direct, but more efficient method to achieve things.

"You have to think of all the parts like a Voltron figure, where on their own they're not really all that impressive, but together they form an awesome robot," continues Barnes. "Now I think a lot more about how the different aspects of production can change people's perception of a song based on how you interconnect and position the presence of each element."

Of course, assembling a mighty robot for excursions outside one's timbre comfort zone is more difficult to do as a lone wolf, however, so Barnes solicited contributions from outside musicians. Matt Chamberlain, also featured on *False Priest*, as well as of Montreal tour drummer Clayton Rychlik, provided percussion. Having met classically trained multi-instrumentalist Kishi Bashi while playing a festival, Barnes solicited his help for string arrangements and sourcing various sundry parts, such as harp, oboe, cello, zither, pedal steel, and dulcimer.

Their meeting came at a highly fortuitous juncture, as one of the key influences on *Paralytic Stalks* is, according to Barnes, the "staggeringly beautiful and terrifying density

and even a lack of dimensional logic" of modernist Classical composers from Charles Ives to Krzysztof Penderecki, as well as the "emotive cacophony" of free jazz icons like Ornette Coleman and Albert Ayler. Bashi, a violinist, was able to draw on his past studies in these genres to provide the descents into madness that Barnes envisioned as he wrote his mini opuses. (Half of *Paralytic Stalks* is a set of suites that range from seven to 13 minutes in length.)

Recording independently, Bashi would receive Barnes' outlines and import them into Logic 8 on a Mac Pro Quad. From there, he would set about to record his violin with an Ithaca Strings piezo pickup run through an L.R. Bass Para acoustic D.I., a Boss RV-3, a Digitech Whammy, a Line 6 DL4 Delay Modeler, and into a Golden Age Pre-73 Neve 1073 clone and Apogee Rosetta 200.

"I really rely on the Line 6 to do a lot of the varispeed stuff I do, because it allows you to slow things down to half-speed and get these amazing murky textures," reveals Bashi. "When Kevin would send a track, I'd look for the arc in the composition and then come up with things that would take the song in a very different, but not too jarring direction. A song like 'Wintered Debts' [which eases out of country-rock into an increasingly abstract, icy minimalism] would be a collage of loops, which much of 'Ye, Renew the Plaintiff' involved

The Next Generation Motif XF

Since 2001, the Motif Music Production Synthesizers have been the best sounding, top selling and most requested music workstations on the market. The next generation XF builds on the heritage of Motif, providing new features and groundbreaking Flash memory expansion capabilities that will set the standard for keyboard workstations for years to come.



KARMA Motif Software

Yamaha and Karma-Lab announce the development and release of KARMA Motif Software for PC and Mac. This new entry in the renowned developer's line of software applications brings the award-winning and patented KARMA algorithmic music technology to the Yamaha Motif XS and Yamaha Motif XF platforms.



Wireless Motif XS OS and iPad® apps to play, tweak, mix and edit your Motif XF remotely



New Large Format Flash Libraries



Detailed Motif XF information
www.4wrd.it/mxfem2



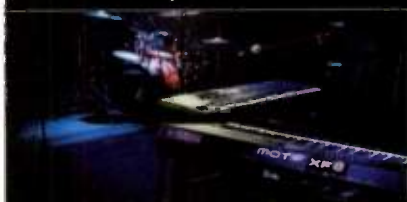
©2012 Yamaha Corporation of America. All rights reserved

Play & Perform

Create & Produce

Customize & Make it Your Own

Connect & Expand



MOTIFATOR.com

LISTEN

profile

a lot more processing on bounces of overlaid strings, plus I recorded my friend [and fellow of Montreal touring member] Zac [Covell] on saxophone and flute to get Kevin this descent into madness so intentionally intense people might want to turn it off.

"The more stuff I pile on, I might have to cut around 200 or 250 to make it fit, but I try not to do any extreme EQing," continues Bashi. "I can tell if there's space, and Kevin has been keeping really even mixes. Recording oboe was a challenge, though, with its intense midrange. It was tough to keep 800Hz-to-2k super bright. But I've learned a lot while working with Kevin about picking better sounds and making better recording choices instead of extreme EQing, and I'm stopping wall reflections, using subtractive EQing, using compression only when needed . . . things I didn't initially understand when I started recording myself. And it's been great to work with someone who lets me have the freedom to improvise and unify layers where he sees a weakness, as long as I push myself creatively to never repeat my approach."



Freedom can have its downsides, however. Or at least it can require some compensation in the mix. The ability of Barnes to write and track simultaneously, incorporating collaborators' WAV mixdowns, limited only by imagination, resulted in songs comprising 50 to 70 tracks.

"A track like 'Gelid Ascent' is short [for this album, at four minutes], but I could easily take every guitar and every vocal and make multiple runs with them through a busted Roland Space Echo and various amp configurations, putting them together all these sounds where they're awkwardly feeding back," reflects Barnes. "And I'd just have these Universal Audio plug-ins like the Cooper Time Cube [mkII Delay] and the Moog Multimode Filter sitting in the channel strip. So, every sound is probably four sounds, which adds up.

"Sometimes it would get to the point that the computer couldn't deal with it anymore, and something like a feedback delay plug-in would trigger twice, pop out for a measure and then pop back in," continues Barnes. "But it doesn't bother me; I look at it like the abused computer made a creative decision, like Logic wants to collaborate by acting illogically, which adds interesting artifacts and is another way this album is about not following the grid so closely. Coming up with ideas and finding things to live in the mix is never hard; the challenge is making it more seamless."

Hands-On!

Learn the art of audio recording without a mountain of debt.

The only way to learn the technical and personal skills needed to excel in an Audio Recording career is to touch, record, edit and create with the same equipment you'll find in the field . . . all day, every day — Hands-On, the CRAS way. In just 11-months, you too can BE CRAS, secure in your knowledge and ready to succeed in the field you love. **CRAS IS UP-CLOSE AND PERSONAL, CLASSES ARE LIMITED TO 12 STUDENTS AND FILL UP QUICKLY, SO RESERVE YOUR PLACE NOW.**



CRAS

CONSERVATORY OF
RECORDING ARTS & SCIENCES

1.888.604.4075 | CRAS.edu
2300 East Broadway Road, Tempe, Arizona 85282

Consumer information available at www.faircreditreporting.com/consumer.html



“I'm a Full-Time Film & TV Music Composer Because of TAXI”

Dave Walton – TAXI Member

My name is Dave Walton and I live in Cape Girardeau, Missouri - 2,042 very long miles from Hollywood.

I became a computer programmer in 1986 and thought my career in music was finished, over, kaput! 18 years later I decided to *return* to my first love and take my shot at becoming a Film and TV music composer.

Music Industry Contacts... *Not!*

If your town is anything like mine, there aren't a lot of movies or TV shows getting produced there. Actually.... none! I had no idea how to make music industry contacts or place my music in films or TV shows until I searched the Internet and found TAXI.

They Show You What Hollywood Needs

Rather than trying to cold call music supervisors and producers in Hollywood, TAXI reverses the process and tells *me* what they currently need. I get tons of Film and TV opportunities for my music and the experts on TAXI's A&R

team also give me helpful, detailed feedback. Finally, a way to make sure my music *gets* competitive and *stays* that way.

You've Got to Have Friends...

TAXI's Forum and online community is second to none. I've made life-long friends who've helped me make my music contemporary and helped me with the business side of the music *business* as well. By building an incredible network of fellow members, I've collaborated, met publishers, signed more deals and learned the skills I needed to branch out and make my own music industry contacts.

I recently finished scoring my 15th Independent Film!



TAXI[®]

The World's Leading Independent A&R Company

1-800-458-2111

World Radio History

Living the Dream Getting Paid for My Music

Today, I'm a full-time Film and Television Music composer because of deals, placements and relationships I've made through TAXI. My music has been on ABC, CBS, NBC, ABC Family, Spike TV, the Inspiration Channel, the Hallmark Channel and BET. In 2008 *alone* I had 161 placements on Network Television and my royalties are coming in from the U.S., Canada, the United Kingdom, Ireland, Finland, Sweden, South Africa, Australia and New Zealand. I love mailbox money!

TAXI was the *first* tool I found to build my career in the music business, and it's the one I'd *never* give up. Without TAXI, I'd still be working at my day job.

If you've been reading these ads year after year but waiting to join when your music is *ready*, wait no more! Join TAXI now and let them help you *make* it ready.

To facilitate this last piece of the puzzle, Barnes turned to Drew Vandenberg (Toro y Moi, deerhunter, Kishi Bashi's upcoming solo album) at Chase Park Transduction, a studio in Athens. Barnes' tracks included a wealth of volume, panning and delay automation to achieve impactful parts as they ride effects, and all done in Logic. Chase Park is a Pro Tools studio, so rather than have to recreate all these intended effects, Vandenberg routed Barnes' I/O into the Sony MXP3036 console, allowing the sessions to take advantage of a wealth of hardware, including Empirical Labs Distressors, Tube Tech CL 1B optical compressors, a Thermionic Culture Phoenix stereo valve compressor, an API 2500 stereo compressor (on all drum submixes) and various other paired gear.

"His track count is so high, and the console only has 36 channels, so we had to do a lot of submixing, establishing stereo blends of things in Logic before it hit the outboard gear," reflects Vandenberg. "We were doing lots of compression, but in small amounts, because

Kevin didn't want things too grabby or super aggressive unless it was an intentional aesthetic. There was no one right way or preferred box; I'd pick compressors or EQ for each part specifically based on how they would color certain things and what they would sit around. He came in having worked in all these interesting details into the super high frequencies and in the low end, and with so many harmonized elements, so we'd have to be extra careful that we didn't accidentally link a stereo compressor and have a cowbell panned hard right ducking a chimes part that's closer to the left."

Each subgroup also saw a choice of several EQs, including the API 550s, the API 560, and the native Sony modules. "I really like the 560 on low-mids, so I really like the half of the band from 1k to 31Hz for carving on subbass and synths, which were integral to the integrity of the songs," says Vandenberg. "It just came down to what was needed. The 550s isn't surgical, moving in 2dB then 3dB increments, but there's something about the color, while the Sony EQs are neutral so were used for parts

that shouldn't dramatically change."

Mixing took part over ten 10-hour days, and culminated in the mix being run to an ATR 102 1/2-inch tape machine to provide a final unifying factor. "It sounds deeper, wider, and the tape compression holds everything together in a very pleasant way," says Vandenberg. "We definitely mixed into the tape and to the qualities the tape imparts, always trying to think more about organization and careful scooping rather than unnecessary boosting."

"I really set out to create more physical effects with this album," concludes Barnes. "I think it accurately shows how the bottom can drop out, how you can have all these strange spirits that can exhaust you in a very therapeutic way, and then after you relieve them you can get your bearings back. It's something I've experienced emotionally and recording." ■



More Online

Read interview
outtakes.

emusician.com/february2012

iMazing



Fostex AR-4i

Audio Interface for iPhone 4

Exceptional 32 bit quality stereo audio

LED level meter for input monitoring

2 x plug-in powered condenser
cardioid microphones, 3 inputs

Includes sturdy hand grip

american
music & sound **AM & S**

A division of Jam Industries Ltd

Fostexinternational.com

Sounds as good as it looks



Scarlett 2i2

INCLUDES live
Ableton Live Lite 8!

THE USB RECORDING INTERFACE FOR MUSICIANS ON THE GO

Whether you want to record guitar, keyboard, piano or vocals the Scarlett 2i2 offers the highest quality in its class. Featuring preamps designed with over 25 years of experience in professional audio, this compact 2 in / 2 out interface will deliver on the road, in the studio or at home.

- Two award-winning Focusrite mic preamps
- High-quality 24-bit / 96 KHz conversion
- Anodised aluminium unibody chassis making it tough enough for the road
- USB bus-powered making it truly portable
- Unique ring-LED signal indicators
- Scarlett plug-in suite giving compression, reverb, EQ and gate, included with every Scarlett interface



Scarlett 8i6

8 in / 6 out USB 2.0 audio interface featuring two award-winning Focusrite mic preamps



Scarlett 18i6

18 in / 6 out USB 2.0 audio interface capable of recording your whole band with Focusrite quality

Go to your dealer and pick one up today

www.focusrite.com/Scarlett

For more information: (310) 322 5500

Focusrite[®]
SOUND IS EVERYTHING

The Little Willies

For the Good Times: real country, made in New York

BY BARBARA SCHULTZ

THE LITTLE Willies: It's the band name that makes grownups giggle (though the musicians insist it's an homage to Willie Nelson). The latest record of mostly country covers from this group of musical friends—Norah Jones, Lee Alexander, Jim Campilongo, Richard Julian, and Dan Rieser—*For the Good Times*, is named for the superb Kris Kristofferson song, which Jones sings so tenderly on the album. It's no secret what a sensitive interpreter she is, and her fans will love these inspired versions of Cliff Friend/Irving Mills' "Lovesick Blues" Loretta Lynn's "Fist City," Ralph Stanley's "I Worship You," and more.

As on the Willies' self-titled debut, Jones trades off on lead vocals with singer/guitarist Julian, rendering unique versions of a dozen familiar tunes, plus one hot Campilongo original written for the album: "Tommy Rockwood." By all accounts, the sessions were live, informal, and fairly relaxed, with keeper versions of the tracks coming quickly—usually in two or three takes.

"The hardest thing about making a Willies record is getting everybody in the same city at

the same time," says electric guitarist Campilongo. When the group does manage to come together, a new album starts with a couple of live shows to test drive the material.

"I'll usually book us a couple of gigs here in New York, and we will play under a false name. We don't call it the Little Willies, so it won't be mobbed. Once the gigs are booked, we'll all start sending each other MP3s of tunes we like. Then we'll get together at somebody's house and play, and that is usually very informal. Maybe I'll bring an acoustic. We don't book studio time. Dan Rieser has never brought a drum kit to one of those meetings; he'll play brushes on a phone book or something like that, which sounds pretty great, actually."

Also contributing to the relaxed vibe of the Willies' process is the flexibility they have to record in Jones and Alexander's studio, which is built into an apartment in New York City's Carl Fischer building, a former sheet music-publishing house. Alexander worked with studio technician/designer Matt Marinelli to turn the condo into a tracking space, where space is at a premium, but the musicians feel at home.

"This is the second time we've recorded there," says Campilongo. "It's a small space, so I just brought two things: my '59 Tele and my Fender Princeton, which we actually put in a bathroom. It's old-school. You stick the amp in the bathroom, and it sounds good."

Campilongo is a Telecaster virtuoso, who puts a lot of care into perfecting solos for his own records, but he's learned to embrace the Willies' live vibe. "I personally enjoy overdubbing, he says. "I love sitting in the control room and hearing the track playing through the speakers, and I have three amps miked, and it sounds fantastic, and we're going to add even more stuff to it later. With the Willies, it's live and there's always a compromise, but that's what defines us as friends and family. My greatest guitar solo might not be the take, for example, because the vocals might have been better on another. I did a solo on the [Cal Martin] song 'Diesel Smoke and Dangerous Curves' that I would have made more perfect if we were overdubbing, but we're recording live, and in the end I really love the wild abandon of it."

Campilongo plays a couple of solos in "Diesel

Photos by Christian Lantry



The Little Willies—Norah Jones, Lee Alexander, Jim Campilongo, Richard Julian, and Dan Rieser.

Smoke”: one that’s pretty close to the original version—which Alexander calls a “pretty, burning little entrance to the song”—and another where he says he thought he should “go a little more crazy. I thought it needed to be cinematic. We needed to hear the Diesel horn [which he imitates on the Tele], we needed to hear some derailing. I’m also really proud of Richard’s reading on that.”

Alexander says that “Diesel Smoke” is a great example of the way arrangements typically come together for the band in the studio. “We’ll just play the tune down as straight as possible, with whatever we think the groove should be, and then, as far as my bass part, the arrangement becomes a matter of deciding when I want to lay out, when I want to come in on the tune. You don’t want to have the same entrances on all the tunes, but there’s a certain feel that comes from waiting, especially on the bass. On that song, the arrangement changed when I was mixing. I just decided I didn’t like where I laid out, so I just muted it.”

The studio recordings were captured to Pro Tools by engineer Tom Schick. Alexander helped determine the mic choices, which he says were “a little bit dictated by the fact there was going to be a lot of bleed in the room,” with most of the players quite close together. He placed lightweight baffles around his upright bass, and lower baffles between Campilongo and Jones, but drummer Rieser was the only musician who was in a separate room.

“Initially we tried to go with more dynamic mics that weren’t going to pick up as much, but it didn’t sound as good,” Alexander says. “So we ended up going with full-on condensers. On Norah’s vocal, we used a Neumann M49, which is actually the mic she used on the very first record—we bought that off the studio. On my bass, we have this beautiful Elam 250. We used a [Neumann] U67 on Richard’s vocal, and one AKG C12A on the upright piano.

“I really like the mono thing,” Alexander continues. “The drums were all mono as well.” The kit was captured with one Coles ribbon mic overhead, an SM57 on snare, a D112 on bass drum, and a U67 that Alexander says was placed “a little far away—kind of like a room mic, but the room itself isn’t actually roomy enough for a room mic to do much; it just helped with a little bit of high end because the



Recording in Close Quarters

Lee Alexander worked closely with tech/designer Matt Marinelli and acoustician Fran Manzella to isolate a studio that shares walls, floor, and ceiling with other apartments:

“Luckily, when they converted this building to condos, they’d floated the floors already—not to the same level you would if you were going to build a studio from scratch, but it helped with the isolation up and down. We also decoupled the studio floor from the rest of the apartment—just cut with a saw around the perimeter of the room and built the new room on that.

“I also needed help with the ceilings, which aren’t super high; they’re about 11 feet, and with the hard floor and the hard ceiling, we were experiencing a lot of flutter echo. Fran Manzella helped Matt design a dropped ceiling. For the wall treatments, I just copied the walls at Avatar Studios [in NYC]: the alternating maple slats with fabric behind and an air gap between that and the wall.

“We didn’t want to lose the windows, because that’s part of the beauty of that space, so I also installed a second set of double-pane windows, so we can get fresh air if we need to; it does a good job of getting rid of the street noise.”

ribbon mic overhead is a little bit dark.”

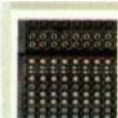
Campilongo’s amp in the bathroom took one SM57. “Part of Jim’s sound is he cranks that little Princeton up pretty loud,” Alexander says, “so it was going to be impossible to have that in the room with all of us. When we built the studio, I built microphone tielines out to the hallway, so we’d have some options.”

Schick and Alexander run the electric guitar through an Empirical Labs Distressor; on vocals and acoustic instruments, they use Pendulum Audio 6386 compression, which Alexander really likes: “They’re just really transparent,” he says. “Whatever is going through it, it tightens it up a little bit, and that’s all. You can crush the thing, and it doesn’t sound crushed. It really suits acoustic guitar, and I’ve always felt it really suits Norah’s voice, and I love it on the upright piano.”

Engineer and producer mix on a Neve 8026 console that Marinelli customized to fit into the little studio. Alexander has only 28 channels to work with, eight of which he says are “basically just faders—I just use those for effects, for reverbs.” However, he finds it easy enough to submix tracks in Pro Tools and send a stereo channel to the console to minimize his track consumption. For example, the last track on the album, Dolly Parton’s “Jolene,” includes a string section that Alexander stacked and manipulated until it became one overall effect that he added to the track.

“I stacked different parts on top of each other to get these dissonances, because I wanted it to be murky—especially on the outro. I wanted it to be this swirly thing going on underneath.”

The effect is apparently so subtle that Campilongo wondered if he were just hearing some manipulation of his guitar work on the track. “It ended up being more of a textural thing,” Alexander says. “It’s hard to add another melodic instrument to our thing anyway, but on a tune like ‘Jolene,’ it’s more about mood and vibe, which is the way Norah’s music has been, too. The subtleties are what make it interesting to me.” ■



More Online
Get band guitar tips in our interview outtakes.
emusician.com/february2012

Pros Rock the AX

Top Players Choose Roland's Keytars



JASON FREESE — GREEN DAY



CARAH FAYE — SHINY TOY GUNS



VALDEZ BRANTLEY — USHER



LISA HARRITON — NATALIA KILLS



BRITTANI WASHINGTON — BEYONCÉ



ROBERT "BUBBY" LEWIS — SNOOP DOGG



JENNIFER STONE — KESHA



KERN BRANTLEY — LADY GAGA



CHARLIE WILSON — RIHANNA



Check out artist demos
on the Lucina AX-09 Keytar.

YouTube

AX-Synth

Lucina
Synthesizer AX-09

Roland

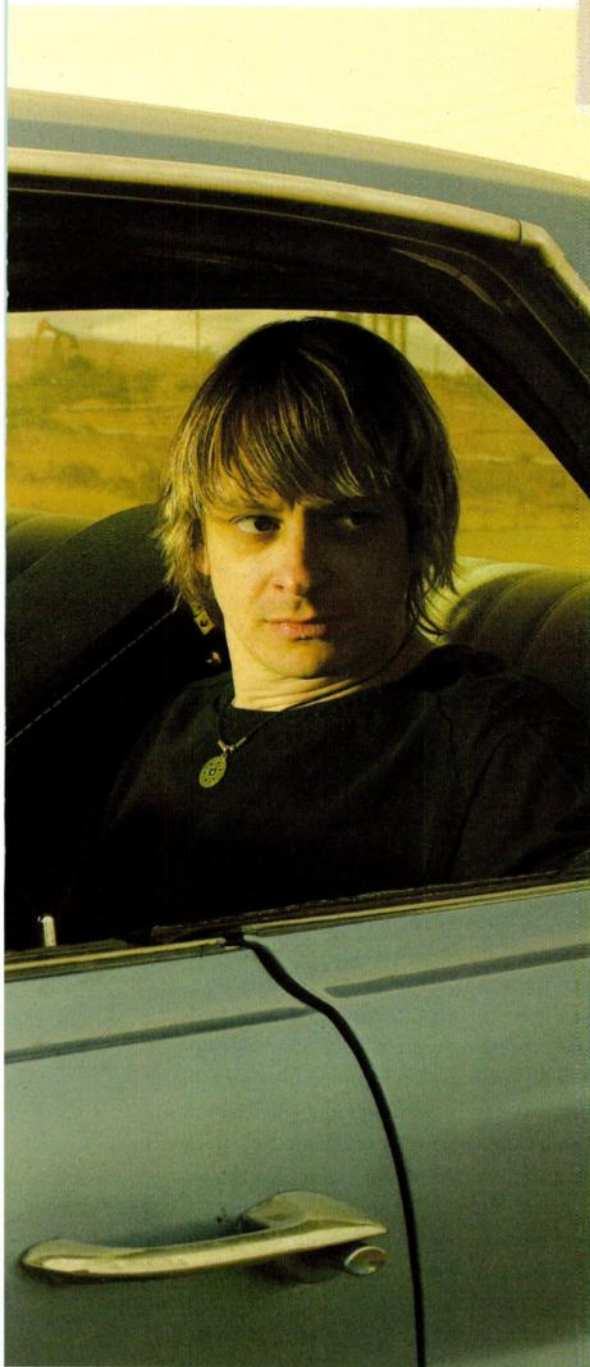


Become our fan
on Facebook



Follow us
on Twitter





Korn

For their tenth studio album, the nu-metal band enlists a half-dozen dubstep producers to push their low-end heaviness into a new sonic domain

BY TONY WARE

EXTENSION. IT'S a word that can hang heavy over a recording artist. And for the band Korn, it's a word that directly influenced the direction of the group's tenth album, *The Path of Totality* (Roadrunner Records), which sees the quartet commissioning the talents of more than a half-dozen synth-mangling dubstep producers to complement the heavy music mainstays' already low-end-friendly signatures.

"You still gotta hustle these days," laughs founding guitarist James "Munky" Shaffer, who welcomed a new opportunity to punish subwoofers alongside frontman Jonathan Davis, bassist Reginald "Fieldy" Arvizu, and drummer Ray Luzier. Even as Korn nears their 20th year together, the band recognizes there's an element of adapt-or-die for every artist. "We've always looked to extend our careers by doing something new, something challenging, going out on a limb. We did that sort of thing in the early '90s when we introduced rap with

metal. We figured people would either get it or eventually come around to it.

"So I wouldn't say doing this record is a departure from what we do; it just has some different characteristics," Shaffer continues. "I think people have this preconceived notion that we made a dubstep record, but what we did was make a Korn record with dubstep elements. We retained the elements that form the integrity of Korn—guitars with that aggressive midrange bite, heavy bass, Jonathan's vocals—and we introduced some of those forceful parts of dubstep."

Korn became fans of producer Sonny "Skrillex" Moore's bass mania on the *Scary Monsters and Nice Sprites* EP. The band approached him to collaborate, and the result is "Get Up!," *The Path of Totality's* first single. Jim Monti, who has engineered six Korn albums to date, confirms that "Get Up!" was a challenging, but rewarding puzzle to solve.



“Tracking and mixing that song was all hands on deck,” reflects Monti. “We didn’t know if it would end up on EP or an album, because it was such a different thing to put in front of the band’s audience. And it took five days to mix to figure out how to merge the new sub-heavy electronic parts with those distinctive, fat Korn guitars and Field’s five-string bass, which already goes low; and, how to bal-

ance parts of Ray’s drums with samples.”

“The process for ‘Get Up!’ was definitely not typical for us,” says Shaffer. “We were less involved with each other during writing and recording, but even busier when editing and mixing. We had a lot more concerns about whether things were too compressed, not compressed enough, too endy, too flat. But we didn’t rush it, and it helped up figure out what

worked best for this type of song.” Ultimately “Get Up!” gelled, and the band proceeded to solicit outlines from additional producers Noisia, Excision, Kill the Noise, Downlink, 12th Planet, and Feed Me.

The band would receive various song segments, isolate their parts as much as possible in the local rig, and then determine the best way to configure a verse/chorus/verse structure over what would essentially be an elongated rhythm track. Adding intro riffs, pre-chorus, bridge, and outro in separate sessions, the band found that working with bass-focused, synth-centered compositions meant reconfiguring more than just how Korn traditionally sequences its work collaboratively.

“A lot of the producers were sending tracks that were in *F* and *F#*, and we’re used to writing in the key of *D* or *A*,” reveals Shaffer. “So we basically changed the guitars up a half-step to match the original parts and it seemed to move air more. There was also new stuff in *B*, which was unconventional for us, so we had to tune up to have that frequency pop.”

Martijn van Sonderen, one-third of Dutch production trio Noisia, confirms that their end of the contribution was relatively simple, as the producers were asked to indulge creative freedom when providing wobbly and distending “instrumental dance floor listening tunes,” though tempering percussion and riffs with considerations. Noisia assembled a demo arrangement, minus the full regiment of synths and basslines that would traditionally occupy the space for vocals and guitar. Then it was sent to Korn to transpose keyboard parts to guitar/bass and develop alternate rhythms, melodies, and harmonies. “We mostly only needed to account for and pull back the parts we would usually use to do the ‘talking’ in the midrange, and they added their energy into our sound design,” says Sonderen.

Tracking was built around a new foundation in ways both musical and physical, as the band was constructing a new studio in its home base of Bakersfield, CA, as it recorded, literally conducting sessions in one room while concrete was being poured in another. The former Buck Owens Studios was undergoing renovations, with a control room centering on Davis’s personal SSL 6000E console, as well as a Neve 8014, reinforced by a full array of Pultec, Chandler, Universal Audio, Tube Tech, and GML outboard mic preamps, EQs and compressors.

Let’s cut to the truth.

Oxygen-free copper, polyethylene, PVC...that’s about it. So why do some cables cost an arm and a leg? At Hosa, we believe a cable should sound great, last a lifetime, and go easy on your wallet. That’s why we designed Hosa Pro Guitar Cables. Combining REAN® connectors by Neutrik AG with world-class manufacturing techniques, they redefine what performance and value are all about. Put your money into your music, not into hype.

-Choose Hosa Pro.



Contact your local Hosa dealer or visit www.hosatech.com

PLAY BY YOUR RULES



learn more at gen-16.com

Paul Kodish; Apollo 440, Jean Michel Jarre, Maximum Rock, Pendulum, Bad Company
Pictured with his touring rig for The FRESH:LIVE Project.

gen¹⁶
Intelligent Percussion by Zildjian

“The SSL has the G Series computer and E Series EQ, making it a good rock desk to mix on,” says Monti. “It doesn’t have that poppy sound a lot of guys like from the J Series. And the Neve is full of 1073s so it kicks ass, sweetens things up. We run a Pro Tools HD rig clocked off the Antelope Audio Trinity, and we use LavryBlue A/D and D/A converters for everything—24 in, 48 out.”

Loading the tracking and iso rooms with gear—such as Munky’s Marshall, Diezel and Bogner amps, Ibanez, Fender and Hofner guitars, and many signature tone sculptures like the Digitech XP100 Whammy Wah—the band indulged spontaneity as it cut its parts, creatively drilling through already textured beds. There were several experiments that fortified the album’s atmospheric, such as the use of sitar, an

octaves-gluing 12-string Hamer bass guitar, and the distortions produced while Davis shocked himself with an antique 1930s “medical” stimulator supposedly for invigorating blood flow/curing ailments called the Violet Ray.

Recording was broken up by a tour of Asia. So Monti accompanied the band to record vocals on the road. “We brought a Digidesign 003 interface and my laptop with Pro Tools, a Tube Tech MP 1A pre, the UA 1176 compressor and a Sanken CU-44X mic in one big Pelican case,” he reveals. “We’d redo a South Korean hotel closet with some pillows, blankets, and headphones to make a booth, and we’d book crew around us to make sure people wouldn’t have to deal with the screaming. I try not to set the compressor too hard so I always have to have my hand on the gain knob, because Jonathan’s voice has such a dynamic range and I don’t know what he’ll do next while he’s working something out.”

Running chains for multiple band members while adapting to a range of producers, varying locations, and odd hours was no mean feat, but the greatest challenge came in the later stages. Monti gives great credit to Downlink and Skrillex for stepping in and helping him grasp the value of sidechaining, a staple of dubstep production. Using the FabFilter Pro-C plug-in and setting ghost hits as a guide, Monti set up the compressor to duck and allow all the dominant basslines, noisy strums, and pounding drums to coexist without turning into mush. Coupling these techniques with some GML EQ for final tucks and boosts and the SSL console’s compressor for 4 or 5dB gain reduction on the stereo bus, Monti assured there could be headroom, top end, and heavy subbass from all contributors without muddying in the 400 range or masking Korn.

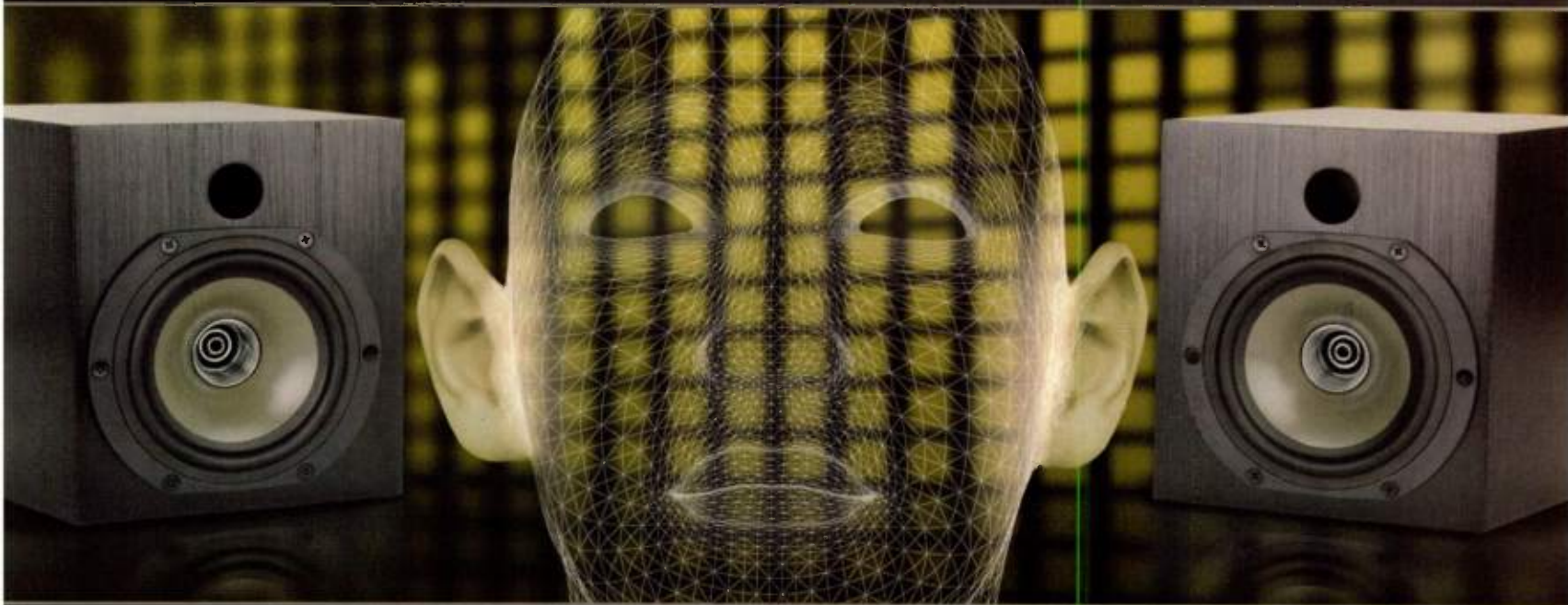
Ultimately, *The Path of Totality* entailed more recording in-the-box and thinking outside the box than any previous Korn productions. “I think it worked so well because the band reached out to people at the top of their field; they didn’t just try to see if they could make a beat like a hot producer would,” reflects Monti. “Everyone involved was working at such a high level, introducing all these new ideas while playing to their own strengths at the same time.” ■

TURNING
BEATS
INTO HITS
SINCE 1999

DRUMAGOG
THE PREMIER DRUM REPLACEMENT PLUG-IN

More Online
Read Jim Monti's tips
for boosting drum
presence.
emusician.com/february2012

Finally - a compact monitor designed to perform like the pair you rely on most.



"It doesn't happen often, but every once in a while I encounter a studio near-field reference monitor that really gets me jazzed about listening. The Pelonis Sound Model 42 is ready to make its mark in control rooms everywhere." - George Petersen, Mix Magazine

"I've tried several small monitors in an effort to have that represented in my set-up. The Model 42 far away exceeded all the others I've tried. Everyone in my team was immediately impressed with them." - Tony Maserati

"I was looking for detail and clarity...for reality, as opposed to pretty tonal colors. I found it in this speaker." - Jeff Bridges

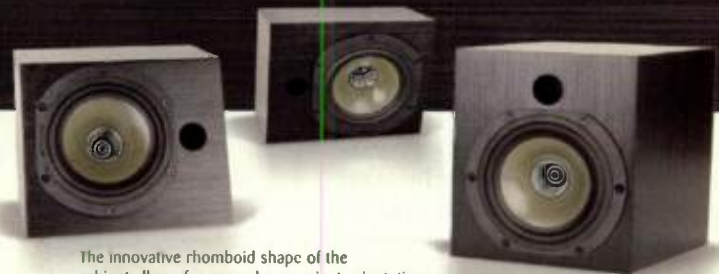
"These little professional monitors contain the sound that I have been coveting for the past 40 years - clean and flat." - Jim Messina

"The Model 42s run rings around much of the competition and stand well above most comparably spec'd systems, perhaps above all similarly priced competitors." - Frank Wells, Pro Sound News



Chris doesn't believe sensitive electronics belong in a vibrating, magnetized enclosure or that power cords should be near audio cabling, so individual 100W amps for each driver and precisely tuned active crossovers are housed in a sleek external unit.

World renowned studio designer Chris Pelonis makes his own custom studio monitors for every facility he builds, and always uses Tannoy dual concentric drivers because of their impeccable time alignment and spectacular imaging. He also uses his own amp and crossover designs to ensure his specifications are met.



The innovative rhomboid shape of the cabinet allows for several convenient orientations.

Now, after five years of R&D, Chris has produced a compact active studio monitor system meticulously crafted to bring his exacting standards to music lovers, hobbyists, and professionals everywhere.

Exclusive Worldwide Distribution By:



wavedistribution.com

Chris Pelonis
Signature Series

www.pelonissound.com

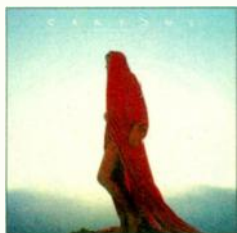
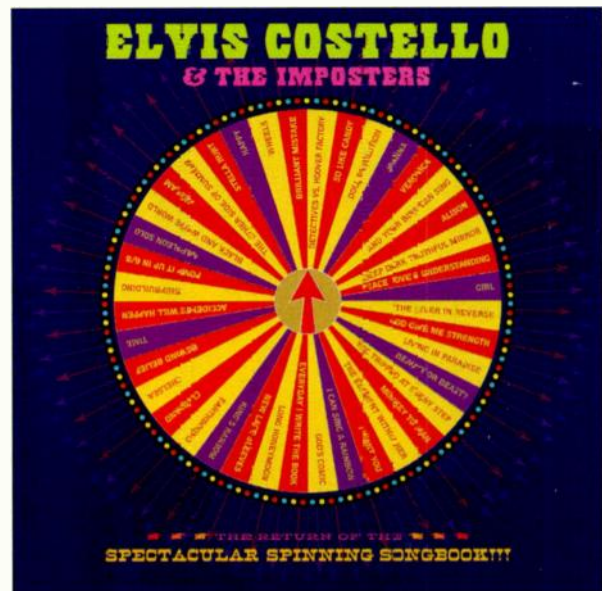
Elvis Costello and the Imposters

The Return of the Spectacular Spinning Songbook!!!

UNIVERSAL

COSTELLO ACTUALLY cautions against buying his overpriced box: three discs of career-spanning tracks from his recent tour (where audience members spun a giant roulette wheel to pick songs), a souvenir book of photos, and a revealing tour diary. But for those who can't help themselves, or who are sensible enough to wait for the later release of individual discs at a reasonable cost, *this* is the jackpot. In an interview for *Mix*, Costello said the difference between studio and live is "animal magnetism"; from "Mystery Dance" to "National Ransom," this music has it.

BARBARA SCHULTZ



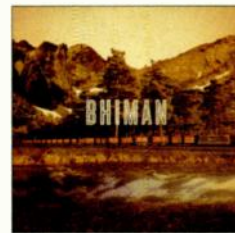
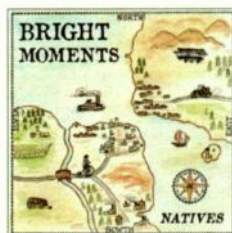
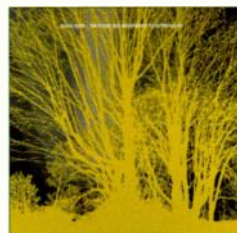
CANYONS

Keep Your Dreams

MODULAR

Vocals that recall a hoarse Rick Astley, '80s synths that simply drip Velveeta, frantic samples, and a tedious 4/4 beat, *Keep Your Dreams* will make you wish you'd kept your money. The Perth, Australia duo of Leo Thomson and Ryan Grieve eschew natural-sounding production—and that may be the point—but the sound is too prickly/retro to be taken seriously, and so plastic it will make your credit cards melt and form silvery globules like that crew-cut alien in *Terminator 2*.

KEN MICALLEF



Nada Surf

The Stars Are Indifferent to Astronomy

BARSUK

Blasting this super-smart, hyper-melodic album, it's hard to believe Nada Surf started out as a sort of JV Weezer with their 1996 altena-nerd hit "Popular." The new LP combines the band's most intensely rocking performances with bandleader Matthew Caws' heaviest songs—"The Moon Is Calling" and the culminating "The Future" powerfully reflect on time's undertow pulling us inexorably toward the unknown, while "When I Was Young" erupts into a widescreen anthem, providing an elegiac centerpiece.

BUD SCOPPA

Bright Moments

Natives

LUAKA BOP

One can imagine that if Brian Wilson was in full control at his zaniest times, he could have come out with something this delightful and enjoyable. Kelly Pratt, trumpeter sideman to the likes of Arcade Fire and many others, shows great talent on his own. Recording in his home studio, the multi-instrumentalist crafts rich textures of chording electronica, shimmering horn accents, and layered vocals over pop-ish beats, all thoughtfully arranged and performed. No DIY musician should miss this kind of inspiration.

CRAIG DALTON

Ulrich Schnauss & Mark Peters

Underrated Silence

BUREAU B

Like jewels on some revolving wheel passing before your eyes, *Underrated Silence* presents a series of ambient vignettes, each one opalescent and refined, subliminally beat-less and nearly sleep-inducing. Inspired by such shoegazing masters as My Bloody Valentine, Slowdive, and Chapterhouse, Schnauss and Peters layer sound upon sound, each compressed into a frosty dessert that exudes somnambulant good cheer. Titles like "Amoxicillin" and "Rosen in Asphalt" only increase the album's dreamlike beauty.

KEN MICALLEF

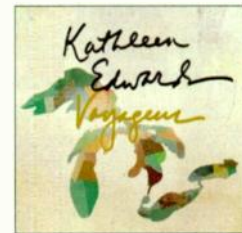
Bhi Bhiman

Bhiman

BOODON

Bhi Bhiman's fusion of soul and folk has an anthemic quality that elevates his well-crafted blues story-songs so beautifully. Familiar acoustic instruments and ethnic pieces are combined for a big, elegant sound, and occasionally processed, to where steel drums sound like ringing bells and his elegant, soulful voice soars above it all. A singer who sounds this sweet, and has this much to say, is great alone with a guitar, but this record fills you up to the brim.

BARBARA SCHULTZ



Kathleen Edwards

Voyager

ROUNDER

On her fourth album, Edwards dramatically breaks out of the alt-country cul-de-sac, armed with a brace of intensely personal songs crammed with guided-missile hooks. As Edwards and Bon Iver auteur Justin Vernon co-produced the record, they were falling in love, which no doubt accounts for the ecstatic vocal and instrumental performances throughout. The songs bear the wounds of Edwards' breakup and divorce, and Vernon's gorgeous arrangements enwrap her vulnerable vocals like a down comforter.

BUD SCOPPA



Pro Tools
The software that
won a Grammy®

Mbox Pro
Hear it to believe it:
avid.com/shootout

All-New
BX5 D2
Tells the truth about
your mixes (for better
or worse)

For keepin' it
old school

Venom
The Jason Bourne
of synths*

Elevate your studio.

See Venom in action



The latest Avid® gear is designed to make your studio smile. Compose, record, edit, and mix with industry-standard Pro Tools® software. Enjoy premium, studio-grade audio with Mbox® Pro. Get down and dirty with the aggressive sound of the M-Audio® Venom® synth. And experience every detail of your mix with the new M-Audio® BX5 D2 studio monitors. When you hear the results, you'll be smiling too.

** AIR Users Blog (January 18, 2011)*

Experience the Venom sound at avid.com/hear-venom

© 2011 Avid Technology, Inc. All rights reserved. Product features, specifications, system requirements and availability are subject to change without notice. Avid, M-Audio, Mbox, Venom, and Pro Tools are trademarks or registered trademarks of Avid Technology, Inc. or its subsidiaries in the United States and/or other countries. All other trademarks contained herein are the property of their respective owners.

World Radio History

Editors'

Choice

Awards

2012



32

of the year's best product innovations

BY CRAIG ANDERTON, SARAH JONES, GINO ROBAIR, AND JON CHAPPELL

THE *ELECTRONIC MUSICIAN* Editors' Choice Awards have become an institution. And there's a saying that "If it ain't broke, don't fix it." But our slogan is, "If it ain't broke—then we're *definitely* not pushing it hard enough."

It was time for a makeover, and time for the awards not to be a benediction from on high, but a celebration of the creativity that's the hallmark of our wacky, wild industry. So we talked, argued, discussed, and threw things at each other in the quest for narrowing down our list to the best products that shipped for the first time between AES 2010 and AES 2011. It's not easy to narrow a plethora of products down to 30 finalists (and two ties), but we didn't just keep our own counsel: The opinions of our reviewers, reader comments, and forum buzz were also factored in, not just in choosing products,

but in helping decide which ones deserved to be finalists.

We also wanted to break free from force-fitting products into categories. (Really, few concepts are more boring than giving awards for the "Best Chrome-Plated Mic Stand Under \$250.") So we tore down the walls, threw out the rule book, and picked what we thought were the best products, bar none—and then had some fun coming up with award categories for those specific products. So in a sense, these awards are more prestigious than ever because every winner was competing not just against similar products, but against *all* products released during the eligibility period.

Congratulations to the winners—you deserved your awards. Now, get back to work so we'll have something to argue about in 2012!

The Winners...



BEST REVERSE ENGINEERING OF ALIEN TECHNOLOGY

Blue Microphones Reactor

This mic is as versatile as it is unusual

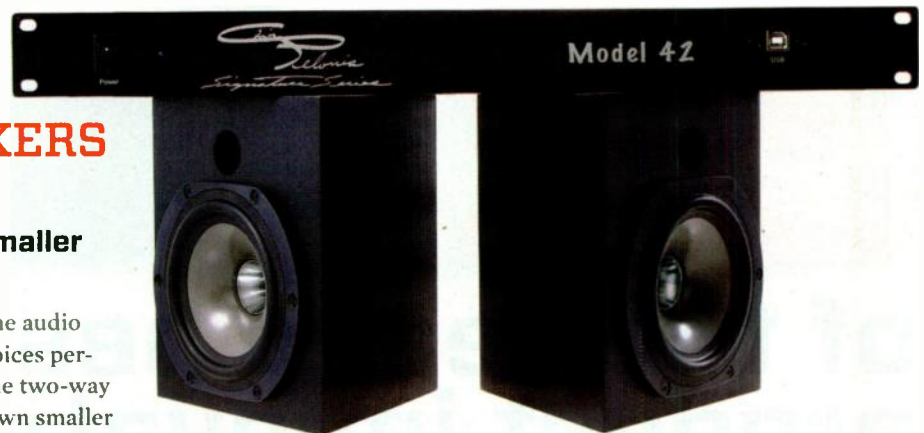
Yes, what gets your attention is the look—described by our reviewer as looking like crop circles, or an IUD for a giraffe. But the exceptional pattern versatility (cardioid, omni, and figure-8), Class-A electronics, and an unexpectedly low price got our attention as well. As more studios look to augment their mic lockers, and as the economy continues to sputter, there's something very appealing about a multi-function microphone that works well with anything from soft vocals to screaming guitar amps, yet doesn't break the bank—and might even offer an unexpected benefit for those who own pet giraffes.

A NEW ANGLE ON SPEAKERS

Pelonis Model 42

Finally—a different kind of monitor for smaller studios and production suites

Chris Pelonis is one of the premier studio designers in the audio industry, and his Signature Series speakers—which he voices personally onsite—are acclaimed for their accuracy. With the two-way Model 42, that expertise is now available to those who own smaller studios. But there's more to the story than just reputation and price: The speakers' unique slant design works for pretty much any positioning, which is always a crucial consideration in any room. Combine the price, size, design, and convenience with exceptional frequency response and serious SPL, and the Model 42 represents something truly new for smaller studios.



TINY TITAN OF TAPELESS TECH

Zoom R8

It's not just an 8-track recorder—it's also a control surface, USB interface, drum machine, and sampler



There are lots of ways to do portable music, but the R8 is a real overachiever. As an example, it has dual XLR inputs with phantom power—which can be set to 48V, or you can dial back to 24V to save power. However, what really took us aback wasn't the rich feature set but the transparent operating system—you can do a lot without even reading the manual. And if you *do* read the manual, you'll find a seemingly endless array of useful convenience features. Zoom has been at the portable music game for a long time; it shows.

OKAY, NOW I REALLY DO HAVE TO GET AN iPad

DigiTech iPB-10

Program your multi-effects with an iPad, then take the rugged hardware—*sans* iPad—on stage



Multi-effects, by definition, have a lot of effects—and therefore, a lot of parameters. For managing all those parameters, the traditional choices have been either a typically user-hostile front-panel interface, or an unwieldy computer-based editor. The iPB-10 sidesteps both problems by incorporating an iPad that you can use to program the hardware for a gig; you can then leave the iPad at home, or insert it into the sturdy case for a user-interface experience that's about as close as you'll come to having physical knobs and switches sitting in front of you.

THE KEYBOARD THAT LETS YOU HAVE IT YOUR WAY

Korg Kronos

There's no arguing over whether this is a stage instrument or studio keyboard—it's both



We don't normally think of keyboards taking advantage of "computer think" the way virtual instruments do. Except for the Kronos. From the solid-state disk drive to the multiple sound engines—not to mention the ability to sample into expandable sample RAM—the Kronos comes very close to packaging your computer-based setup into a rugged keyboard that's as good for the road as it is for your audience. It slips effortlessly into studio contexts as well, and what's more, it doesn't care what Microsoft or Apple do.

ABOVE AND BEYOND VIRTUAL ANALOG

Roland Jupiter-80

It not only sounds incredible, it focuses on live performance like a laser



The star of this show is the way the Jupiter-80 *interprets*, not just reproduces, the music that you play. Its SuperNatural technology isn't just about imparting expressiveness to static timbres, but providing a type of realism that's perhaps best likened to the audio equivalent of CGI—the sound is so clean, it acquires a "personality" of its own. Furthermore, the Jupiter-80 is about much more than sound, given its live-performance orientation; the touchscreen, extensive set of hands-on controls, and comfortable keybed were made for the stage yet also impart that live performance ethic to the studio.

DJS ARE MUSICIANS, DEAL WITH IT

Native Instruments S4

There's no doubt that this controller crosses over into being a musical instrument

Guitars haven't changed much in the past 50 years, but DJ controllers have changed dramatically in the past 50 months. Not only is digital DJing here to stay, so is the continuing evolution of DJs as their performance moves become more and more like playing traditional musical instruments. The S4 exemplifies this metamorphosis (especially when coupled with NI's Traktor software and the X1 effects controller) as DJs find ever-increasing ways to manipulate not just sets, but sounds, on multiple levels. Best of all, the S4 allows for fluid, natural performance moves—essential for the new generation of DJs.



FOOLED YOU! IT'S DIGITAL!

Universal Audio UAD-2 6.0

Analog-modeling mojo rises to a new level

In 1998, Creamware's SCOPE was ridiculed for using hardware DSP—after all, native processing was going to take over, and DSP would be dead. Apparently Universal Audio didn't get the memo, electing instead to deploy powerful DSP chips in service of power-hungry algorithms that have the uncanny ability to capture the vibe of analog in the digital world. Now they're applying that expertise to collaborations with companies like Studer, Ampex, Lexicon, SPL, MXR, Brainworx, and Manley to bring more hardware processors "into the box"—and version 6.0 is their most realized version yet.



IF I COULD HAVE ONLY ONE VIRTUAL INSTRUMENT

Spectrasonics Omnisphere 1.5

What can we say? Play this and enjoy its awesomeness

Spectrasonics never released a product that was anything less than excellent—and even in a world with a bevy of exceptional virtual instruments, Omnisphere stands out as a combination of the comfortable and the innovative. Of course, it doesn't hurt to have a soundset with Eric Persing's imprimatur; he not only knows good sounds, he knows how to capture them—as well as sounds that have never been captured before. The result is a virtual instrument with sound quality and playability so intense that they transform what could be just a great musical instrument into an instrument of inspiration.

Bullet Proof.

Subject: JDK R24 & R22
From: "Marcello De Francisci" <info@bluelabyrinth.net>
Date: Sat, August 6, 2011 5:01 pm
To: "JDK Sales" <sales@jdkaudio.com>

I had the pleasure of trying out your R22 & R24 today in my room. I bought them from Mark Spiwak at West LA Music. So so happy I purchased these. The warmth from the R24 is unlike anything I have heard. The color of this EQ is great for the mid to bass frequencies. It is so lush. Wow! The compressor is quite ballsy. Very very happy. I hope the prices don't go up cause I may just buy another R24.

Thanks guys! Very cool.

Best.

Marcello De Francisci
Blue Labyrinth Production Music
www.bluelabyrinth.net

- R20 dual channel mic pre
- R22 dual channel compressor
- R24 dual channel 4 band equalizer
- \$1,195 MSRP

With its historic **Pedigree**, superior sonic **Integrity**, and rugged build **Quality**, every JDK product represents extraordinary **Value**.

JDK Audio by API
www.jdkaudio.com
NAMM Booth #6411

• JDK AUDIO •



SOFTWARE WITHOUT HARDWARE IS LIKE A DAY WITHOUT SUNSHINE

Arturia Spark

Software is a lot more fun with hardware to control it—a philosophy Arturia has applied with aplomb

Arturia's been around for more than a decade, and established a well-deserved reputation for creating warm, accurate emulations of classic synthesizers—and now they're garnering serious cred for their hardware, too. Their Origin synthesizer applies the mindset of software to the physical world, and their Analog Laboratory series combines software with hardware that fits like a glove. But Spark merits an Editors' Choice Award because of its exceptional controller, high fun factor, and reasonable price: If you like to pound out beats, Spark is not just about sounds, but about the control necessary to bring out the best of those sounds.



BEST ALTERNATIVE FOR PEOPLE WHO CAN'T AFFORD RECORDING SCHOOL

Alan Parsons *Art & Science of Sound Recording*

This *tour de force* DVD set from a Jedi master engineer is instructional, educational, and enlightening

There are hundreds of ways to screw up an instructional video, but fortunately, Alan Parsons and his team seemed incapable of finding any of them. Yes, this is about instruction, and yes, you'll learn a lot. But this is a video with heart and soul that somehow manages to communicate the intangibles of recording and engineering music in a concrete, hands-on way. The thing that holds it all together is Parsons himself—he's friendly, even-handed, knowledgeable, and does it all without a trace of condescension. What's more, he's assembled a stellar collection of guests who offer their own valuable insights. Most excellent.



YOU'VE BEEN FRAMED— IN A GOOD WAY

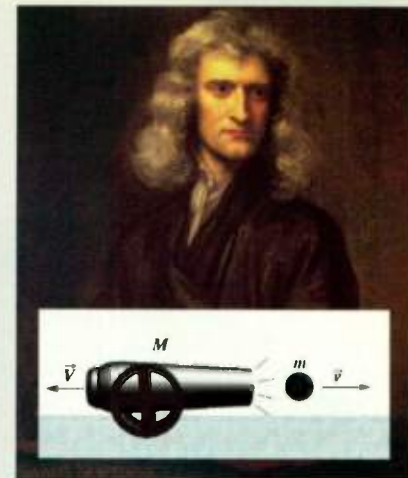
Radial Workhorse

Sure, 500 Series modules need an enclosure—but this one takes the concept further

With all the great 500 Series modules out there, trying to figure out which one deserved an Editors' Choice Award was daunting—until we realized that you needed something to *hold* all these goodies, and the Workhorse was clearly designed to be the *ne plus ultra* of 500 Series frames. The construction is stellar, but it's the extras that stand out: the ability to accommodate modules in the “wrong” size, the option to forego the mixer section if you're tight on bucks, and a well-thought-out implementation of the unused connections that's already attracted third parties. What's not to love?



If Newton was an audio engineer, he would use Recoils!

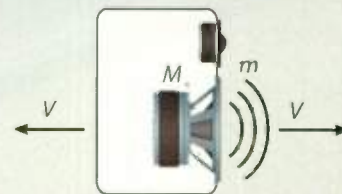


You've bought your new monitors, you put them on your desk and start to mix. However when you listen in your car or on other systems you notice that your mixes are not translating well – they don't sound the same as they did in your studio. Why?

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.

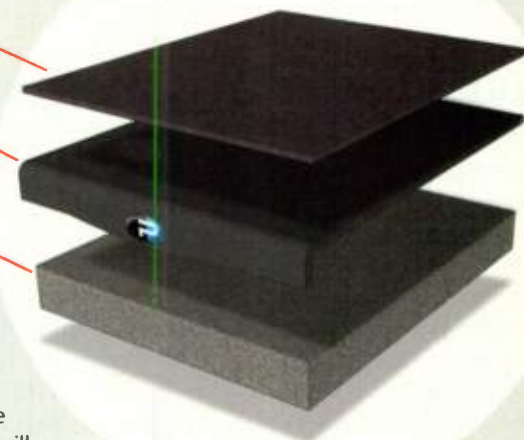
Some would say "just isolate the loudspeaker from the desk with a foam pad" but by doing so, you introduce a new problem—your speaker is now swaying back and forth unhindered on the foam, just as Newton said it would. Energy that could be producing a crisp kick or accurate bass is dissipated into the 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 and adds a massive platform that stabilizes the loudspeaker. 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 Keblet Way, Port Coquitlam BC V3C 5M5
www.primacoustic.com

World Radio History

"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!"

~ Bill 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 Filippetti

(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)

Copyright © 2015 Radial Eng. Specifications, appearance subject to change without notice.



iPAD'S NEW BFF

Alesis iO Dock

Don't you wish the iPad was studio-friendly? Now it is

iPads are definitely cool, but they're not exactly built to "rock and roll" specs—unless you have a flimsy-connector fetish. And the iPad's I/O is, shall we say, lacking. Alesis decided to do something about it by creating a home for your iPad that provides the necessary I/O for audio applications and a sturdy exoskeleton that lets the iPad take its place with your other studio gear. Couple that with a price that's more than reasonable, and iPad fans have the solution to its main limitations for audio use.

THE DRUM MACHINE FOR PEOPLE WHO DON'T LIKE DRUM MACHINES

Dave Smith Instruments Tempest

Calling this a drum machine is like calling a Harley a scooter—but it's one heck of a drum machine

The pedigree on Tempest is enough to get anyone's attention: Dave Smith, the "father of MIDI," and Roger Linn, of LinnDrum, MPC, and AdrenaLinn fame. Well, that level of talent certainly didn't go to waste; Tempest is a remarkable musical instrument, and it's not just "another drum machine." Of course the sounds are of the expected level of quality, but the surprising thing about Tempest is the workflow (or perhaps more accurately, "playflow") that's smooth as warm butter, to the point where it encourages creativity—and it's even good for more than just beats.



GUITARS AREN'T JUST ABOUT TUBES AND TELES

Roland GR-55

Bringing high-tech guitar and MIDI together in a beautifully integrated package

Guitar synthesizers have always sort of poked along, never taking over the world but never quite going away either, as guitarists learned to live with the limitations in order to enjoy the advantages. Surprise: The GR-55 not only tracks better than anything to date, but folds in VG-99-style COSM guitar/amp/multi-effects modeling to complement the MIDI aspects, a basic looper, MIDI outs for driving external gear in addition to the internal sounds, and USB audio interfacing. In the process, Roland has created the most complete package yet for electronic guitarists—and may just have given MIDI guitar a new lease on life.

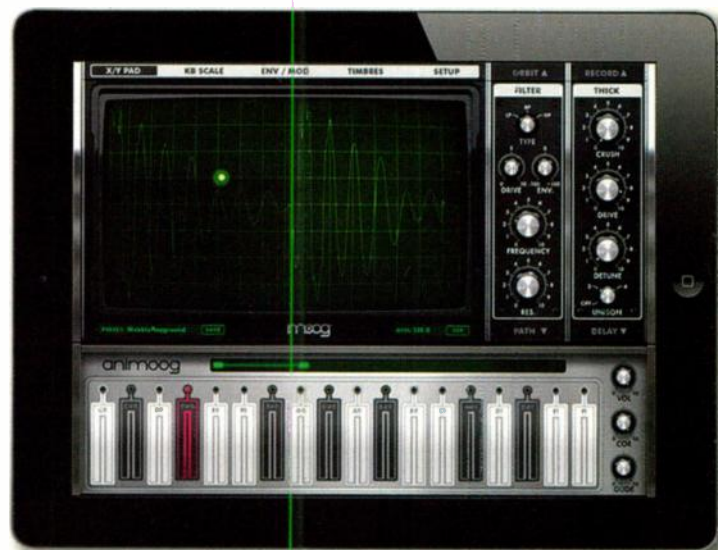


BOB WOULD HAVE APPROVED

Moog AniMoog

There's a very good reason why this iPad instrument is among the top-selling apps: It's a great little synth

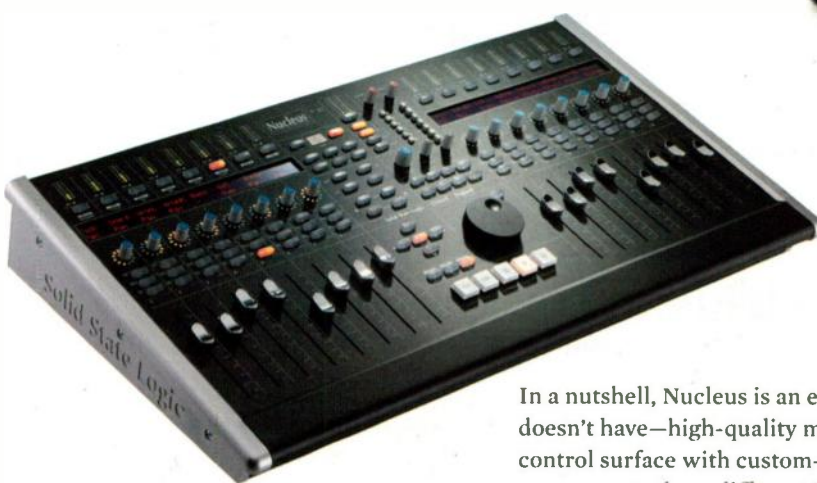
It's impossible to overestimate the impact Bob Moog had on this industry, and on the world of music in general. Although he may not be with us physically, his legacy continues as if he were still sitting at his workbench. Fortunately Moog Music has carried on without him—not without a twinge of sadness, but with a commitment to carry on his spirit. The AniMoog continues the Moog tradition, and its iPad platform will bring synthesis to even more people—maybe if we're *really* lucky, one of them will go on to become the next Bob Moog.



HANDS ARE FOR MIXING, NOT MOUSING

SSL Nucleus

This box provides all the missing hardware elements needed by your DAW software



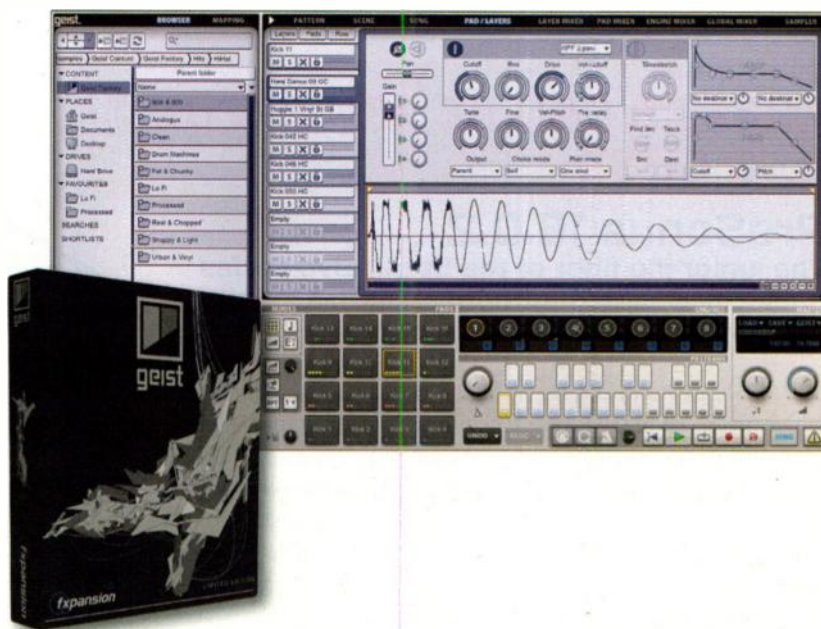
In a nutshell, Nucleus is an environment for your DAW that incorporates everything a DAW doesn't have—high-quality monitoring and mic preamps, USB audio interface, sophisticated control surface with custom-configurable motorized faders, metering, instant switching among up to three different DAWs, and bundled Duende Native plug-ins. But perhaps the most important feature doesn't show up on a spreadsheet: ergonomics. If you were raised in an “in the box” world, Nucleus provides the hands-on experience that was an essential part of the studio gestalt before zeroes and ones ruled recording.

EVIDENCE OF INTELLIGENT LIFE ON EARTH

FXpansion Geist

This clever instrument gives beatmeisters an amazingly complete toolbox

When FXpansion decides to do something, they do it right—from the superb sound of their DCAM synths to the BFD drums that revolutionized electronic drum plug-ins to the wrappers that let frustrated DAWmeisters take advantage of “non-supported” plug-ins. With Geist, FXpansion does it again by providing a total “workstation” for beats, sampling, and live performance that recalls Guru colliding with both Ableton Live and a serious sound library. Versatility separates Geist from the pack: Whether you want to use it as a tone module, pattern creator, live performance instrument, or even a song-construction kit, you're covered.



THE BIGGEST DRUM INNOVATION IN 400 YEARS

Zildjian Gen16 AE

As drummers go more high tech, Zildjian is giving them 21st-century cymbals

You don't like trigger pads, but you like being able to get different sampled sounds. You like real cymbals, but a lot of times they're way too loud. Gen16 AE tackles both problems by offering real cymbals, but re-designed for lower volume and with embedded miking for processing and triggering. Combine them with the Cymbal Controller, and you have a zillion (or is that a zildjian?) different cymbal sounds without having to carry around a bag of cymbals, and Zildjian is also supporting the system with additional sounds. So why do they play like real cymbals? Because they are.



AN ACOUSTIC P.A. IN COMBO CLOTHING

Fishman Loudbox Artist

It's a box, it's loud, it's loaded with features, and it will fill the room

We're favorably disposed towards products that simplify the lives of gigging musicians, so cue the Loudbox Artist—it's portable, fits on today's down-sized stages, and has everything a solo performer needs. You'll find inputs for instrument and mic, a bunch o' processors, inputs for backup-track portable players when you feel like cheating, feedback control, and DI out. And if you didn't think it was possible to stuff 120W of bi-amplified power into a box that weighs 25.5 pounds, think again. Instrument in one hand, Loudbox Artist in the other—doesn't get much simpler than that.

MIXERS CAN BE POWERFUL AND CUTE

PreSonus 16.0.2

The junior member of the StudioLive Series packs incredible functionality into a small, affordable mixer for studio or stage

The PreSonus StudioLive series has been extremely successful, which gives a good idea of what happens when the inmates are allowed to run the asylum. Well, it seems someone at PreSonus wanted a mixer with a smaller footprint, but still had the Fat Channel, could serve as a FireWire audio interface, and do the job for live performance but be just as home in a smaller studio. Oh, and have 130 processors. And remote-control software. And MIDI. And recall, and live capture software, and . . . well, you get the idea; they get an Editors' Choice Award.



ABOUT THE ONLY THING IT WON'T DO FOR MUSICIANS IS STAND UP AND APPLAUD.



Best-in-class microphones

Eight-track recording

Metronome

Tuner

XLR inputs

Get a versatile set of recording tools in the amazingly compact Olympus LS-100 Linear PCM Recorder. Capture the energy of any live performance with our most advanced, best-in-class microphones. Lay down clean, low-noise tracks by plugging in through two XLR jacks. Then, build your songs like a pro using the LS-100's two-channel recording and eight-channel playback. The Olympus LS-100. Performs so well, you might give it a standing ovation.

For news, reviews, tips and tricks, visit olympusamericaaudioblog.com.

OLYMPUS

getolympus.com/audio



GIGGING IS HARD ENOUGH; SIMPLIFY MY SETUP

HK Elements

Going modular with P.A.s means easier load-ins and happier backs

With all the fine portable P.A.s on the market, HK had to do something different, and they did—create a scalable line array for bands, DJs, and solo performers with just six matched elements. Part of the coolness is their online configurator, where you specify the type of application and audience size, and HK recommends a particular system configuration. Beyond its flexibility, HK Elements is a chiropractor's nightmare—the system is lightweight, easy to set up and tear down, and highly transportable. While it isn't inexpensive, in today's recessionary times, a system that lets you expand as your finances permit is a bonus.

SO THAT'S WHAT COAT POCKETS ARE FOR

TIE: TASCAM DR-40 and Roland R-26

Field recording is big, and these two are two of the best

We really didn't want any ties, but what other choice is there when two products fall into the same category yet offer differing visions of excellence? With the DR-40, TASCAM nailed the affordable, multitrack recorder for musicians by including all of the Important Stuff: four tracks, variable speed, long battery life, small size, lower-level "safety track" recording, built-in reverb, and a truly affordable price. The larger R-26 costs considerably more, but hits the high end of field recording, offering up to three stereo tracks for ambient and surround recording, two stereo mic types (omni and directional), and a navigation touchscreen that's both large and friendly. It's also compatible with Roland's CS-10EM binaural mics/earphones package. 'Nuff said. Tie granted.



THE SWISS ARMY KNIFE OF SIGNAL FLOW

Pigtronix Keymaster

And not just any Swiss Army Knife, but the one with a corkscrew and scissors

If the Keymaster was a person, it would be the guy working in the cubicle toward the back of the office, making sure everything gets done, never raising his voice, and never really noticed . . . until he takes a week off and the entire place falls apart. The Keymaster bypasses, crossfades, matches impedances, loops pedals in series or parallel, performs blending transitions between effects, can re-amp, and even includes a gourmet espresso maker. Oh wait . . . it doesn't have an espresso maker. Well, it gets the award anyway.





MOST BADASS INTERFACE

MOTU 828 mk3 Hybrid

In the audio interface wars, the 828 mk3 brings on the heavy artillery

Given the 4,553,600 audio interfaces out there, this wasn't an easy choice. But in a world where more and more interfaces are being designed for budget studios, this is the interface you bring out when the children have left the room. If the ten basic channels aren't enough, you'll appreciate the 16 channels of ADAT I/O—as well as the FireWire/USB hybrid approach, especially if your new laptop forgot that FireWire exists. Add the above-average DSP, built-in diagnostic tools, overload protection on the mic/guitar inputs, and other goodies—all at a surprising price—and the end result is an Editors' Choice Award.

EXTREME DAW MAKEOVER

TIE: Cubase 6 and Sonar X1

What do you do with two of the longest-running DAWs in the business?

Give them a complete makeover

After granting a tie for field recorders, we figured there wouldn't be any more—but then we hit the "Extreme DAW Makeover" category. A ground-up switcheroo of a popular program, Sonar X1 was the obvious choice; although the upgrade alienated at first, over time (and with the help of updates to tighten some loose ends), the wisdom of the design choices became clear. But then there was Cubase, which deserves an award if for no other reason than for the continual re-invention that keeps one of the original DAWs fresh, new, and creative. With Cubase 6, although the signature feature is VST Expression 2 (yes, Steinberg can even re-invent MIDI), the workflow improvements have made this venerable program far less opaque.



PLAYS NICE WITH OTHERS

Pro Tools 9

Now that Pro Tools works with just about any interface, you can say goodbye to the world's biggest dongle

With both Pro Tools 9 and 10 released within our eligibility guidelines, which to choose? Easy: Pro Tools 10 was an update, but Pro Tools 9 was an event—and cutting Pro Tools free from Avid interfaces put it at the leading edge of the democracy movement that garnered so many headlines in 2011. Sure, some of the features were about catch-up (who *didn't* have delay compensation?), but by opening up Pro Tools to the world, Avid sent a clear signal that it wants to be a player on a much bigger stage—by playing nice with others.

TOO DARN USEFUL NOT TO GET AN AWARD

Cloud Microphones Cloudlifter CL-1

Go for the gain, don't blow up your ribbon mic, and change the impedance—we like it

You get the impression that this is one of those products where someone had a “Why doesn't someone make something that . . .?” moment, and upon realizing no one did, made it himself. The idea is simple: a phantom-powered preamp that's ideal for giving extra oomph to ribbon mics, while blocking potentially dangerous phantom power from hitting the ribbon. Sure, it's a simple idea . . . but it's not a simplistic one. And it's a very useful one at that.



EXCELLENCE IN DIGITAL DIVEBOMBING

Morpheus Bomber

Your tuning stays perfect—and you don't even have to drill any holes

Realtime, polyphonic pitch-shifting never sounded so good on guitar—the Bomber is like having a vibrato tailpiece on a pedal, except that your strings don't break, they stay in tune when you shift the pitch, and you don't ever have to take your fingers off them. Sure, the dive-bombing function is outrageous, and you can get amazingly cool steel guitar-type sounds, but the really big deal here is the quality of the sound—the designers apparently checked Darth Vader and the Munchkins at the door. Still not convinced? It even works on vintage electric pianos and many other pitch-shift-challenged instruments.

WAY C-C-C-COOL PLUG-IN

iZotope Stutter Edit

This amazingly creative app offers entirely new vistas for DJs and groove fans

We have enough plug-ins for Pultec emulations, delays, reverbs, and compressors. Really, we do. But we don't have one of *these*, and while Stutter Edit is pretty specialized, it's also extremely creative both in terms of its design and what it can do for your music. Basically, it's a realtime sampler that chops, slices, dices, cuts, repeats, loops, and otherwise messes with phrases—anything can become an evolving, fluid rhythmic component. And, it does all this with an interface that initially looks like a 747's cockpit, but is actually easy to figure out. Creative thinking should be rewarded—so we did. ■



TOOLS FOR CREATION



The
Professional's
Source™



When it comes to the B&H sales staff, knowledge and experience are a given. We offer unparalleled expertise and solutions for the Audio professional.

Visit our SuperStore in the heart of NYC, give us a call, or browse our newly expanded Web site featuring live assistance, and experience for yourself the most knowledgeable and helpful sales staff anywhere



420 Ninth Ave, NYC
Visit Our SuperStore



800-947-5509
Speak to a Sales Associate



www.BandH.com
Shop conveniently online



TASCAM TA-1VP

Vocal processor/ channel strip with Antares Auto-Tune and mic modeling

BY PHIL O'KEEFE

SUMMARY

STRENGTHS: Logical and easy to use user interface. Individual outputs allow routing pitch-corrected audio separately. Dynamic MIDI control and assignable footswitch for remote parameter adjustment. Excellent collection of vocal processing tools in a 1U rack.

LIMITATIONS: No dedicated hardware gain knob for mic preamp level. Slight mic preamp hiss at higher gain settings.

\$599.99 NATIVE
\$449.99 STREET
tascam.com

THE TA-1VP, essentially a hardware “channel strip” optimized for vocalists in both live and studio contexts, crams multiple processors into a single rack space unit: mic preamp with pad and +48V phantom power, compressor, noise gate and de-esser, over-achieving 2-band EQ, mic modeling, tube warmth, and Auto-Tune Evo pitch correction that can range from transparent to “hard,” highly-processed pitch correction.

The straightforward user interface gives each major “module” its own complement of front-panel controls and meters, which work with a data knob and Page/Save controls to navigate through the various parameters, change values, and store edits. For example, need to change the compressor’s attack time? Just push the front-panel ATK button in the compressor/gate section, then adjust the value to taste—super easy. I do wish that the front panel offered a dedicated mic preamp volume knob, but otherwise the interface is outstanding.

You can run the TA-1VP “inline” between your mic and PA as a live vocal channel strip, with a mixer’s insert points or aux send/returns, or as an external “hardware plug-in” for DAWs that support this kind of routing. The documentation is very helpful regarding setup for both vocal and instrumental use; while vocal processing is the main attraction, several of the factory presets are geared toward drums, bass, and other instruments. I was even able to tweak a weak-sounding upright bass part with questionable intonation into a useable track, thanks to the pitch correction, mic modeling, and EQ tools.

The Modules The mic preamp has a 20dB pad and up to 30dB of gain trim, yielding a decent enough range for vocals. I noticed some audible, but not necessarily objectionable, hiss at higher gain; it’s fine for live, but for critical studio applications I preferred using the TA-1VP as a line-level processor, preceded by a high-end outboard mic pre.

Regarding dynamics control, the downward expander/gate is smooth on vocals, and works well to help reduce background hiss and noise. The compressor has variable knee, along with attack and release controls, and is very effective whether controlling dynamics due to extreme changes in singing levels, or fattening the sound. The de-essing option makes it easy to control sibilance without removing any more highs than necessary.

I really liked the 2-band EQ. You can individually select the filter type for each band—fully parametric peaking, high- and low-pass filters, shelving EQ—it’s all there. While two bands of EQ is usually plenty for either shaping tone or solving problems, I occasionally wished for a third band when processing instruments, or when I needed simultaneous tonal shaping and a surgical EQ fix.

The Antares Connection Antares is famous for their pitch-correction and modeling plug-ins. Their mic modeling does make a noticeable difference, and the selected models provide a pretty wide range of useful timbres. The snare and kick mic models in particular



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
- 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),
NAAB (M-ARCH)

**Acting, Architecture (BFA) and Landscape Architecture degree programs
not currently available online.*

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

hint at the TA-1VP's ability to serve as a channel strip for processing other audio sources, including instruments. While there are a limited number of both source mics and modeled types, generic models such as "handheld dynamic" and "large-diaphragm condenser" work with practically any source mic. Also, TASCAM encourages experimenting with different source mics—even "mismatching" them, which can lead to some cool-sounding results.

Based on Auto-Tune Evo's "automatic" mode, the pitch correction lacks the precision of the computer plug-in's "graphic" mode, but for on-the-fly pitch correction, it works well as long as you specify the right scale and the vocalist is "close"—more than 50 cents off from the "right" note is problematic (then again, a singer who's a quarter-tone off is problematic, too). As with any pitch correction, it's best if the singer monitors the "dry" vocal; most singers will be thrown off pitch if they listen to the corrected output while performing.

The Auto-Tune Evo version's improved pitch detection makes the TA-1VP a definite

improvement over the earlier Antares AVP-1 regarding pitch-correction accuracy and transparency, but if you want you can get that "Cher effect," too—just crank up the speed and sensitivity controls. Less-sensitive and slower settings produce more natural, transparent pitch correction.

A double-tracking effect can feed a second stereo output jack for separate panning and processing, or you can mix it in at any ratio up to 50% with the main output. But that's it for time-based effects; you'll need to provide your own echo, modulation, or reverb.

Wrapping Up With Auto-Tune, I liked the TA-1VP best as a post-recording insert effect, as I could control the speed via MIDI, as well as choose which words and phrases needed fixes. This kind of precision gives greater realism than just processing everything, although of course in live performance, you don't have the luxury of using the TA-1VP this way, so the ability to have relatively transparent pitch correction

is welcome. Of course, if you want the Auto-Tune to serve as an "effect," the TA-1VP does that too.

I love that a standard 1/4" footswitch jack can be assigned to the Comp/Gate, EQ, Auto-Tune, Mic Mod and Double Track enable/bypass; the main bypass; or to increment presets. It's even possible to bypass just a couple of effects (such as the EQ and Auto-Tune) with the footswitch, then kick them in as needed. In a "live" setting, this let me get a more "produced" sound on the choruses while leaving the verses more stripped down.

For studio use, a good preamp and plug-in processing with full automation will be inherently more flexible than a hardware processor like the TA-1VP. However if your focus is live performance, but you also need a unit that's suitable for the studio—and as a bonus, lets you dial in sounds quickly—the TA-1VP is an excellent choice. It really does a great job of turning plain, basic vocals into fully produced and polished ones. ■

NEW! FROM LEGENDARY PRODUCER/ENGINEER KEN SCOTT

LEARN THE SECRETS OF WORLD-CLASS DRUMSET RECORDING

The single most difficult part of recording a band is getting a good drum sound. Now, come into the studio with legendary producer/engineer, Ken Scott, as he re-creates his timeless drum sounds.

Ken covers mic choices and placement, EQ, gating, reverb, and other essential recording techniques.

You get complete 48kHz multitrack files of all five drummers, for use in any DAW, allowing you to mix following Ken's techniques or experiment and create your own unique style.

In addition, you can also download other multitrack files, including 2 FREE bonus files, in 48kHz or upgrade to 96kHz from SonicReality.com

DVD
VIDEO

DVD
ROM



TERRY BOZZIO
MISSING PERSONS

BILLY COBHAM
MAHAVISHNU ORCHESTRA

ROD MORGENSTEIN
DIXIE DREGS

BOB SIEBENBERG
SUPERTRAMP

WOODY WOODMANSEY
DAVID BOWIE

BUY THEM TODAY at alfred.com/EpiKDrumSEDU or at any of these fine retailers:

amazon.com

BARNES & NOBLE

BUY
Musical Instruments

Guitar Center

Musician's Friend

Sweetwater

Alfred
90th ANNIVERSARY

OMNISPHERE 1.5



- Innovative new "Orb"
- Expanded Synthesis
- Tons of New Sounds
- Omni TR - Touch Remote App



WWW.SPECTRASONICS.NET



800.747.4546 www.ilio.com

See Us at **NAMM Booth 6728**





Fig. 1: Spark is all about hardware/software synergy.

Arturia Spark

This ain't your daddy's beatbox

BY REEK N. HAVOK

SUMMARY

STRENGTHS: Excellent controller with velocity- and pressure-sensitive pads. Wide-ranging selection of sounds. Highly accessible for real-time control. Suitable for stage and studio. Real-time recording of all parameters.

LIMITATIONS: Can't adjust LCD contrast.

\$599 NATIVE
arturia.com

I'VE ALWAYS had a soft spot in my heart for the drum machines of the early '80s. The advent of these beat-making monsters from companies like Linn, Oberheim, and E-Mu pitted drummers against technology, and scared the music scene forever as unforgiving, rock-solid tempos entered the mainstream.

While drum machines were very approachable, non-drummers found out quickly that making their own drum patterns required actual skill. Unfortunately, much like a dinosaur in a tar pit, many drummers were horrified by these machines that seemed to spell their extinction. I was one of the few drummers who embraced, rather than disliked, this technology—and many checks followed.

Fast Forward Over subsequent decades, there was little innovation until the Beat Box era brought back the love of these programmable wonders, which took on new life in the techno world. Today, software-based instru-

ments dominate the market, with a few hardware-only holdouts like Korg, Roland, Alesis, and several boutique companies. However, the landscape is changing with Native Instruments Maschine, and Tempest, the co-development project by Roger Linn and Dave Smith (of Sequential Circuits).

Software-based instruments' lack of tactile response never appealed to me, but then Arturia decided to do something about it and introduced Spark (Fig. 1), a very powerful software-based drum machine with an incredible hardware controller—all for a very reasonable price.

All Hands On Deck As we get more into virtual instruments and away from hardware, mouse-driven performances sometimes lead to far more static grooves. Arturia's Spark provides a comprehensive software-based set of sounds with a surprisingly rich feature set, coupled with a hardware layout that is not only exceptionally well-designed, but brings serious usability and intuitive control right out of the box. And remember . . . this is a drummer speaking!

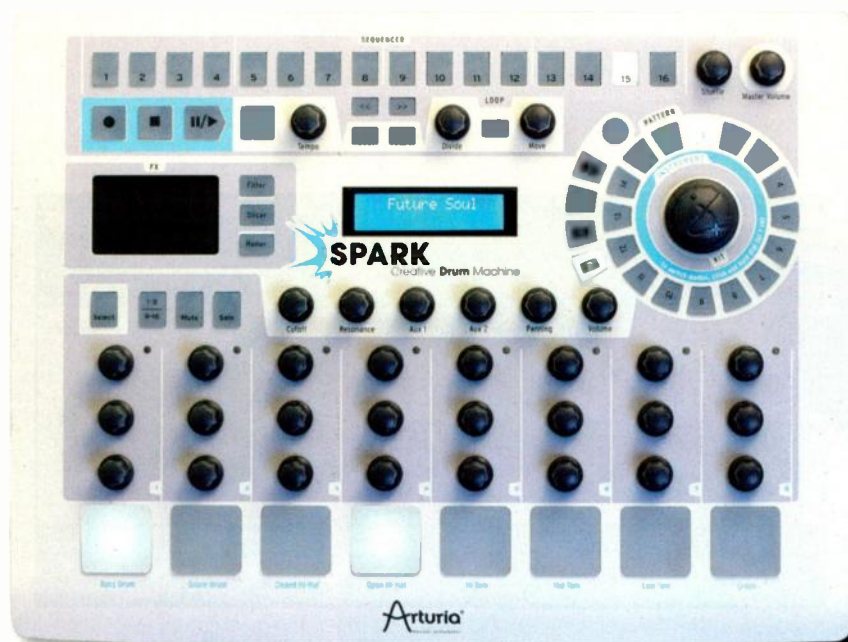
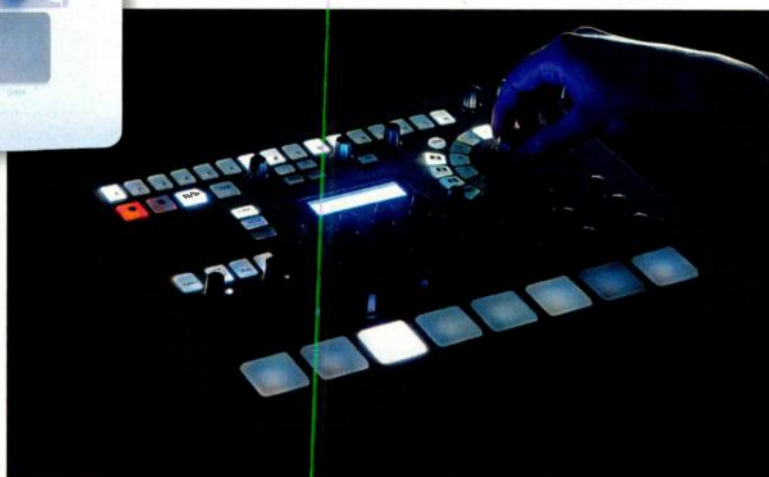


Fig. 2: In addition to the plethora of pads and controls, note the X-Y controller toward the upper left.

Fig. 3: You can even use Spark under low-light conditions.



Realtime, hands-on control of preassigned controls like pitch, decay, and frequency shift is always available, and a fast assign mode provides the ability to tweak more in-depth parameters for aux sends, cut off, resonance, panning, and volume on an individual drum basis. On-the-fly pattern-select and sound-swapping is fast and simple. Every time you tweak a knob, the LCD quickly shows you the parameter and value so there's virtually no guesswork, particularly regarding the three assignable controls for each sound that can be changed and saved with each kit.

I've been a fan of the Korg Kaoss pad for a long time; Spark's built in X-Y touchpad on the Spark controller (Fig. 2) recalls that, giving quick access to Filter, Roll, and Slicer. You can swap out other effects for these (including Tape Slow Down, Echo, and Reverse), and all this makes Spark a very dynamic and playable instrument with highly creative options.

The hardware controller is beefy, rugged, and feels great. As a drummer, the way a pad plays is very critical for me and the Spark hardware controller does not disappoint. The eight soft, illuminated, silicon-like pads toward the front are large enough for two-finger playing, and the responsiveness allows for

quick rolls, intricate patterns, and very predictable playing—a feature rarely found in most dedicated controllers and keyboard pads. The controller itself is relatively heavy, which helps keep it in place regardless of any real-time beating; the many illuminated controls make Spark easy to use in low-level environments.

Another cool feature is the pattern loop section. A simple button push jumps you into Loop Divide mode where you can cut your pattern in 1/2, 1/4, 18th, 16th, or 32nd and the knob lets you move that selection all around the pattern. This makes the pattern dance around, creating all kinds of wild permutations of a pattern without ever switching away from that groove.

Spark ships with a great array of sounds; Version 1.3.3 features over 480 instruments in 30 unique kits, with sounds ranging from classic drum machines to funk, industrial, jazz, pop, and more. You can also add your own sounds. To top it all off, the realtime automation and visual editing makes integration with your DAW of choice simple and fast.

It Really Can't Be Beat Arturia has hit a home run with Spark. The company's software/hardware pairings over the past few years represent a clever approach, par-

ticularly in this instance where a generic controller would not do the software justice. What's surprising is the high quality of these hardware controllers—I find them quite a bit better than average, and the reasonable price makes them attractive controllers even without the software. In fact Spark's controller rivals just about anything I've seen with respect to build quality, responsiveness, and of course, fun factor. How Arturia manages to bring this hardware/software package in for under \$600 retail is nothing short of incredible.

With all the realtime controls, logical layout, readily accessible controls for tweaking patterns and sounds, and useful assortment of onboard effects, Spark is as cool live as it is in the studio. I quickly found improvisation on Spark to be engaging and rewarding, opening the door to some very fun grooves and (at least in my hands) demented percussive assaults.

I can sit and play with Spark for hours—it excels in bringing back the tactile feel of a drum machine that's been missing from my arsenal for so long, while adding intelligent, accessible features. Overall this is a great buy, and a fine addition to just about any setup that involves beats. ■



1
Yamaha
01V96i
 Small-format digital mixer
\$2,699
HIGHLIGHTS 16-in/16-out USB 2.0 audio streaming • 24-bit/96kHz resolution • single-cable DAW integration; includes Cubase AI6 • incorporates a full suite of pre-installed Virtual Circuit Modeling (VCM) plug-ins and REV-X reverbs • Studio Manager software • 24 analog and digital ins • expandable using mini-YGDAI cards
TARGET MARKET Recording studios and live recording
ANALYSIS Being able to save and recall all settings via USB is a time-saver for live use, but also simplifies setup time in the studio. The 01V96i can also serve as a multi-input interface for live recording.
yamaha.com

2
Acorn Instruments
Masterkey 61
 USB keyboard controller
\$149.99
HIGHLIGHTS Full-size, velocity-sensitive synth-action keys • five octaves • seven MIDI-assignable controls including two rubberized expression wheels, 60mm fader with rubberized cap, four assignable knobs, two assignable buttons • class-compliant, no drivers required with Mac OS X, Windows XP/Vista/7 • includes PreSonus Studio One Artist DAW • input jack for sustain pedal
TARGET MARKET Computer-based studios, virtual instrument users
ANALYSIS Any computer-based studio benefits from a MIDI keyboard controller, whether for playing instruments or using as a control surface. The Masterkey 61 is intended for studios where cost-effectiveness is a priority.
acorn-instruments.com

3
Applied Acoustics Systems
Chromaphone
 Virtual percussion synthesizer
\$199
HIGHLIGHTS Create acoustic resonator-based drums, percussion, mallet, string, and synth-like instruments • novel “coupling” physical modeling technology results in extremely expressive instruments with a wide range of sonic colors • AU/VST formats for Mac OS X and Windows • sounds morph easily and continuously from one timbre/character to another • one-shots are no longer limited solely to velocity control modulation
TARGET MARKET Percussion players who want more sonic flexibility
ANALYSIS By incorporating advanced physical modeling technology, Chromaphone is intended for those seeking more dynamic and timbral flexibility than is obtainable with conventional sampling.
applied-acoustics.com

4
Hercules
DJ Control AIR
 DJ mobile control surface
\$169.99
HIGHLIGHTS Uses AIR (“Adjustment by InfraRed”) proximity sensor to control computer DJ mixing consoles • control your choice of functions (volume level, effects, etc.), without touching the controller, by moving your hand above the sensor • intuitive ensemble of controls • functions under all ambient lighting conditions • built-in audio outputs
TARGET MARKET DJs who want to augment their stage presence
ANALYSIS As DJs step more into the spotlight and integrate more performance moves, DJ Control AIR allows doing conventional DJ moves in an unconventional way that provides greater stage presence and physical control.
hercules.com



5

5
Kenton Electronics
Eurorack Modular Solo
MIDI-to-CV converter
£162.50 (approx. \$250)

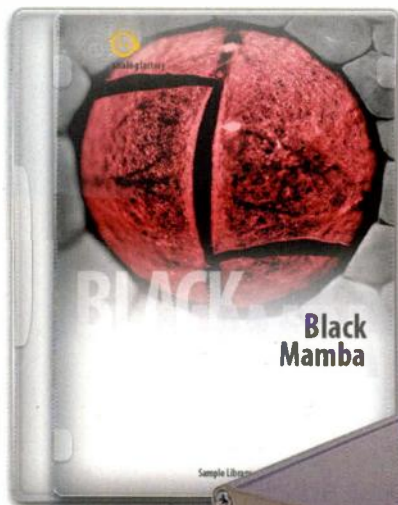
HIGHLIGHTS Control voltage (V/oct, Hz/V, or 1.2V/oct) and gate/S-trig outs • MIDI I/O on standard 5-pin DIN connectors • ships with ribbon cable that fits into Eurorack (A100) modular systems • MIDI out can also provide DIN Sync for vintage Roland gear
TARGET AUDIENCE Modular synthesis enthusiasts who want to interface CV/gate systems with MIDI
ANALYSIS Modular synthesizers have staged quite a comeback, but in today's world, it's important to be able to interface them with MIDI-based systems. The Modular Solo allows controlling synth modules with controllers like MIDI keyboards.
kenton.co.uk



6

6
Akai Pro
Laptop Stand
Collapsible laptop holder
\$99.98

HIGHLIGHTS Holds laptop above control surfaces such as keyboards and DJ controllers • disassembles in seconds for easy transport • rugged, lightweight design • includes transport case • rubber pads on the stand's top and bottom provide a secure grip • includes pre-drilled mounting points for studio installation
TARGET MARKET Stage or studio laptop-based music-making setups
ANALYSIS Laptops have a significant footprint, and often have to sit aside of any associated controllers. Being able to raise the laptop above controllers, yet have it remain easily accessible, saves space and places both devices in closer proximity.
akaipro.com



7
analogfactory
Black Mamba
Virtual instrument plug-in
\$29.99

HIGHLIGHTS MAM MB33 emulation for Ableton Live 8.2.6 • 937MB unpacked as Ableton Live Project Pack • 539 samples, 24bit/96kHz • in addition to square/saw, nine new waveforms based on the MB33's oscillator morphing options
TARGET MARKET Roland TB-303 fans who want a virtual instrument based on the vintage analog MAM version
ANALYSIS Decades after its introduction, the TB-303 sound continues to power dance music. MAM's hardware MB33 was one of the more interesting hardware clones as it offered several variations on the original, and now it's been virtualized for Ableton Live.
analog-factory.com



8

8
Advanced Pro Gear
MIDI Bridge 120
MIDI recording interface
\$199

HIGHLIGHTS MVS (MIDI via S/PDIF) technology takes input from MIDI instruments/controllers and sends the data to DAW plug-ins through S/PDIF audio • high-speed protocol eliminates MIDI "jitter" to preserve timing accuracy • eliminates delays and timing problems caused by the computer OS and USB/Firewire/PCI buses • two MIDI inputs and two MIDI thrus
TARGET MARKET Studios requiring precise, accurate MIDI recording
ANALYSIS Using S/PDIF to transfer MIDI data provides a highly accurate alternative to traditional MIDI interfacing; MIDI notes are accurate with each other to within one sample at your DAW's sample rate.
advancedprogear.com



vintagekingaudio

NEW | USED | VINTAGE

WORLD CLASS AUDIO | WORLD CLASS SERVICE



NEW! SSL DUENDE NATIVE BUNDLES

The legendary sound and flexibility of the SSL console range brought within easy reach of all DAW users - the Duende plug-in bundles are now available in VST, AU and RTAS formats.

Solid State Logic



LITTLE LABS REDEYE 3D PHANTOM

The simultaneous vintage transformer direct box/re-amping tool with passive and active inputs. Easily interface the whole re-amping signal path, taking all the guesswork out of high-fidelity re-amping!

Little Labs



MXL GENESIS II

The Genesis II borrows the outstanding qualities of the original Genesis and adds MXL's dual-diaphragm capsule and patented warm and bright switch. This allows you to change the tonality of the microphone to suit different applications.



KRK KNS 8400 HEADPHONES

"I've just fallen in love with a pair of KRK KNS 8400s. The detail in the sound is amazing. It really felt like I was hearing it in the studio. They are an incredibly easy listen, both from a comfort and a sonic point of view." - Audio Media



MCDSP 6030 ULTIMATE COMPRESSOR

"The great thing about the 6030 is that I can audition several compressors quickly to find what works best for my singer. All of the models have their own flavor and I do feel like I'm getting the results that I would from hardware." - Joe Chiccarelli



THE HARRISON 32EQ BY GREAT RIVER

A collaboration between Harrison and Great River, the Harrison 32EQ updates the legendary 32 Series console four-band EQ plus filters in one 500 Series space. You'll be thrilled.



WHY SHOP
VINTAGE
KING?



WORRY FREE
WARRANTY



EASY
FINANCING



BillMeLater

Let Us Service Your Gear

Repair, customize, refurbish & install.

Visit our TECH SHOP

vintageking.com/tech-shop

FREE TWO-YEAR WARRANTY

Most new items covered for two years.

TRADE OR SELL YOUR GEAR

Recycle today!

FREE SHIPPING

Online orders.



NEW! APOGEE MiC USB MICROPHONE

Apogee brings yet another revolutionary advancement to the portable studio with MiC, the most compact studio-quality USB microphone for iPad, iPhone and Mac.



NEW! GRACE DESIGN M102 OPTICAL COMPRESSOR

A single-channel module of gorgeous, musical optical compression. Also available as a 500 Series module, the m502. Easy on the ears, easy on the bank account.



SONNOX TDM PLUG-INS

Reduced pricing on Sonnox TDM plug-ins - save up to 30%. Call now for a quote on the world's finest audio plug-ins.



NEW! CHANDLER GERMANIUM DRIVE PEDAL

The Chandler Germanium Drive is really a germanium pedal like none you've used before. The five feedback selections modify the tone, harmonic distortion and clipping of the pedal and offer a nice range of uses from tighter, lightly driven to slightly fuzzy, to full on germanium hell!



ELECTRODYNE 501 MIC PRE & 511 EQ

The legendary Electrodyne sound is now available in the 500 Series format!



UNIVERSAL AUDIO UAD-2 SATELLITE

The UAD-2 Satellite puts the world's finest emulation plug-ins within easy reach of select FireWire 800 and 400 equipped Macs, including Intel-based iMacs and MacBook Pros.



GET A FREE 500 SERIES RACK!
WHEN YOU BUY FOUR NEW 500 SERIES MODULES

Contact us today! | 888.653.1184 | info@vintageking.com

Snark

Clip-On Chromatic All Instrument Tuner**\$39.99**

WHY: It's cool, useful, inexpensive

DESCRIPTION: It resembles a space-age pocket watch, but the Snark Clip-On Chromatic Tuner is remarkably versatile in its positioning, due to two ball joints that connect the display to a curved arm, and the arm to the clip. It includes one-button on/off operation, a tap-tempo metronome, transpose function, and calibration controls. You can use either the vibration sensor or the internal microphone.



Planet Waves

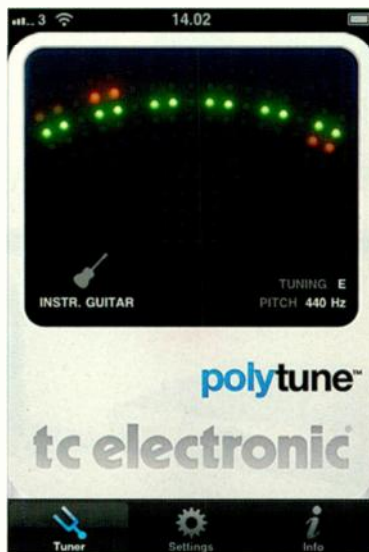
SOS Strobe Pick Tuner**\$21.99****WHY:** Extremely compact, take anywhere, works well

DESCRIPTION: A tuning device that's as ingenious as it is small. The SOS Strobe Pick tuner employs true strobe tuning—lights that blink at slower and slower intervals until perfect tuning is achieved, just like old turntables. And it's in the form of a flatpick! The best thing is you use it like a flatpick, too: Aim the pick at the string you want to tune, and the strobe display activates. Since the SOS uses string vibration and light, it doesn't require sound or a connection, and so is ideal for noisy settings.

TC Electronic

PolyTune for iPhone (iOS app)**\$4.99****WHY:** Tune all six strings at once using your iPhone

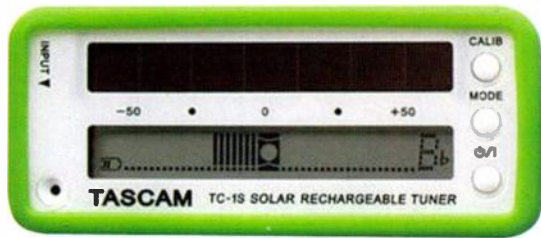
DESCRIPTION: TC Electronic stunned guitarists with their revolutionary polyphonic tuning system. Play a full, six-string chord and it will tell you which string (or strings) is out of tune. This allows not only for faster tuning, but for tuning within the context of a chord or key. Now the TC folks have affixed their pedal so that iPhone users can take advantage of this amazing technology. The manufacturer asserts it's a 1:1 port of the pedal's functions, and even the display and interface are faithfully transferred from the pedal to the phone's screen.



Peterson

StroboSoft 2.0 Deluxe Suite (VST/AU tuner plug-in)**\$149.99****WHY:** Brilliantly complete, comprehensive plug-in tuning suite

DESCRIPTION: StroboSoft is accurate to 0.001 semitones (1/10th of a cent), includes offsets of ± 50.0 cents (in 0.1 cent steps) and can be calibrated in 0.1Hz steps within a range of 80Hz to 2,080.0Hz for ultra-accurate tuning. In addition to standard (equal-temperament) tuning, StroboSoft 2.0 includes Buzz Feiten plus 11 other tempered and "sweet" tunings, built-in and user-defined tunings, different-themed skins, realtime plotting of pitch variation, and a spectrum analyzer. StroboSoft supports high-resolution sampling rates (up to 96kHz) for use with a variety of high-end interfaces.



TASCAM

TC-1S Solar Tuner

\$49.99

WHY: Here comes the sun!

DESCRIPTION: Solar power isn't just for calculators anymore, and TASCAM is to be applauded for providing a tuner for planet-conscious musicians. You can charge the battery from either the onboard solar panels or your computer via USB. The TC-1S has both a built-in mic and a 1/4" input jack, and features multiple tuning modes: Bar, Strobe, Animation, Needle, and Fine (for tuning within one-cent accuracy).



BOSS

TU-3

\$160.50

WHY: Heavy-duty tuner in stompbox format

DESCRIPTION: The TU-3 is dirt-simple to operate. Sporting a bright, well-designed display with a 21-segment LED meter that spans the width of the entire pedal, operation of the TU-3 is hands-off and straightforward: Stepping on the pedal simultaneously activates the tuner and mutes the output, allowing you to tune silently. The TU-3 includes several innovative features, including flat tuning mode, the ability to act as a power supply for up to seven BOSS pedals, and a high-brightness mode for outdoor use.



Korg

TM-40 Digital Tuner Metronome

\$40.00

WHY: Inexpensive tuner/metronome combo

DESCRIPTION: The TM-40 is Korg's longest-established and best-selling tuner. It is both a plug-in/mic tuner and a full-featured metronome with lots of onboard buttons for easy and quick navigation. Tuning accuracy is displayed by a large, LCD "needle," with multi-colored LEDs to show whether you're flat, sharp, or in tune. These same LEDs blink in tempo to the music when in metronome mode. The TM-40 has a robust speaker and variable-pitch (A5-B4) sound output.

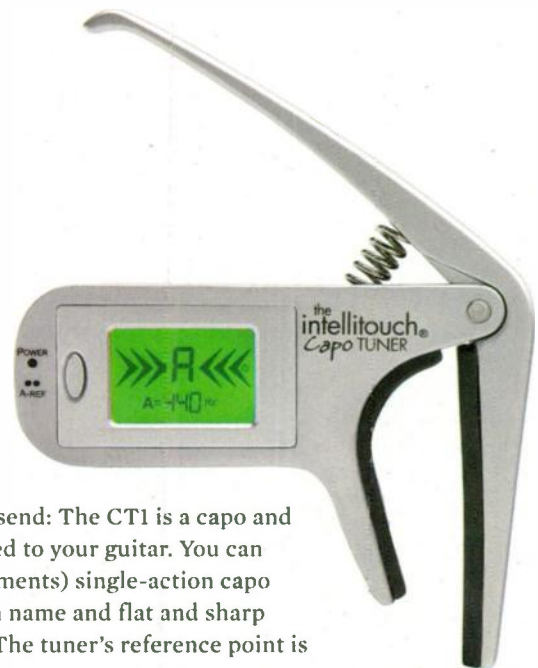
Intellitouch

CT1 Capo Tuner

\$54.95

WHY: Capo and tuner

DESCRIPTION: If you use a capo, then this clever marriage is a godsend: The CT1 is a capo and a tuner. Now you don't have to fumble with two gadgets tethered to your guitar. You can use this vibration-based (no mic, so it's usable in noisy environments) single-action capo and chromatic tuner on both 6- and 12-string guitars. The pitch name and flat and sharp indicators are displayed on a large, multi-color backlit screen. The tuner's reference point is variable from 430Hz to 450Hz.





LEARN

master class

Live Sound 101

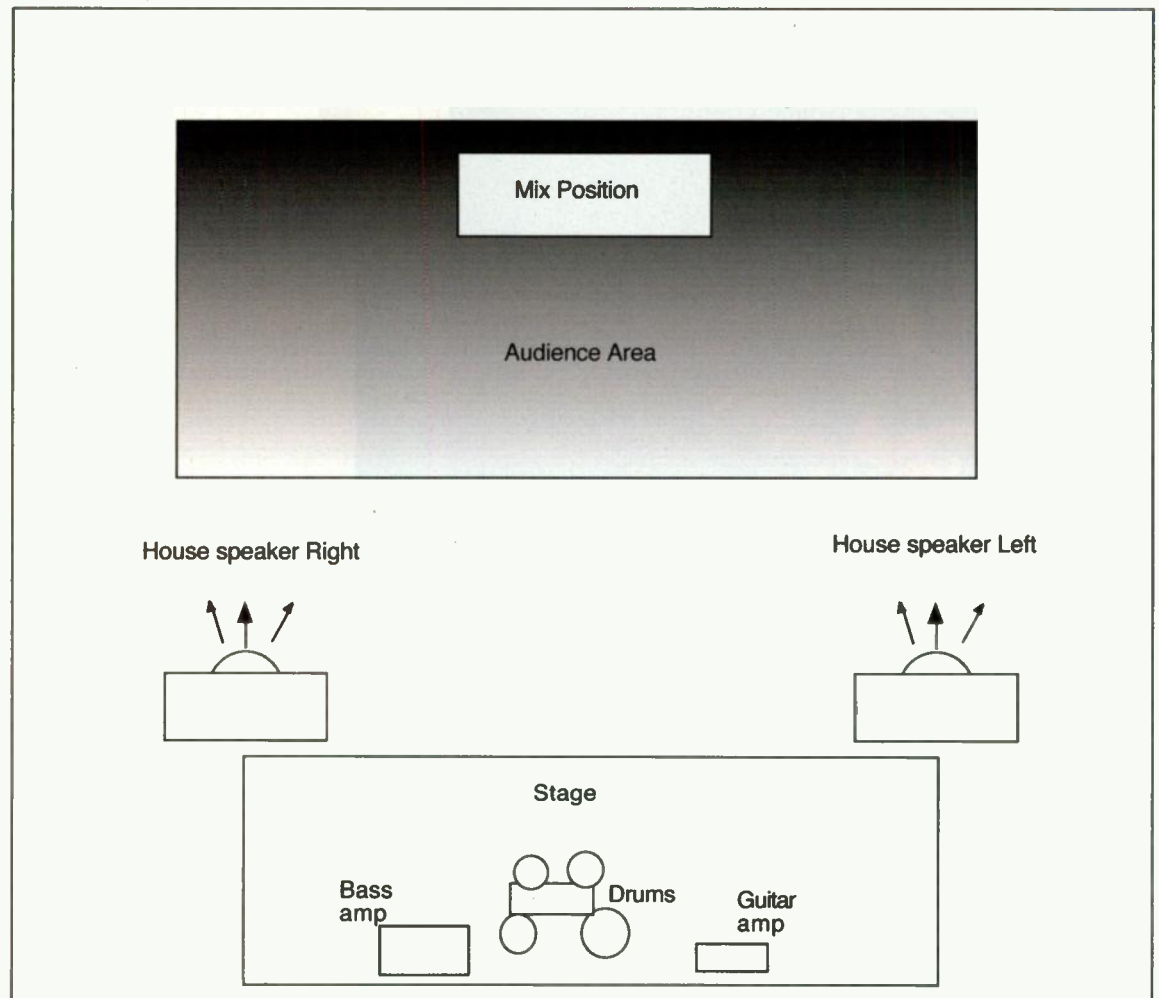
Practical tips for the
working musician

BY STEVE LA CERRA

THERE ARE certain live sound goals that every band should seek to accomplish, no matter where you are performing. First and foremost is making the lead instrument clearly audible to as much of the audience as possible. I don't care how great your band is, if the audience can't hear the main instrument—in most cases, the vocal—they won't enjoy your performance and you won't get a positive reaction. Next, make sure that you can accomplish the first goal without subjecting the audience to feedback. Nothing runs a crowd out of the room faster than a

Bon Iver performs
in Nashville.

Fig. 1. Basic Layout of house speakers and mix position relative to stage and audience.



When listening to a CD, ask yourself if it sounds the way it does on a high-fidelity home or car system.

loud, high-frequency squeal coming through the P.A. system. You also want to present a coherent balance of instruments so that the audience “gets” your band, and it’d be great if you could do so at a volume level that doesn’t send musicians or audience members running for cover. Let’s take a look at some of the ways you can address these issues and get an edge on your live sound.

Nuts and Bolts There aren’t many rules in the audio world, but here’s one: The house speakers (*i.e.* the P.A. speakers that the audience hears, as opposed to the stage monitors) *must* be placed in front of the band. A band member facing the audience should be able to see the rear panels of the house speaker cabinets (see Figure 1). I’m amazed by the number of times that I see a band with a P.A. placed behind them. This setup is just begging for

feedback, because the speakers will have a direct path into the microphones. Even when you are setting up on the floor in a club that doesn’t have a proper stage, adhere to this rule. It will enhance your quality of life.

The second rule: Make sure that the audience can see the house P.A. speakers. With the exception of subwoofer cabinets, if the audience can’t see the P.A., they won’t hear it very well. This means that sitting full-range speaker cabinets on the floor is a no-no. Low frequencies produce long wavelengths that easily pass through and around objects, including human beings, so people standing in front of a subwoofer cabinet do not present significant obstacles. On the other hand, midrange and high frequencies have shorter wavelengths that beam, like a flashlight. A person standing in front of a high- or midrange speaker will block that sound just as they’d block the

FL STUDIO

RECORD - EDIT - SEQUENCE - MIX

Host synthesizer and effect plugins (32 & 64 bit VST)

Automate interface and plugin parameters

Multi-track audio & MIDI recording

Mix audio and apply realtime effects

Edit, pitch-correct, time-stretch, beat-detect and slice audio

Record and play MIDI input from controllers

Sequence and arrange music

Perform music live with video effects

Connect as a VST in other DAWs or through ReWire

Lifetime Free Updates by download

Introducing:



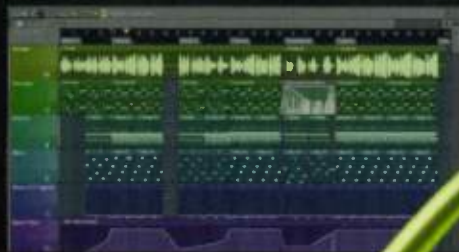
Groove Machine (optional)



The most powerful Piano roll ever



Patcher : create plugin & FX chains



Multi-track audio & MIDI recording



NewTone : pitch-correction & time manipulation editor

Every day more than **30,000** people download
the free & fully functional demo.
Get addicted now!

www.flstudio.com

FL Studio Mobile is available for
iPhone, iPad & iPod Touch



www.FLStudioApp.com

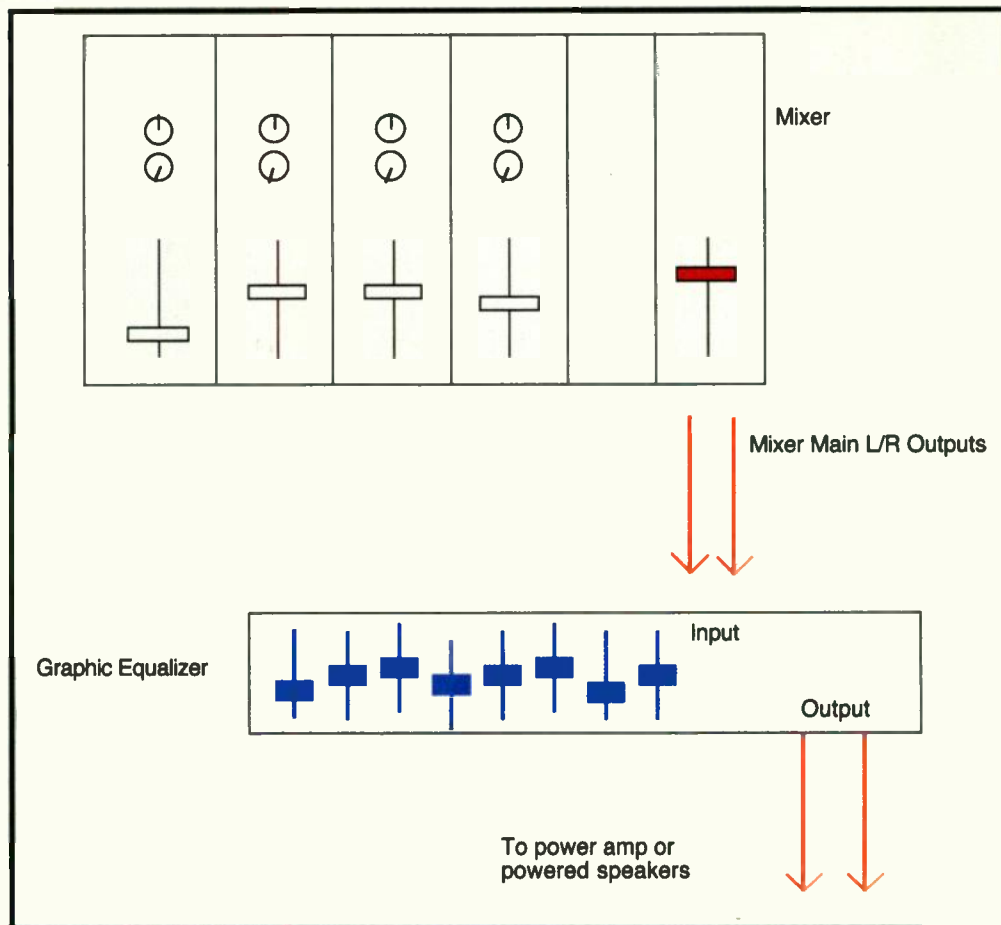


Fig. 2. Graphic EQ patched between mixer outputs and power amp inputs.

Since line inputs are less sensitive than mic inputs, using an XLR-to-quarter-inch adapter cable to plug a mic into a line input is another no-no.

beam from a flashlight. As a result, overall volume is reduced and (since high-frequency sounds suffer the worst) the audience hears a muffled mix. One way around this issue is to put your full-range speakers on top of the subwoofer cabinets or on pole-type stands. Raising the full-range cabinets above the heads of the audience avoids beaming sound directly into someone's ears and allows the speaker to "throw" the high frequencies deep into the room so that patrons in the back can hear a crisp mix. (That's why concert sound systems are typically flown.)

That said, it'd probably be a bad idea to raise a subwoofer into the air because subs couple with the floor, enabling the cabinet to be more efficient, produce deeper bass, and throw that bass farther into the room. Stacking subs and/or full-range cabinets on the front of the stage is common but can promote feedback. Club stages are usually big, undamped, empty boxes, and boxes resonate. When your microphone stands are resting on the same surface as the house speaker cabinets,

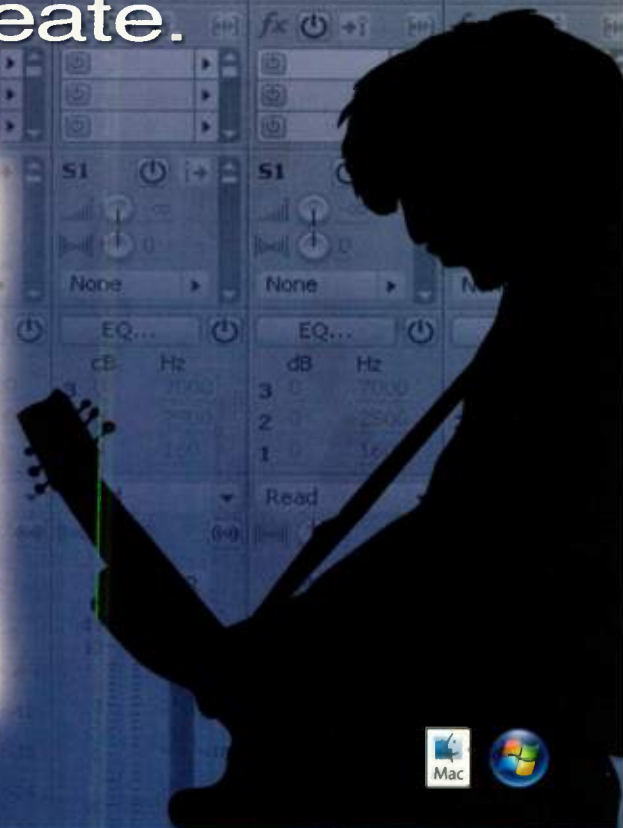
vibrations transmit from the speaker cabinet through the floor to the mic stand, through the stand and to the microphone(s). This is one reason that most mixers provide a high-pass filter (HPF) or low-cut switch on the input channel. An HPF is designed to remove unwanted low-frequency sound from microphones without butchering the bottom end. Getting cabinets off the stage also helps reduce vibration-borne feedback.

It's important to orient P.A. speakers in the manner intended by the manufacturer because high-frequency dispersion will be affected by speaker position. For example, let's say we are using a JBL SRX725 speaker. This cabinet houses two 15-inch woofers plus one high-frequency horn driver. The dispersion pattern of the SRX725 is spec'd at 75x50 degrees, meaning that the box covers an angle of 75 degrees in the horizontal plane and 50 degrees in the vertical. If you place this box on its side, you change the dispersion to 75 degrees vertical and 50 degrees horizontal. Why do you care? Dispersion angles define the "coverage" of the audience.

Because you create.



* Shown with Classic Blue theme option: user-selectable



StrobeSoft™ 2

VST/AU Strobe Tuning Software



StrobeSoft™ 2.0 continues to be the most accurate tuning software with the easiest to use interface available today. Unmatched 1/10th cent accuracy and VST/AU plug-in support adds rock-solid precision tuning to your favorite DAW.

Use StrobeSoft to accurately tune your guitar, bass, or any live instrument either before and/or during a recording session.

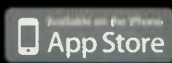
Create an unlimited library of tuning presets that can be recalled instantly to easily identify your instrument's settings in a session you tracked last night, last week, or even last year!

Consistent tuning results can be effortlessly achieved each and every time.

With StrobeSoft 2.0, there is no reason why any element in your session should sound out of tune with itself or the mix.

Stop worrying about your tuning and get back to creating today.

iStrobeSoft™ also available on the App Store



Join us on Facebook: facebook.com/petersontuners Product demos and artist videos: youtube.com/petersontuners

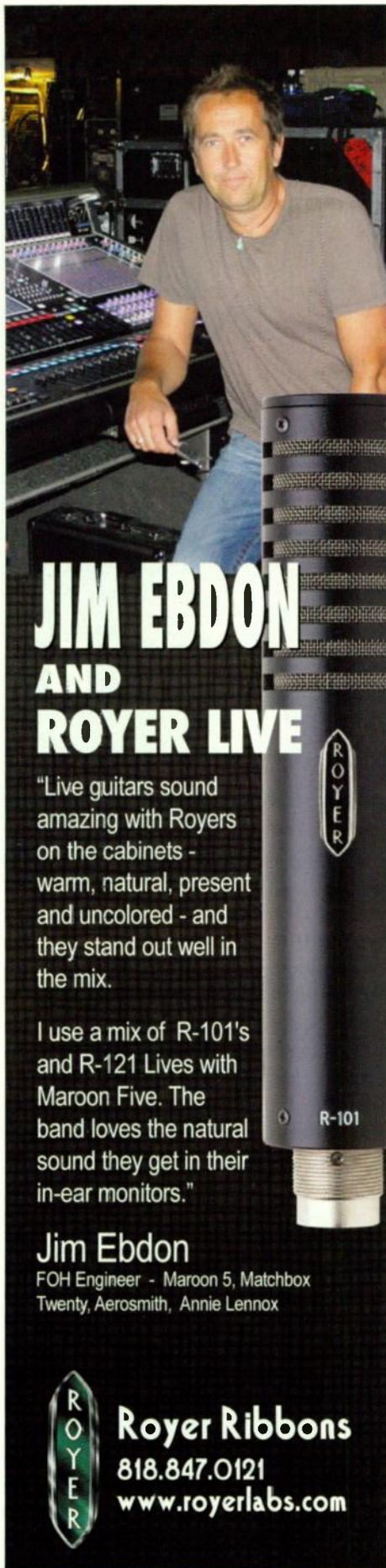
The Sound of Precision **peterson**
STROBE TUNERS

www.StrobeSoft.com

Alsip, IL 60803 USA | 708.388.3311

©2011 Peterson Tuners. StrobeSoft 2, the Sweetened Tunings and HD Tuning logos are trademarks of Peterson Electro-Musical Products, Inc. Buzz Feiten Tuning System is a registered trademark of Buzz Feiten Design Co., Inc. Apple, iPod, iPad and iTunes are trademarks of Apple Inc., registered in the U.S. and other countries. iPhone is a trademark of Apple Inc.

World Radio History




**JIM EBDON
AND
ROYER LIVE**

"Live guitars sound amazing with Royers on the cabinets - warm, natural, present and uncolored - and they stand out well in the mix.

I use a mix of R-101's and R-121 Lives with Maroon Five. The band loves the natural sound they get in their in-ear monitors."

Jim Ebdon
FOH Engineer - Maroon 5, Matchbox Twenty, Aerosmith, Annie Lennox

 **Royer Ribbons**
818.847.0121
www.royerlabs.com

We want wide horizontal coverage, to spread sound across the audience, and narrow vertical coverage, to avoid bouncing sound off the ceiling. Rooms that are very wide may require more than one full-range cabinet per side to improve horizontal dispersion—even if you don't need to play the P.A. loud. If that's the case, the cabinets should match in brand and model and should be butted up against each other so that their outputs couple in a constructive manner.

Don't Cross Your Wires Make sure that your cables are correct for the purpose and are clearly labeled. Mic cables are easy because they typically use XLR connectors, but 1/4-inch tip-sleeve (TS) cables can deceive you. A TS cable intended for guitar or keyboard should not be used to connect a speaker to a power amp (although TS jacks on speakers and power amps are becoming scarce in favor of the SpeakOn connector). Such cables—especially when used in lengths greater than 20 feet—can load down a power amp, making it work harder than it

needs to, and in severe cases, shutting it down. Speaker cable for live sound use should be no thinner than 16-gauge, preferably 14-gauge. Given the possibility that your gear has balanced inputs and outputs, use those wherever possible, with tip-ring-sleeve (TRS) and XLR cables between them. Balanced lines can be run farther without loss of audio quality and are less susceptible to RFI (Radio Frequency Interference) from cell phones, two-way radios, nearby radio or TV stations, etc. While a discussion of balanced and unbalanced lines is beyond the scope of this article, it's worth noting that just because you use a balanced cable does not mean you are achieving a balanced connection. Consult your manual for details.

Get a P.A. Tuner After you have the P.A. placed properly, check that the entire system is working. In addition to using your ears, you'll need a graphic equalizer (preferably 31-band stereo), a CD player, and a familiar CD of high recording quality. MP3s are not acceptable. The

Setting Proper Input Gain

There are several ways to measure input level. Unfortunately most compact mixing consoles do not provide a meter for each channel, but they usually feature a switch called PFL, or Pre-Fade Listen. Generally, pressing this button on the channel temporarily switches the mixer's main meter to show the selected channel's level *before* that channel's fader. In other words, it's letting you measure the water pressure at the main valve, before the kitchen faucet. If you set the level incorrectly here, you're practically doomed to distortion or noise. Adjust the gain or trim knob while watching the meter. You can raise the level until the meter reads "0," but remember that other microphone signals must make it into the audio "plumbing" during the mix—so leave a bit of headroom by PFL'ing the signal at roughly -7 to -5. This way, when you start combining signals, you won't overflow the main mix pipe. Adding EQ will likely change the signal level, so you want to leave room for that as well. If you have the trim all the way down and the PFL signal is still way over "0," use the channel's Pad switch; this will lower the sensitivity of the mic preamp by a fixed amount, reducing the possibility of distorting the signal (sort of like narrowing the water main).

Variations on this type of metering include Solo, as implemented on most Mackie consoles. The trick here is knowing that this type of solo does NOT show pre-fader level, so the fader *must* be set at "unity" while you make the adjustment or you won't get an accurate reading. (After you adjust the gain setting, you can put the fader wherever you want.) This is the spot where the fader is putting out exactly what it is receiving—it's neither boosting nor cutting the signal. On some consoles, unity is marked with a "0" or a small arrow. Other consoles offer a two-color LED with green indicating "signal present" and red indicating overload. Adjust the trim until the LED blinks red briefly and then back it off by about 10 to 15 percent. Since some consoles have more headroom than others, you'll have to experiment to see how far you can push the trim before distortion occurs.



LOUDBOX^(☺)X ARTIST

You're ready.



You've been getting ready for this your whole life. Introducing the new Loudbox Artist. It's the evolution of acoustic amplifiers. Incredibly lightweight and portable, it packs 120 watts of ultra-clean, bi-amped acoustic power. It features

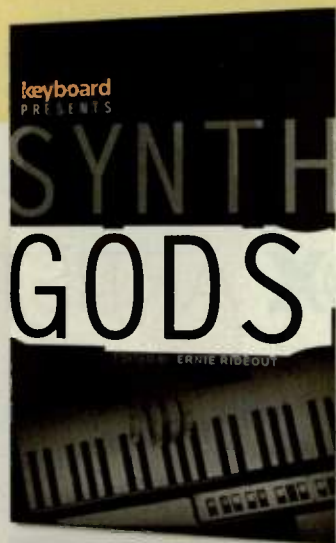
FISHMAN[®]

Acoustic Amplification

two versatile input channels with Fishman's legendary tone and feedback-fighting controls, plus a new dual effects section that makes the new Loudbox Artist the ultimate acoustic instrument amp for any seriously active musician. And best of all, it's under \$500.

keyboard®

P R E S E N T S



edited by Ernie Rideout

This book spotlights artists who did much more than just play synthesizers: they changed the course of music history and inspired generations. Featuring in-depth profiles of Jan Hammer, Wendy Carlos, Rick Wakeman, Brian Eno and others, this book delves into how these new, untested boxes of circuitry captured the imagination of so many legendary artists.

ISBN 978-0-87930-999-2 \$14.99

Backbeat Books

AN IMPRINT OF

HAL•LEONARD®

25% off at
halleonardbooks.com!

USE PROMO CODE NY11

LEARN

master class

graphic EQ should be patched in between the outputs of your mixer and the inputs of your power amplifier (or powered speakers). Some powered mixers may incorporate a graphic EQ or may provide patch points labeled “preamp out” and “power amp in.” In the case of Mackie’s PPM series of powered mixers you’ll find “main out” and “power amp in” patch points on the front panel designed for insertion of an external processor such as a graphic EQ or compressor between the mixer and amp (see Figure 2 on page 68).

Connect the CD player to two input channels of the mixer. Set the channel EQ and graphic EQ flat or bypassed. Play the CD at a low volume, walk up to each loudspeaker, and put your ear against the grill. Listen to each component (driver) inside the speaker cabinets and make sure that they are all producing clear, undistorted sound. Pan the two channels of the CD player center to create a mono mix and turn up the volume. Listen for consistency between the left and right sides of the P.A. You can pan channels hard left and hard right to hear each side separately as well. Sometimes one side might sound a bit brighter than the other, particularly if it’s close to glass or a mirrored wall, but there should be no major differences in sound quality or volume between the left and right sides of the P.A.

There are a million ways to tune a P.A. system. Some engineers will speak through a vocal mic into the P.A., try to excite resonant frequencies of the P.A./room combination, and then use EQ to correct them. Personally, I don’t find this effective. Many engineers use a favorite CD to tune their P.A. system. They become very familiar with a certain piece of music and know how it should sound over a variety of systems. By listening to the CD through the P.A. they apply EQ until it “sounds right.” There’s nothing wrong with this approach, but keep in mind that a CD—with its processing, compression, and mastering—is not representative of the transients encountered when amplifying a live band. Alongside playing a music CD, I find it useful to play a CD of test tones across the frequency range (you can use a car stereo test disk for this) and listen for “hot spots.” You might hear certain tones that are louder than others, indicating a nonlinearity in the

P.A./room combination. Find the corresponding frequencies on the graphic EQ and pull them down to make the level of the tones more consistent across the frequency range. The optimum way to tune a P.A. system is to use realtime spectrum analysis (“RTA”) and a measurement microphone (a topic we’ll save for another time). In all cases, the idea is to *carefully* adjust the graphic equalizer to compensate for room issues. You will not be able to *fix* acoustic issues this way, but you can make the overall sound of the P.A. work better in a particular room.

When listening to a CD, ask yourself if it sounds the way it does on a high-fidelity home or car system. If there are parts of the frequency range that are lacking or overemphasized, use the EQ to make adjustments. You cannot EQ something into your system that it is incapable of producing, so attempting to get earth-rattling bass out of a P.A. speaker that uses a 10-inch woofer ain’t gonna happen. Boosting very low frequencies outside of a system’s capabilities can overwork the power amp and/or woofer, possibly blowing up one or both. I always feel a lot better about using a graphic EQ to *cut* what I *don’t* want. For example, some P.A. speakers are inherently hot in the upper mids at frequencies like 1.6kHz, 3.15kHz, and 6.3kHz, so cutting a few dB at these frequencies can smooth out the upper vocal range and keep sibilants from taking your head off. If the P.A. sounds like it “has a cold,” try cutting a bit at 630Hz and 800Hz. If you need to boost or cut a frequency more than a few dB, you have a more serious problem, or the room may have acoustic issues.

Everything to Gain A big challenge facing anyone who operates a P.A. system is understanding the concept of *gain structure*. Gain structure (sometimes called “gain staging”) refers to the manner in which signal levels are set in (and between) the various devices in an audio system—for example, between a mixing console and a power amplifier. Regardless of whether you have a brand-new digital mixer or a 30-year-old analog dinosaur, proper gain structure is crucial to avoid problems and keep the various components of your P.A. system interacting happily. Poor gain structure results in high noise levels, increased distortion, and decreased headroom. When you understand gain structure, you’ll be able to easily recognize



From Live Mixing to Studio Recording, The 01V96i's Faders Move Smoothly.

Yamaha just (re-)invented the small format digital mixer. Over ten years ago, we were the first company to make an affordable moving fader mixer for stage and studio. When you are mixing live, motor faders let you easily see exactly where your main, aux and monitor levels are at the touch of a button. In the studio, they let you take full control of the powerful automation features of your DAW. The 01V96i continues our tradition of digital mixing innovation with 16-in/16-out USB 2.0 computer connectivity, Virtual Circuit Modeling effects and advanced DAW control for Cubase® (as well as Pro Tools®, Logic®, Sonar® and Digital Performer®).

So if you need a mixer that moves easily between live mixing, live recording and home studio, you need to check out the 01V96i.

- 24-bit/96kHz digital mixing console with 40 mixing channels
- 24 inputs built-in (8 digital)
- 16-in /16-out USB 2.0 audio streaming at 96kHz
- Full suite of VCM DSP effects (Master Strip, Channel Strip, Vintage Stomp FX) and high resolution REV-X reverb
- Studio Manager Editor with complete mixing control via PC, Mac® and even iPad® (with Air Display)
- Advanced DAW control
- Improved studio-quality head amps
- 100mm motor faders
- Mini YGDAI expansion slot

For more info visit 4wrd.it/01VEM

96
kHz

Virtual
Circuit
Modeling

DAW control

Motor
Faders

CUBASE AI

01V96i
EDITOR

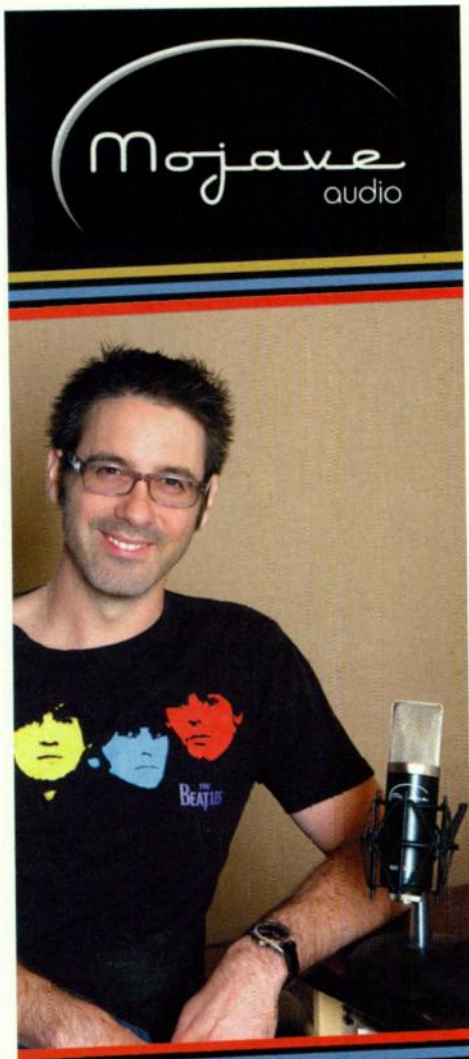
 **YAMAHA**

©2012 Yamaha Corporation of America. All rights reserved.



Scan code for 01V96i info

World Radio History



Ryan Hewitt On the New MA-300

"I've had a pair of Mojave MA-200s for years now and use them on all sorts of sound sources, but I've been begging the company for a variable pattern version for almost as long. I am really amazed with the MA-300's performance. The ability to tailor the response of the mic, along with the new high pass filter and pad has greatly increased its versatility. I'm now able to use the MA-300 even more creatively."

Ryan Hewitt

Engineer: Avett Bros., Red Hot Chili Peppers, Flogging Molly, blink-182

www.mojaveaudio.com

Follow us on [f](#) [t](#) [s](#) [v](#)

when a piece of gear is malfunctioning, or when you have a defective cable in the chain.

Audio gear features meters to help manage gain structure. If you observe that the meters on interconnected components of your P.A. system display widely different levels, that's an indication of poor gain structure. The first step in achieving proper gain structure is plugging gear into the correct holes(!) This warning is not as silly as it sounds. We typically deal with three distinct categories of signal level: microphone level, line level (the output level delivered by devices such as CD players, outboard reverbs, delays, compressors, equalizers, DJ mixers, etc.), and instrument level (signals from electric guitar and bass, as well as many keyboards and drum machines). Mixers provide a variety of inputs along with gain or trim controls to accommodate these signals. Line signals are much stronger than microphone signals, so a mic input incorporates a preamp designed to raise the mic's output up to line level so that it can pass through a mixer on to other gear. Instrument level falls somewhere between mic and line level, so neither a mic input or line input will make your bass happy when you plug it directly into the mixer. That's why some mixers provide a few channels that also feature an instrument input. If your mixer does not have an instrument input, use a DI to interface the instrument with a microphone input.

As you're aware, mic inputs typically use XLR connectors, while line inputs are usually 1/4-inch TS (unbalanced) or TRS (balanced) connectors. Since an instrument cable uses a 1/4-inch TS connector, it's tempting to plug a guitar or bass into a line input. However, a line input is not sensitive enough for an instrument, so you'll end up cranking the gain knob to the point where noise becomes an issue. Also, a line input does not have the correct impedance for guitar or bass pickups, so mismatching can also cause a loss in fidelity. Since line inputs are less sensitive than mic inputs, using an XLR-to-1/4-inch adapter cable to plug a mic into a line input is another no-no. You'll have to crank the gain way high just to hear the mic, and this process will add noise. Conversely if you plug a keyboard into a mic input, you're probably going to hear distortion even when the gain is turned all the way down because the signal

from the keyboard is strong enough to overload the mic preamp. These situations are all examples of poor gain structure.

Some mixers have a mic/line switch on each channel so you can select between inputs (or possibly a mic/line/instrument switch), but mixers without a mic/line switch may leave both jacks connected at the same time. It's important that you connect a source to only *one* of these. You probably won't break anything, but you may cause an increase in noise or distortion to both signals.

Show Your Mics Some Love Setting the gain or trim on a mic input is very important because it's the first step in the signal path. It's like a main water valve: Screw it up and you won't get proper water flow through the building. In our water analogy, you need to set the valve so that you get sufficient flow (good signal-to-noise ratio), yet not set it so high that you create too much pressure (distortion). You can boost the fader up as high as you want but if the trim is off, you'll get nothing but noise. On the other hand, if you set the trim way up and the fader way down, chances for distortion are much higher. (For details on how to set gain, see the sidebar "Setting Proper Input Gain" on page 70.)

Once the gain is set, you can bring up the channel fader to hear the signal. At least some of the channel faders should be at or near the "0" mark; if all the faders are very low or very high, something is wrong. Other "valves" affect the audio signal, such as the main mix fader(s)—which should also be set at or near "0." If setting the master at "0" makes the volume in the room too loud, turn down the level controls on the power amp(s). If you need to bring the master fader all the way up to get adequate volume in the room, either the power amps are set too low or your system is under-powered.

A P.A. system facilitates a positive sonic experience for your audience. When that happens, it's a win-win situation. The audience gets to hear you at your best and by providing you with good feedback, you enjoy performing. We'll take a look at other aspects of live sound management in future issues of *Electronic Musician*. ■

Steve La Cerra is the front-of-house engineer and tour manager for Blue Öyster Cult.

LA *scoring strings*

2.0

HEAR THE DIFFERENCE

Featuring Stage and Color:

At the heart of Stage & Color is a collection of exclusive orchestral sound profiles (colors) inspired by famous movie scores and recordings. Now, at the push of a button, LASS can adopt the tonal characteristics of some of the most coveted scores and recordings.

Other features include:

- The ARC (Audiobro Remote Control)
 - Advanced panning and stage placement of instruments
 - Advanced Key Switching
 - New Real-Time Aleatoric patches (string effects)
 - New Real Legato Tremolo patches
 - New Real Legato intelligent Trill patches
 - New Real Legato Non-Vibrato-to-Vibrato patches
 - Remote programming of all LASS's features to all patches simultaneously
- And many more new features...*

Read, hear and see more at
www.audiobro.com



audiobro

HOME OF LA SCORING STRINGS

WWW.AUDIOBRO.COM



Engaging Your Facebook Audience

Five strategies for getting—and keeping—fans

BY CARL JACOBSON

RECENT FACEBOOK developments have meant exciting opportunities for musicians. More people are listening to music there than ever before, and that means more fans can discover your music. This is great for exposure, but what happens once people find you? Here are a few strategies for engaging your fans, developing relationships, and increasing sales.

Strategy 1: Sell Directly on Facebook In today's distracted world, you can't rely on fans going somewhere else to buy your music, or remembering to buy it later. If a fan has found you and he or she is excited about your music, there are great solutions available to sell your music, merch, and tickets right on Facebook. In this article, I'll use Nimbit's free Spotlight Store (apps.facebook.com/nimbitstore) for my examples, but these concepts should apply to any Facebook store, including those by CD Baby, Topspin, and Bandcamp.

Strategy 2: Don't Advertise—Have a Conversation How many times have you seen an artist post something like this: "BUY MY ALBUM!"

If they do it enough, you tune out, right? So will their fans. Today, the key to success is keeping fans engaged. Asking questions is one of the best ways to do that. Try this instead: "We're trying to pick our next single. Please listen and comment about your favorite song [link to album on store]." The soft-sell above has additional benefits:

1. You're inviting people to share their opinions.
2. You're asking them to try before they buy.
3. They'll see that they are able to make purchases.
4. When they comment, it also appears on friends' newsfeeds.
5. People are much more likely to buy after recommendations from friends.

Strategy 3: Reward Fans and Ask Them to Reward Their Friends Releasing a free track is a great way to reward your fans, and if you can get them to share it with their friends, you can greatly increase your fanbase. Once you capture a fan by getting an email



PRACTICAL CREATIVE MEDIA EDUCATION



**Learn the fundamentals of Music Production,
Sound Engineering, Studio Recording, Live Sound,
Post Production, App Development and much more!**



Find us on:



1800-YOUR SAE
www.sae-usa.com

in exchange for the download, you can then build the relationship. Many times, they'll reciprocate by purchasing a track or going to a gig. Recently, Suzanne Vega gave her fans a free download, and later found that 61% of the people who bought her new CD had also received that free download.

People like to turn friends onto the music they like, so when you give away a free track, always ask your fans to share it with their friends:

1. Set up the song you want to give away as a free download or with a promo code.
2. Share the song on Facebook. With Nimbit, click the Share button next to your track and a player and message will spread to your followers on the Facebook ticker.
3. Say something like: "Hey I'm excited about my new song; listen here and get it for free by clicking the link. If you like it, help me reach

new people and share this post with your friends."

This kind of thing can spread like wildfire. Jazz singer Thisbe Vos just tried this approach and was able to add 300 new fans with just a single Facebook post because 28 fans shared it, and so on.

Strategy 4: The Virtual High-Five Any time a fan leaves a comment or shares your music, respond with a "thank you," share their comment with a shout-out on your wall, or at least "like" their comment. This is the online equivalent of a high-five and a subtle way to reward your fans. When they see your post, they'll be thrilled, and may even share it again.

Strategy 5: Advertise Yourself I know, Strategy 2 says, "don't advertise," but this is different. Facebook makes it incredibly easy (and affordable) to advertise to people who will probably like your music. This process is a lot easier than you think. When setting up your

ad, here are some key tips:

1. Link to a free track to introduce people to your music.
2. Type in names of similar artists to you in the "Precise Interests" field. Completely original? Then enter your influences.
3. Start small. Set your daily budget low; pay for "clicks," not "impressions," and set your bid below what's suggested. When you do that, you'll save money and pick up ads off-hours.
4. Fine-tune. Check back to see how your ad is doing, then change your settings to see if you can increase your reach.

These are just a few ways that you can engage your fans and increase your sales on Facebook. The key is to find your voice, so if one strategy isn't working, try another, and don't be afraid to experiment! ■



**Sky HIGH Values!
Down to Earth Prices**

FULL COMPASS
PRO AUDIO | VIDEO | AV | LIGHTING
MUSICAL INSTRUMENTS

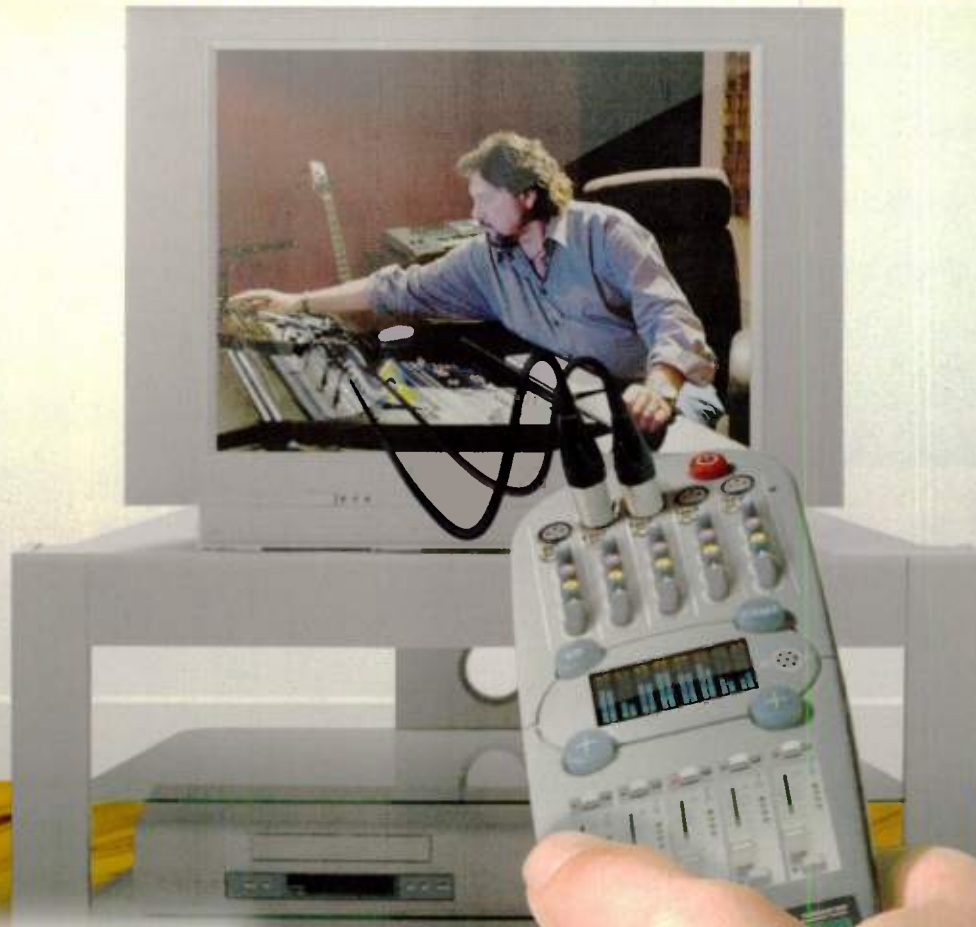
Call 800-356-5844
or visit fullcompass.com
Leading The Industry For Over 30 Years

Request your FREE
512-page catalog today!

Call a
Sales Pro
Today!

Learn From The Audio 'Professor' Alan Parsons

THE ART & SCIENCE OF SOUND RECORDING



Open Your Eyes And Ears To A New World Of Recording Secrets with legendary engineer, producer and artist Alan Parsons

- 3-DVD boxed set available at all good music stores
- Downloads and streams direct from the website
- Educational License at participating schools and colleges
- Live Master Class Training Sessions all over the world

"If you want an education in all things audio, could you ask for a more qualified teacher than Alan Parsons?" Mike Senior, Sound On Sound

Previews, downloads and hours of free bonus videos at
www.ArtAndScienceOfSound.com

Narration by
Billy Bob Thornton.





In Recovery

Strategies for backing up and restoring your Mac's data

BY MICHAEL COOPER

THE LAST time I performed a major upgrade of my Mac's operating system (from Leopard to Snow Leopard), things went horribly awry. I rolled the dice and wrote over my old system—residing on my only bootable drive at the time—with the new OS, rather than installing to a new drive. Unfortunately, the Snow Leopard Install DVD installed a corrupt operating system and fried my monitor. Luckily, I had a second (undamaged) monitor I could use to cure my sudden blindness. But my Mac Pro would only boot partway, and I was left staring dumbfounded at a blue startup screen stuck in Hades.

This would have been a total disaster but for one saving grace: I had backed up my startup drive immediately prior to embarking on my highway to hell. A few hours later, my system and all my assets (150 GB of applications, plug-ins, emails, business documents and so on) were completely restored. Catastrophe averted.

If you've never had a major computer meltdown, make no mistake—it's only a matter of time. Avoid the heartache of losing precious and irreplaceable data. Use the tips in this article to safeguard your Mac and hard drives and prevent a fatal blow to your musical legacy.

Make Two Copies Of Your DAW Files At least once a day, copy any audio projects that have been modified that day to two additional hard drives (thereby storing your data in three

places). Make sure that at least one of the two backup drives is external, and use it only for archiving purposes; keep it turned off at all times when you're not copying your DAW files to it. That way, should your Mac self-destruct and take all connected and booted hard drives with it to the grave, your audio data will be preserved in at least one place. Better yet, keep your archival drive off-premises. If a flood or fire wipes out your studio, hopefully your archival drive's safe house will survive.

Copy Downloaded Sample Libraries If your sample libraries originally came supplied on DVDs, those are your back-up copies. If you have any libraries that were downloaded from the Internet, however, make extra copies of those—preferably to DVDs (which have a longer lifespan than hard drives). If your only copy of a library were to have a FEMA moment, you'd be crushed to learn the manufacturer discontinued the product or went out of business. Back it up.

Embrace Time Travel If your Mac uses OS X 10.5 or later, you already own excellent backup software: Time Machine (see **Fig. 1**). Time Machine is a stock Mac utility that makes incremental backups of your drive (or multiple drives, if you wish). Apple recommends you dedicate a hard drive solely to storing Time Machine backups. The drive must be formatted as journaled HFS+ and,

performance for the 1%, priced for the 99%.



m101 – the original high performance single channel mic preamplifier. Huge bandwidth and headroom to capture all the details of your source. Our exclusive ribbon mic mode makes it the first choice for gain hungry ribbons.



m501 – air and detail for the 500 series rack. Our signature transparent mic preamplifier circuitry is the perfect palate cleanser for all the high calorie treats in your lunchbox.



m502 – the same circuit as the m102, but for the 500 series rack. A feedback opto compressor design that not only provides a wide range of dynamic control, but remains inherently neutral, open and musical.



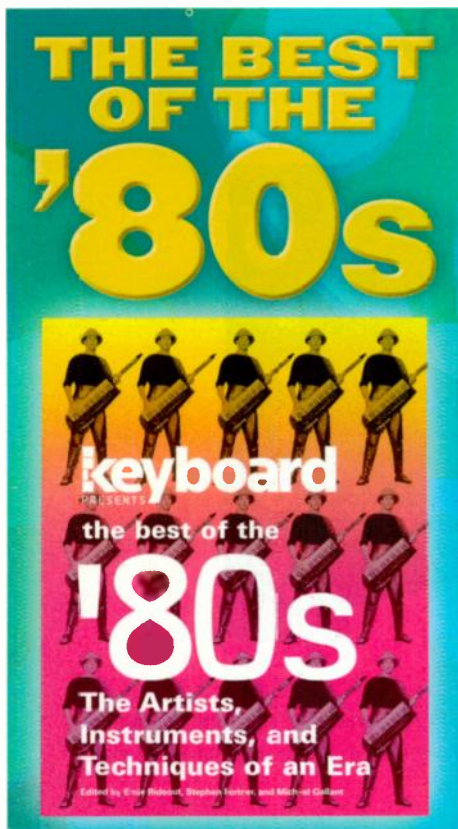
m102 – open, musical optical compressor. All your tracks can now have glorious, easy to use dynamic control which regardless of how much you squeeze, will always end up with their sonic essence perfectly intact.



m103 – the complete input solution. Our transparent, musical microphone preamplifier coupled to a silky smooth 3 band EQ and a sweet, open optical compressor. The m103 transforms ordinary tracks into beautiful recordings.

GRACE
DESIGN

www.gracedesign.com
World Radio History



**KEYBOARD PRESENTS:
THE BEST OF THE '80s**

**THE ARTISTS, INSTRUMENTS,
AND TECHNIQUES OF AN ERA**

edited by Ernie Rideout, Stephen Fortner,
and Michael Gallant
BACKBEAT BOOKS

No single decade revitalized the keyboard as a focal point as much as the 1980s. Now, the editors of *Keyboard* magazine have culled that era's most significant articles and combined them with a wealth of insight to create this landmark book. Features 20 interviews with noted players and producers like Jimmy Jam & Terry Lewis, Duran Duran's Nick Rhodes, Depeche Mode's Vince Clarke, Peter Gabriel, and The Human League, as well as such visionary pioneers as Herbie Hancock, Chick Corea, and Frank Zappa.

00331932.....\$19.95

**ORDER
TODAY!**

See your favorite retailer or call Music Dispatch at

1-800-637-2852
www.musicdispatch.com

**Backbeat
Books**

AN IMPRINT OF

HAL•LEONARD

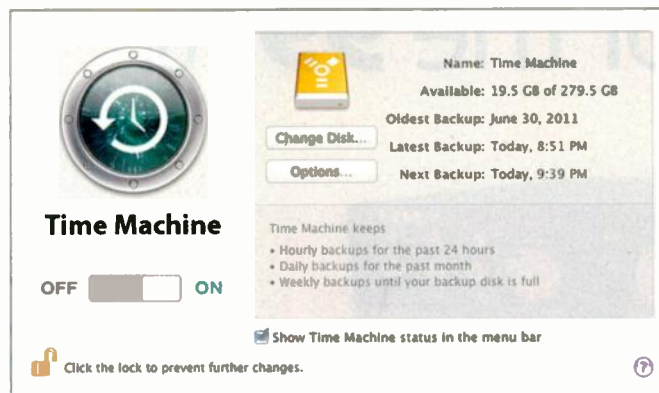


Fig. 1. Time Machine lets you restore any past configuration of your operating system that you previously backed up.

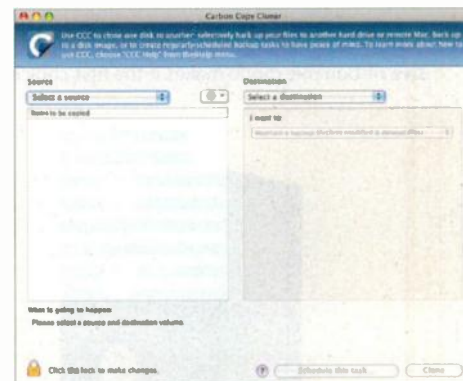


Fig. 2. Carbon Copy Cloner makes an exact copy of your operating system on a bootable drive.

obviously, have more storage capacity than the drive or drives you're backing up.

The great thing about Time Machine is it saves the different configurations of your operating system as it changes over time. If your operating system should become corrupted and you back it up in Time Machine before you realize it, you're not stuck with using that dysfunctional configuration; you can go back in time to an earlier system that's not corrupted (as long as you backed it up previously in Time Machine), and restore that instead.

Unfortunately, you can't use a booting drive for Time Machine. If you ever need to restore your operating system, you'll have to use your OS X Install DVD to reboot your Mac and access Time Machine. That's a minor inconvenience—unless your operating system's trip to the funny farm disabled your optical drive. And God forbid you have any pressing deadlines to meet or you're in the middle of a recording session: It took Time Machine almost three hours to restore my startup drive after it went south. Sometimes you can't wait that long to get back to work. Which brings me to my last tip.

Create an Identical Twin If you can afford to reserve yet another hard drive for backup,

dedicate it for use with Carbon Copy Cloner (CCC), shareware software from Bombich Software (see Fig. 2). Unlike Time Machine, CCC can make a *bootable* backup copy—an exact clone—of your startup drive. Lost your Mac OS X Install DVD? No problem. Power up your Mac while holding down the option key, and select (for rebooting) the drive to which CCC cloned your system. You'll be back to work in minutes. After you've met your deadline or finished your recording session, restore your original startup drive at your leisure using Time Machine.

CCC has one disadvantage compared to Time Machine: For all intents and purposes, it only clones your current system configuration. (You can use it to merge past and present versions of your startup drive, including your operating system, but that's asking for big trouble.) Time Machine is the more important of the two utilities because it allows you to choose which of your past system configurations to recover and it restores to your original startup drive. But if deadlines or sessions with clients rule your day, you also need CCC.

However you shape it, put a backup regimen in place now. You'll thank yourself one day, when your Mac's lunatic alter ego runs free. ■



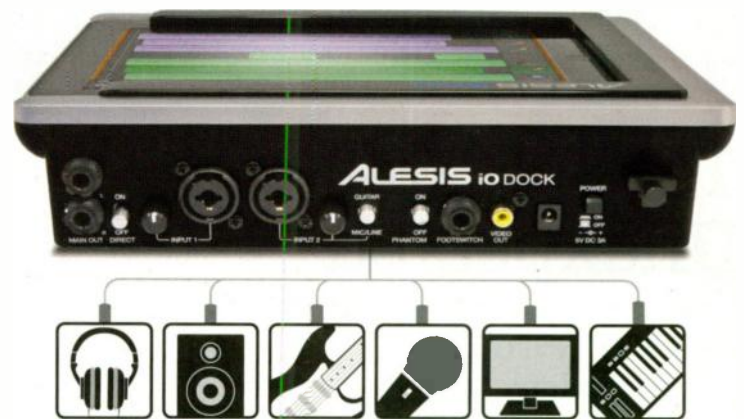
Award Winning I/O for iPad



iO DOCK

PRO AUDIO DOCK for iPad

iO Dock gives you all the connections you need to plug just about anything into your iPad and iPad 2, from guitars, microphones and keyboards to MIDI gear, mixers, and studio monitors. Now you can use virtually any of the amazing music production apps available for your iPad with high quality audio inputs and outputs, phantom-powered mic pre's and professional MIDI I/O. You can even use the video output to put your apps up on the big screen.



Enter to win yours!
www.facebook.com/alesis

ALESIS
alesis.com

iPad is a trademark of Apple Inc., registered in the U.S. and other countries.



Jared Gutstadt, seated, with the Jingle Punks team.

Tales of the Unexpected

In commercial composing, if you want to stand out in a sea of talent, you have to dare to be different

BY BILL MURPHY

WE HERE at *Electronic Musician* are looking out for you, because let's face it—it's a jungle out there. When you're not hustling for scraps from record labels, club owners, or even your own fans, you can fall into the negative feedback loop of asking yourself, "Am I *really* doing this because I love music?"

Over the past few months, we've tried to provide some alternatives by shedding light on the arcane secrets of composing, producing, and placing music for film, TV, video games, and commercials. What does it take to break into that world? The approaches are pretty much endless, but among all the artists, producers, and licensing execs we've interviewed, the consensus for success has focused on one elusive but essential ingredient: Find what comes naturally to you, whether it's a particular

genre, sound, style or stunt, and give it your own unique twist.

"I learned early on that it wasn't always the best bands that get signed, but the more interesting ones that do," says Jared Gutstadt, CEO of Jingle Punks, a New York-based licensing house that specializes in hip, underground, and indie music for a wide range of clients, including top TV networks like NBC and Bravo. "That's why Facebook and Twitter are so useful as a means for artists to market themselves. You want to make your story magnetic to people—not in a desperate 'Look at me!' kind of way, but more like, 'I've got a cool perspective on this, and you should follow me.'"

Gutstadt certainly knows the terrain; Jingle Punks itself is unique in that it does more than just music placement. Like Rumblefish or

ALL ABOUT THE MUSIC



NOTE THE EXPRESSION MUSIC

- Phase-accurate multitrack drum editing
- Lightning-fast multitrack comping
- VST Expression 2 for editing controllers on single-note level*
- VST Amp Rack virtual guitar tone suite plug-in
- HALion Sonic SE with 900 production-ready sounds

steinberg.net



CUBASE 6 AND UR SERIES USB 2.0 INTERFACES.
THE ULTIMATE INTEGRATION BETWEEN
SOFTWARE AND HARDWARE



Steinberg, Cubase and VST are registered trademarks of Steinberg Media Technologies GmbH. Yamaha Corporation of America is the exclusive distributor for Steinberg in the United States. © 2012 Yamaha Corporation of America.

“I learned early on that it wasn’t always the best bands that get signed, but the more interesting ones that do.”

—Jared Gutstadt

Pump Audio, the company represents a library that has ingested music from thousands of artists (see jinglepunks.com/submit_music), including MGMT’s Will Berman, who composed original cues for the new Cinemax series *Skin to the Max*. But Gutstadt also employs a full-time staff of composers, and each Jingle Punks office (a Los Angeles branch launched in 2010) is outfitted with high-end recording and post-production studios. In fact, Gutstadt won his own ASCAP Award last year for his rocked-out theme to the History Channel’s hit reality show *Pawn Stars*, and has just released an album of classical revamps of Nirvana (*The Nirvana Sessions*, Razor & Tie) with his Jingle Punks Hipster Orchestra.

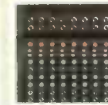
As the old music industry rolls over and dies, artists are beginning to package and present their music in new ways—another key to being heard above the din. “When we first started, most of what we got was from people who had a CD out,” Gutstadt says. “But I think artists have gotten hip to the fact that

sometimes all we need is an awesome 40-second instrumental jam to put in [the History Channel’s] *American Pickers* or something like that. If you want to get your stuff heard in TV shows, you have to optimize it accordingly. You might write the best song in the world about breaking up with your girlfriend, but that may not be relevant for a reality show that needs a more general lyric about love, loss, and forgiveness. It’s bizarre, but if you just watch TV and make music based on that, it actually works.”

Jingle Punks has a team of “sonic deducers” who screen each submission, giving it a value that assesses whether a certain drum loop or keyboard

hook brings to mind an iPod commercial or a show like NBC’s *The Voice*. If a song gets placed, the company splits all licensing fees and performance royalties down the middle, fifty-fifty, with the artist. And in some cases, if the material a composer submits online is especially strong, they might just get an offer to join the company.

“We’re trying to pinpoint trends and usher those into our library and make them available to our clients,” Gutstadt explains, “but we also see ourselves in a high-growth industry right now. A lot of that is because labels are saying no, and publishing companies are saying no, and making it really difficult for people to work with them. It’s a very entitled business. They like to say no to everything, but we like to say yes, and I think the artists we work with are all on the same page.” ■



More Online
Visit Jared Gutstadt's
blog.

emusician.com/february2012

The world’s best audio plug-ins...
...are about to get even better.

Sonnox



- 64-bit support
- AAX compatibility for Pro Tools|HDX & Pro Tools 10
- Updated graphic interfaces
- Lower TDM prices
- Same outstanding performance

Oxford
Plug-ins

MARCH 13-18, 2012 AUSTIN, TX

SXSW[®]

MUSIC

The 2012 South By Southwest
Music Conference & Festival

REGISTER TO ATTEND

Next early bird discount Feb, 10, 2012.

sxsw.com/attend

MUSIC ANNOUNCEMENTS

Showcases now on Tuesday night!

For the latest panels, bands and more, go to:

sxsw.com/music

MUSIC GEAR EXPO

March 14th - 17th

EXPERIENCE MORE

Visit us at: youtube.com/sxsw



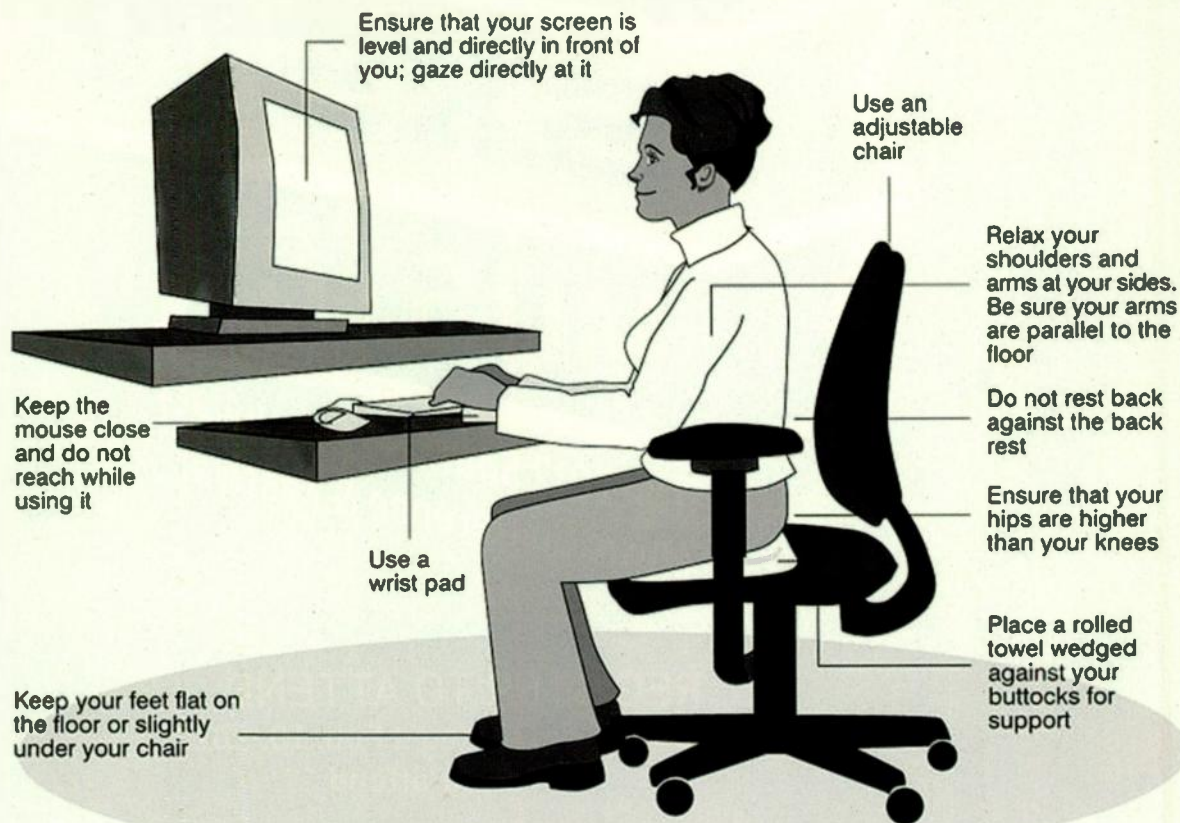
IFC



**freecredit
score.com**

THE AUSTIN **CHRONICLE**

TIPS FOR PROPER POSTURE WHILE AT A WORKSTATION



SOURCE: PHYSICAL THERAPY SPECIALISTS, PSC

BY DEVON MORGAN, THE COURIER-JOURNAL

Run Whatchya Brung

Can't afford ergonomic studio tools? Try these tips for making better use of what you have

BY KENT CARMICAL

IN TIMES of greater economic uncertainty, it is be wise to lay low and make due with what we have. We can use this discomfort as motivation to assess our studio setups and see if we can make changes with elbow grease instead of credit cards. You can still have a great sound in just about any studio space—I don't have to tell you the number of successful records that were made in funky places and situations. Any studio can be improved, and the first step is to ensure your body doesn't get shattered while you're working.

Set yourself up People have been on my tail to "Sit up straight!" as long as I can remember. Turns out, they were right. Every job has its ergonomic concerns, but mixing means countless hours of hunching and leaning into a computer screen while performing repeated, precise movements, often manipulating tiny onscreen software parameters over and over again.

Slumping on a milk crate with your studio on a folding card table for years on end will result in rotten circulation causing a build-up of toxic sludge around muscles and nerves. Repetitively twisting and stretching to reach gear can cause many painful musculoskeletal disorders ending in "itis". Your nerves are going to be seriously abused by long periods of this sort of anti-yoga. So sit up straight and pull your shoulders back. Feels better all ready.

You're gonna be here for a while A decent chair is a must, and they can be had for cheap. The ol' "studio slouch" blows out the lumbar section of your spine, destroying the natural arch of your lower back. I like office-type chairs. They are designed for people to endure a full shift of doing mind-numbingly repetitive things in front of a computer, so they have varying degrees of lumbar support. Situate your back against the back of the chair instead of perching on the front. And don't settle



Hammer Action Portable

Introducing the world's first Nord Electro with Hammer Action, sporting a classic 73-key E-E range keyed – without sacrificing portability (only 24.25 lbs).

Nord Electro 3 HP features our acclaimed String Resonance, optional Long Release for legato playing, 4 selectable keyboard response curves and a new flexible Delay effect. We've also added more Live locations and made program access even easier!

Naturally, the Nord Electro 3 HP includes all the award-winning features from the Nord Electro 3-series.

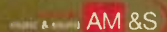


HANDMADE IN SWEDEN
BY DEVOTED MUSIC LOVERS
AT CLAVIA DMI AB

nord electro 3 HP

H A M M E R A C T I O N P O R T A B L E

www.nordkeyboards.com



For more information contact info@AmericanMusicAndSound.com

A division of Jam Industries Ltd

for anything less than five legs. I've seen too many four-legged chairs go over backwards.

If you've retreated to your dad's hunting cabin or an Airstream trailer in the desert to record the most awesome album ever, use whatever available chair has the highest back and tie a rolled-up towel to the back of the chair for lumbar support.

Put it where you need it The goal here is to assess which studio device you use most and make it accessible all of the time. Be smart; if your working method is a keyboard, beat box, guitar, mixer, controller, or mouse—put it front and center instead of at your side. It took me a long time to see the light. For a year I had a keyboard in front of me when I was playing way more guitar. I had to twist around to make adjustments or even play, and things began to hurt. Once I put as much of the guitar control stuff in front of as possible, I eliminated a good deal of torture to my neck and shoulders.

Quick Tips for Working Better

Break out of the zone: Stop working and take a 5-minute rest every 45 minutes.

Take mini-breaks: While you're working, periodically remove your hands from your equipment and re-adjust your posture.

Switch your work up: Every couple of hours, stop and perform a different type of physical activity such as talking on the telephone.

Re-evaluate: Remember that ergonomics is an evolving process, so from time to time, pause to assess and adjust your work environment.

Surveying your domain Now, fine-tune your chair so that your feet are flat on the floor and forearms are level with your hands when resting on the working surface of your choice. Be sure there is enough space underneath the

desk for your legs so you can get close enough to the action. Keep your upper arms close to your body. If your wrists are bent upward, that means the chair is too low, and if they are hanging down unsupported, then your chair is too high. Once you get the arm/hand setup optimized, it's a good idea to give your wrists some support, and a rolled-up towel taped to stay that way works just fine. I wash mine regularly.

Position the computer monitor an arm's length from your face with the top of the screen, level with your eyes while practicing your new consciously improved posture. If you have to dip or raise your chin to see what's going on, your monitor is too high or low, so adjust till you get the best, most comfortable view of your DAW.

Finally, remember that no matter how ideal your work environment is, it's only going to be as good as the way you interact with it. One great way to actively combat the potential harm of studio hibernation is to simply get up, walk around, and stretch your achin' back. ■

The challenge of audio for music, film, video game production and live performances is hard work, but you love it! Welcome to the world of...
AUDIO RECORDING TECHNOLOGY!



Attend our Open House March 10


Attend a four-year college that takes music as seriously as you do. Earn a degree in Business or Music with a concentration in Audio Recording Technology.

FIVE TOWNS COLLEGE
Dix Hills, NY 11746 631-656-2110

MAKE
MUSIC
YOUR
LIFE!

www.ftc.edu
email: admissions@ftc.edu

The **ALL NEW Electronic Musician** covers all aspects of modern music making



One year for \$23.97 • That's \$1.99 an Issue!

Get the New *Electronic Musician* at
www.mymemmag.com

WE PUT

ON iTUNES... AND NOW YOU



FREE ACCOUNT
GO TO **TUNECORE.COM**



WOMEN'S AUDIO MISSION

Changing The Face Of Sound

JOIN TODAY!

RECORDING CLASSES
GEAR DISCOUNTS
CAREER COUNSELING
JOB PLACEMENT
LOW-COST STUDIO SERVICES

www.womensaudiomission.org

George L's

Instrument cables
Patch cables
Jumper cables

Think outside the box for purer sound!

George L's Effects Kit

Everything you need to maximize the signal strength and quality of your pedal board. Make custom length cables in minutes!

10 .155 cable/10 right angle plugs & jackets

Get Award Winning Sound with
The Original High End Cable.

615 868 6976 www.georgel.com



Marc Eric

Nashville Guitarist/Singer
Songwriter/Producer
www.marceric.com

Take your MOTU high-end studio even higher

Achieve superb world-class sound running DP7 and MachFive 3 on the new, faster Mac mini along with high-end MOTU audio I/O and the latest advances in studio technology



Turbocharge your Mac mini
Digital Performer sessions
with MachFive 3.



Apple Mac mini

Up to 2x faster processors and graphics. It's mini in size only.

With its sleek aluminum design, removable bottom panel for easy access to memory, and space-saving built-in power supply, the Mac mini packs a powerful punch, especially for music and audio production with Digital Performer and MachFive 3. The new Mac mini features high-performance graphics that make it up to two times faster than before.

MOTU 896mk3 Hybrid

192 kHz audio I/O with 8 preamps

With 8 flexible combo-style XLR/TRS analog inputs, 8 pristine mic preamps, 192 kHz state-of-the-art converters, and professional metering, the 896mk3 Hybrid serves as the ideal hub for your high-end MOTU recording system.



MOTU

World Radio History

Radial Workhorse

3U frame for Radial 500 Series modules

The Workhorse is the perfect interface to bridge vintage-sounding analog with your digital MOTU desktop studio. Eight slots let you mix and match 500 Series modules to create the ultimate channel strip.

Load it up with Radial PowerPres to instantly add the warmth and character of old-school transformer isolation to your signal path. Parallel process signals with direct outputs to the 896mk3 while sending a stereo mix via the built-in stereo bus for instant audio nirvana.



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

(800) 222-4700
www.sweetwater.com



Value Added
Reseller
Professional Audio



Ableton Live 8

Make drum parts more percussive

BY CRAIG ANDERTON

OBJECTIVE

Take existing drum tracks or loops and apply downward expansion to impart a more percussive character.

BACKGROUND

Live's Multiband Dynamics is a very powerful processor that, while typically used for compression, also provides useful expansion effects. Applying downward expansion to a drum part can tighten up the sound, reduce ambience, and add a more percussive quality.

TIPS

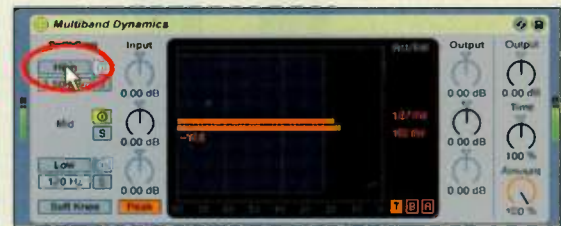
■ Step 4: Drag up all the way for the extreme, compressed drum sound used by '60s groups like The Beatles and Traffic.

■ Step 5: After dialing in the basic sound, revisit the Below block setting (step 3) and fine-tune the decay through the time button and increase the value until the decay sounds smooth.

Step 1 Drag the Multiband Dynamics' Reduce Ambience preset (it's the closest preset to what we want) into the drum track's Track View Selector.



Step 2 Turn off the High band (the Low band should already be off) to convert the Multiband Dynamics into a single-band expander.



Step 3 Click on the Below block's right edge, and drag the bracket cursor left or right so the block edge is just above the drum part's peaks.



Step 4 Click within the Below block; the cursor turns into a double arrow. Drag down to increase the expansion amount.



Step 5 Cymbal decays will sound choppy, so click on the T (time) button, click on the lower orange number field (release time), and increase the value until the decay sounds smooth.





GIK Acoustics
Quality Treatments at Affordable Prices
 "The GIK Monster was the perfect trap to reduce a resonance that I detected in Studio B."
 Bob Katz - Mastering Engineer
 1.888.986.2789 • www.gikacoustics.com
 "Bringing your sound to life!"



"Last year Tiny Telephone partnered with Minna Choi and her Magik*Magik Orchestra, a modular group of symphonic players that can be ordered up as needed, from a single bass clarinet, to a 60-piece ensemble.

The enormous amount of string and orchestral work we started doing revealed startling flaws in our vintage mic collection: between problems of self-noise, variations within pairs, and issues of fidelity, we just couldn't rely on 60 year-old microphones to get us through a live chamber ensemble.

Then I discovered Josephson Engineering. I was blown away. It was like summer love. After a decade of collecting tube mics, I quickly auctioned them off and bought everything Josephson Engineering made."

- John Vanderslice
 (Owner, Tiny Telephone - recording studio)




Whitewater Recording
Audio/CD Mastering • CD/DVDs

Complete Mastering \$375
 UP TO 12 SONGS
 FREE BAR-CODE WITH ALL RETAIL CD ORDERS

After complete analysis of your mixes, we will creatively adjust necessary dynamics, equalization, stereo enhancement, maximize volume, clean up fades/starts, encode CD text and ISRC codes and create a PMCD or DDP file set ready for replication.

1000 Retail CDs \$1199 Short-run CDs • 50 \$169 100 \$299
 (includes graphic design, color insert, color cd print, box, wrap)

828-684-8284
 184 Sleepy Gap Rd.
 Asheville, NC 28704

Check us out on the Web and Facebook
 www.whitewaterrecording.com

Serving the recording industry since 1987



Berklee College of Music
Now accepting applications for a full-time faculty position in Music Production and Engineering

With a nine-month, renewable contract beginning September 1, 2012, this faculty member will be responsible for teaching courses with a particular emphasis on modern production paradigms, including DAW and related software, MIDI sequencing, beat making, and remixing, in addition to multi-track recording and mixing techniques. Full description with qualification guidelines can be found at berklee.edu/jobs/detail/1609




We Like Music Too



R-10
 Lightweight 10mm Noble Rare Earth Magnet Speaker Drivers

R-30
 Hi-definition Balanced Armature Speaker Drivers With Customized Fitting Kit

ROCK IT

www.rockitsounds.com

CATEGORIES

SOFTWARE

EDUCATION/TUTORIALS

STUDIO FURNISHINGS

PARTS/ACCESSORIES

ACOUSTIC PRODUCTS AND SERVICES

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.

SOFTWARE

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

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

"Norton Music (since 1990)"

www.nortonmusic.com

EDUCATION/TUTORIALS

BE A RECORDING ENGINEER
ONLINE COURSE
 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

STUDIO FURNISHINGS

custom furniture ●●●●●



What can we create for you?

●●●●● **ARGOSY®**
www.ArgosyConsole.com

PARTS / ACCESSORIES

JustStrings.com

World's Largest Selection of Guitar & Bass Strings!
www.juststrings.com (800) 822-3953

ACOUSTIC PRODUCTS & SERVICES

SILENT Source
 58 Nonotuck St., Northampton, MA 01062
 Info: (413) 584-7944 Fax: (413) 584-2377
ORDER: 800-583-7174
 Silentcore Fabric Panels • Sound Barrier • Isolation Hangers
 Tube Traps • Primacoustic • WhisperWedge • ProFoam • Clearsonic
 • Hushfoam • R.P.G. Diffusers • Sonex • Sound Quilt • More
www.silentsource.com
info@silentsource.com
 QUALITY • PRICED RIGHT • INTEGRITY

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

small ads work too

Pocket Sound Booth™
 \$50 MSRP
 ambient sound & echo reduction for microphones
 popscreen & windscreen included
www.pocketsoundbooth.com

The MixPack



- Send us your tracks
- We mix it
- You download it

www.themixpack.com/em
 (510) 338-1240

Acoustics First
www.acousticsfirst.com
 Materials to Control Sound and Eliminate Noise™
 800-765-2900

To advertise with us,
Contact:
 Contessa Abono
cabono@musicplayer.com
 650-238-0296

ANTHONY DEMARIA LABS



ADL 670 STEREO TUBE LIMITER

DESIGNED IN ACCORDANCE WITH THE ORIGINAL FAIRCHILD 670

22 TUBES & 10 TRANSFORMERS

SALES / SERVICE / REPAIR 660 / 670

845-255-4695

www.ANTHONYDEMARIALABS.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



BoomBot2 (BB2)

BoomBotix
Now Available!
The BB2 Portable Speaker packs a punch for it's small size. With wireless Bluetooth connectivity and a sturdy clip on the back of it, you can take this product anywhere-giving you ultimate mobility with your music. Rechargeable battery and 3W rated/5W Max
MSRP: \$64.99
www.boombotix.com
650 -204-7900



Tempest

Available now
Dave Smith Instruments
Tempest is an advanced analog drum machine that generates its sounds using six powerful synthesis voices, and uses an innovative, performance-oriented operating system to create, edit, arrange, and manipulate beats in real time without stopping.
US MAP: \$1,999
www.davesmithinstruments.com



ISO-L8R155 Speaker Stands

IsoAcoustics
Adjustable height and tilt speaker stand improves any speaker system. Patented technology provides low frequency decoupling and improved midrange imaging. Designed for 4" to 7" studio monitors.
MSRP \$119 per pair.
www.isoacoustics.com



1

Beware of appointment safaris.

NAMM is sooooo big that if you make an appointment in Hall E and your next one is in Hall A, you cross a time zone and you'll end up being an hour late. Or an hour early. I always forget which. Some people even get jet lag going from one end of the convention center to the other.

Five Tips for NAMM Newbies

BY CRAIG ANDERTON

Like speed traps, Starbucks coffee shops, and muggers, the Winter NAMM supersized convention is *just around the corner!* Going for the first time? We're here to help.

2

Bring earbuds with a 1/4" adapter.

You can't hear anything on the show floor. What? Oh, I said, "YOU CAN'T HEAR ANYTHING ON THE SHOW FLOOR!" But if you claim you're from Some Huge Music Retailer and you're considering buying 10,000 'thingies,' the demo people will sometimes let you plug into the unit's headphone jack. Just remember to run away *real fast* when they go to find a purchase order.

3

Let's do lunch!

Hungry? There's an eatery on the convention center roof (really). It's so secret that I can't tell you where it is, but ask a security guard, "Where's the undisclosed location where Dick Cheney used to hide?" Next, give the Special Password ("twentydollarsifyou tellme"), then he'll give you directions—but only after running a background check and swearing you to secrecy.

4

The E-Z way to insanely great demos.

Find someone with a Guitar Center or Sweetwater badge, then follow them at a discreet distance. Exhibitor hearts get all a-flutter when Big Buyers come around, and you might as well benefit from the beatific aura of potential prosperity they emit.

5

Fanboi protocol.

If you see someone famous, don't go up to them and say something like, "Hey, you're Alan Parsons!" Trust me on this—they know who they are. Well, maybe not after happy hour starts, but you get my point. ■



MINITAU

EARTHQUAKE WITH KNOBS

Wall Splitting, Paint Peeling, Moog Analog Bass Synthesizer.

A compact monster bass powerhouse that fits easily into your performance, production, and studio rig. Create new sounds instantly with classic one knob per function design. Take it on the road or rack it up for 100% Analog Moog Bass anywhere.

All Bull, No Crap.

www.moogmusic.com

Introducing the

4PRE

6x8

HYBRID FW • USB2

FOUR MIC PREAMPS WITH MIXING
COMPACT LIVE RECORDING AUDIO INTERFACE



Record with four studio-grade mic preamps and mix with hands-on control

Only the 4pre gives you four flexible "combo" style mic inputs with preamps, combined with intuitive hands-on mixing, at such an affordable price. Hybrid FireWire/USB2 connectivity to any Mac or PC means your investment

is future-proof. Advanced features include balanced connections, rock-solid DDS clocking, an instrument tuner, a full-featured oscilloscope, bullet-proof drivers, renowned reliability, and award-winning sound.

- **Compact size** — fits easily in a backpack and next to your laptop.
- **Studio-grade audio** — record with clean, transparent mic preamps and professional balanced connectors.
- **Four flexible mic inputs** — mix and match mics, guitars, keys, etc.
- **Two headphones** — work with others, free from noise restrictions.
- **Hands-on mixing** — use the 4pre as a monitor mixer while recording or as a live mixer, with no computer.
- **Simplicity by design** — just plug in and go. No involved setup.
- **CueMix software** — control four mixes with simple tabbed interface.
- **Tuner, oscilloscope and more** — real-time FFT, spectrogram waterfall, X-Y phase analysis, and other tools.
- **Hybrid connectivity** — connects to any Mac or PC with USB or FireWire.

Learn more at motu.com/4pre



MOTU
motu.com