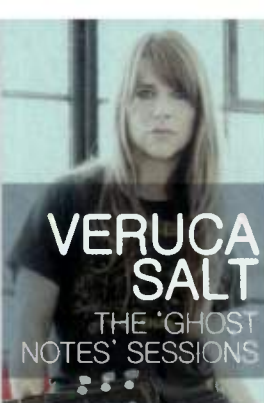


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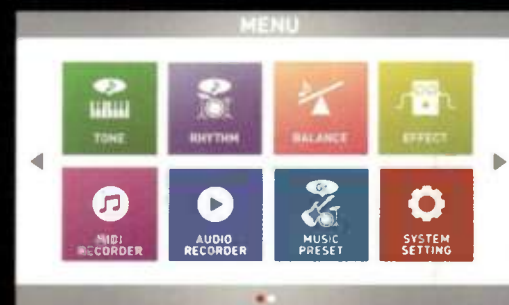


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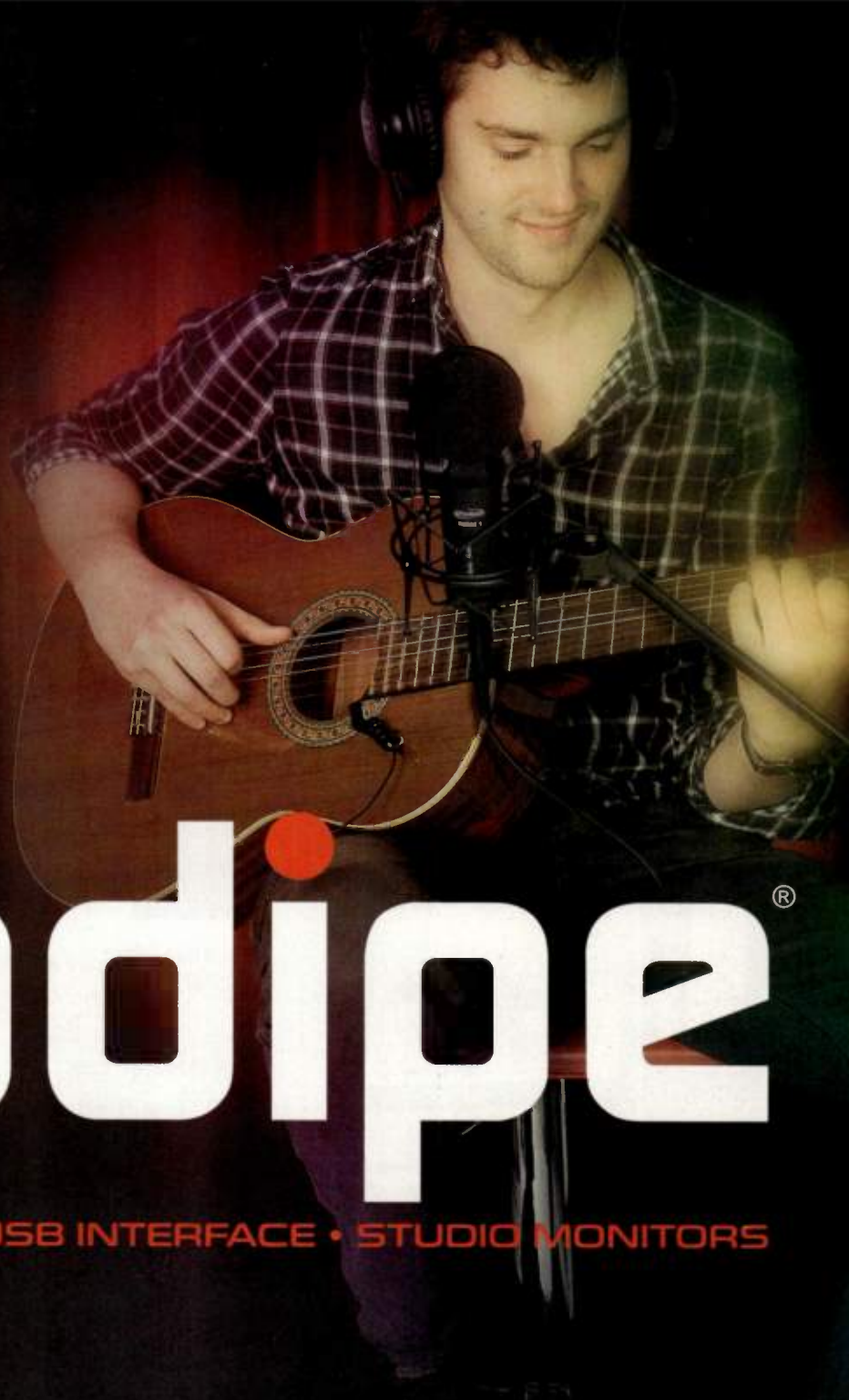
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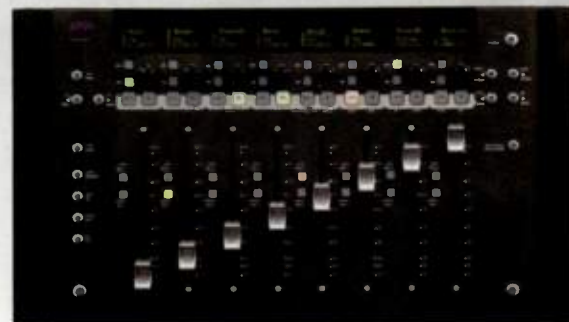


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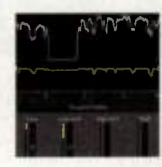
POWERED MONITORS FOR MUSICIANS

Whether you're shopping for speakers for your desktop, portable rig, or pro critical listening space, there's an active monitor that's ideal for you. In the market for a new pair? Start with our buyer's guide.

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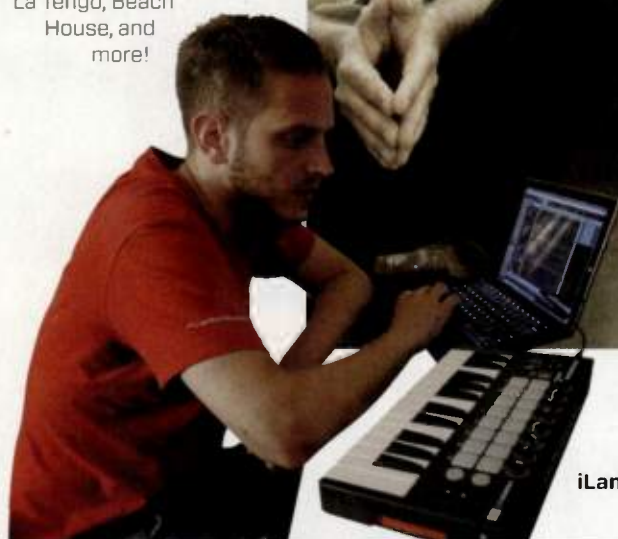
New releases from the Chemical Brothers, Yo La Tengo, Beach House, and more!



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Nineties alt-rockers reunite to record *Ghost Notes*.



iLan Bluestone

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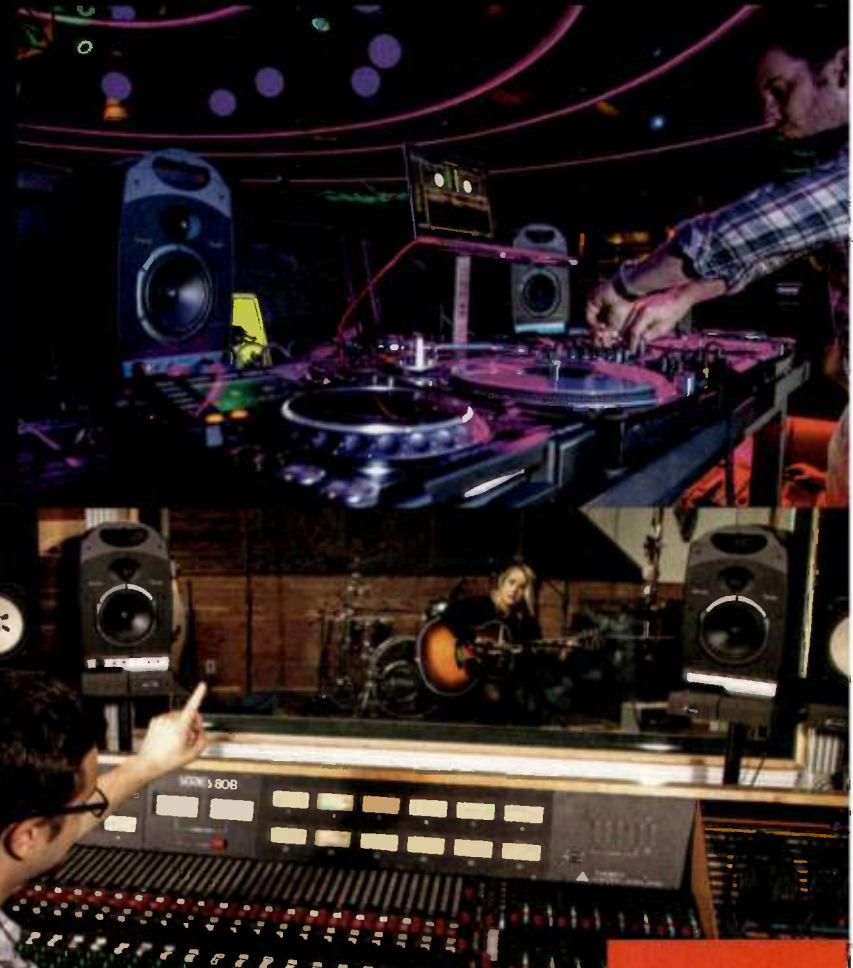


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Making an Educated Decision

LET'S FACE it: Most home recording is done in less-than-honest acoustic environments. So when you're shopping for studio monitors, accuracy is crucial. But your evaluation doesn't end there.

Choosing the right monitor means understanding how its design characteristics affect its frequency response (and your listening fatigue). Get familiar with specs: Learn how power and sensitivity influence a monitor's performance. (And know which ratings to take with a grain of

salt.) Understand the pros and cons of powered vs. active monitors. (Need to brush up? This month's "Ask" on the next page breaks it down for you.)

These factors are further influenced by the ways you use your monitors. Do you work with clients who have specific needs (mixing at high SPLs, for example)? Will you be mixing on a portable rig, or in hotels and other inconsistent environments? Do you need to be able to make speaker response adjustments to compensate for room placement?

Your speakers, more than any other piece of gear, impact every mix you make—and you'll spend more time with them than with anything else in your studio. So choose wisely. Start with our "Monitors for Musicians" guide on page 22. And for some honest perspective, check out Gino Robair's Rough Mix Column, "Monitors in Moderation," on our back page. Ultimately, your monitor choice boils down to how it sounds. Just make sure you understand the factors influencing that sound.



SARAH JONES
EDITOR

sjones@musicplayer.com

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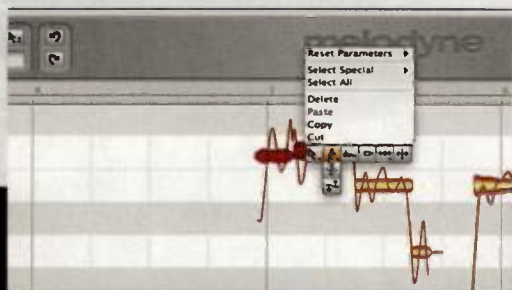
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Tuning Vocals with Melodyne

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...and lots
more!



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RareBeasts Handmade Instruments

Brian McNamara, the musician and inventor behind RareBeasts synths, wanted to design simple instruments that anyone could pick up and play. His collection of synths, drum machines, and noise loopers range from Theremin-style light-controlled instruments to circuit-bent synths crafted with recycled circuit boards; they feature ultra-simple controls and are housed in gorgeous chassis, often built from wood. Prices start around \$100; Etsy.com/rarebeasts.

YOUR TAKE

SHOW US YOUR RIG AND WIN!

Do you produce music on the go? We want to see your setup. Send a high-res image with a paragraph describing your gear to ElectronicMusician@emusician.com. Our favorite submission will appear in an upcoming issue of *Electronic Musician*, and will win a limited-edition Gravity Drive loaded up with Heavyocity's flagship virtual instrument, *GRAVITY: Modern Scoring Tools*. *GRAVITY* covers the gamut of intangible scoring elements; complex Pads, evocative Risers, other-worldly Stings, and earth-shattering Hits, delivering more than 12 GB of production-ready instruments in an inspiring new interface. (Value: \$449) Contest open to U.S. residents only.



ASK!

A FRIEND OF MINE WHO HAS A STUDIO SAYS HE WOULD NEVER USE POWERED STUDIO MONITORS. ARE PASSIVE SPEAKERS BETTER THAN ACTIVE ONES?

BOB NORTH
MIAMI, FL
VIA EMAIL

Like anything having to do with audio playback, the answer depends on whom you ask. But ultimately, it comes down to how they sound to you.

One of the main reasons active monitors are popular is that they are convenient; no need to wire up separate components. In the best-case scenario, the

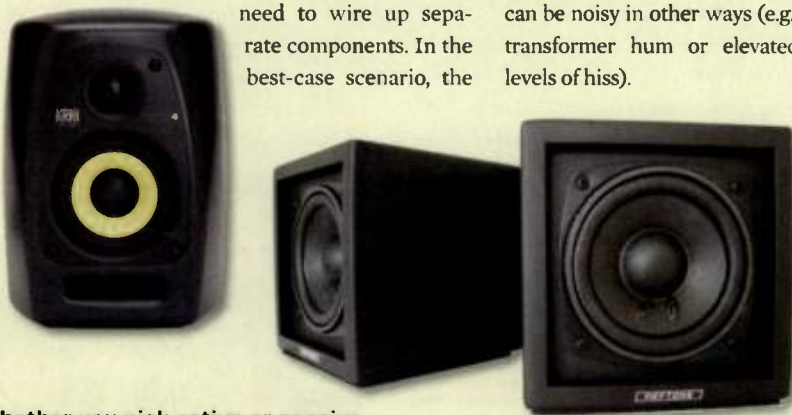
amplifiers and speakers in an active monitor are designed to complement each other, with optimized crossovers, minimal distance in the wiring between components, as well as other design criteria. With a bi-amped monitor, the high- and low-frequency drivers each have their own amplifier. Although there is no fan noise, some models (particularly budget-priced ones) can be noisy in other ways (e.g., transformer hum or elevated levels of hiss).

Engineers who prefer passive models often like having control over the choice of components. And if the power amp is noisy or has a fan, it can be placed out of the way. Best of all, you can upgrade the amp and speakers separately to suit your needs and tastes. In addition, engineers who prefer passive setups often complain that active monitors have an uneven frequency response or that having the speaker and amplifier in one cabinet negatively affects audio performance.

Of course, sound quality is only part of the equation. Sometimes portability influences a decision, such as when the monitors need to be moved from one room to another in a school or studio, or easily carried between facilities. For example, a pair of Genelec 8010A or KRK VXT4 small-

format powered monitors can be placed in a protective tote bag and, together, are small enough to go into the overhead bin of an airplane. That's perfect if you know the response characteristics of your monitors and need a reliable reference wherever your jobs take you. (For more on active monitors, see our cover story beginning on page 22.)

However, passive reference monitors can be just as portable. For example, the Reftone LD-1 is small full-range speaker that can be used in a mix room, video editing suite, or educational environment. They work with nearly any power amp, but when mated with a small amplifier/USB DAC such as the Topping TP30, they're as easy to schlep and set up as an active pair. **THE EDITORS**



Whether you pick active or passive monitors, be sure you're happy with their sound quality, while also taking into account other factors (size, price, and your work environment). Shown here are KRK VXT4 (active) and Reftone LD-1 (passive) monitors.



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



Sweetwater GearFest '15

Stone-cold bargains and cool presentations in the Indiana heat

BY MARKKUS ROVITO

AH, FORT Wayne, Indiana. Known for its aviation and military/defense industry, hot, humid summers and of course as the worldwide headquarters for musical mega retailer Sweetwater, the town delivered on all counts June 12-13, when Sweetwater held its annual GearFest event. As soon as we landed at the small, yet international, airport, a charming Aviation Museum greeted us on the way out, as if to say, "Welcome to Fort Wayne. You just may like it here."

The biggest and baddest yet, GearFest 2015 attracted 400 music gear vendors, featured \$80,000 in gear giveaways and brought in record crowds. We overheard entrepreneur extraordinaire Chuck Surack, the founder and president of Sweetwater, say he expected 12,000 to 14,000 attendees, which means it may have exceeded the 12,442 registered attendees for 2014's Summer NAMM!

GearFest takes place entirely on Sweetwater's sprawling complex: 320,000 square feet of indoor space on 100 acres of land, including a recently expanded full-service brick-and-mortar music store, a 250-seat performance theater, three recording studios, a spa, salon, health club, and diner. Walking through it all with satisfaction, we see big banners showing the current job openings at Sweetwater, and it's as if to say, "Stay in Fort Wayne. You definitely will like it here."

Outside, within a layout of about 20 tents and tour buses, a flea market offered some interesting and reasonably priced used gear finds, a tent of "open box" but new gear sold at deep discount,

and all the vendors showing their latest and coolest stuff, some of it still not shipping yet, like Arturia's very cool new BeatStep Pro controller and four-part performance sequencer for synchronizing analog, digital, and iPad instruments all in one place.

EM readers could easily kill the day in the Electronic Production tent, where they could check out products as well as live presentations from Novation, Native Instruments, ReLoop, Ableton, KMI, Roger Linn, Serato, Nord, Propellerhead, and others. That's also where Moog, Dave Smith Instruments, Tom Oberheim, Elektron, Studio Electronics, and Modal Electronics all had their beautiful analog synthesizers up and running. While GearFest was well attended, it was easy to get plenty of hands-on time with these dream machines. Modal had its brand-new 001, the 2-voice version of the 002 12-voice analog/digital hybrid synth. Thanks to their convenient displays and insane inner architectures, the 001 and 002 seem to be some of the most versatile hardware synths ever.

Right in the middle of our analog heaven, the clouds burst, releasing a torrent of rain upon GearFest's tents. Now, Sweetwater does everything big, so the tents were in no jeopardy, but the mini flood of water streaming across the pavement caused the synth bonanza to



power down temporarily. Back in the Sweetwater compound, there were more performances, seminars, and tutorials happening in the conference halls and theaters to keep up with them all. Popular Craig Anderton sessions taught mastering within DAWs and dynamics; you could learn vocal tuning and audio restoration from Celemony and iZotope.

The pace was dizzying; the heat blistering. That night, after the minor league baseball game downtown, thunderous fireworks that kept people from sleeping just before midnight seemed to say, "Isn't this fun? You're not thinking of leaving Fort Wayne, are you?" Day 2 was filled with an insightful session on electronic music featuring up-and-coming trance producer/DJ Ilan Bluestone and Cakewalk Sonar software, a cautiously optimistic talk on being successful in today's music business from Sweetwater's own Senior Producer Mark Hornsby, and more blissful tweaking on modular synths both ancient (an Arp 2600 in the Bob Moog Foundation booth) and modern (Pittsburgh Modular).

But all things must pass, and we lifted away from Fort Wayne, Sweetwater, and GearFest 2015 in a puddle jumper bound for Chicago O'Hare. There, as Chicago never disappoints, lightning abounded in a violent thunderstorm, delaying and grounding flights far and wide, as if to scream, "You should have stayed in Fort Wayne!"



IN THE STUDIO

>> The Secret Storm with John Morand

BY BARBARA SCHULTZ

THE RECORDING industry has changed a lot since Lauren Hoffman's first album, *Megiddo*, released in 1997. However, engineer/producer John Morand has been a frequent presence in her process, all along.

"The first record we did was on 16-track, 2-inch analog tape," Morand recalls. "Then came the 24-track era, and then we did a record on an Otari RADAR system in 2002. I think the last record we did before this was in 2010, after we'd finally switched to Pro Tools."

Morand works in Sound of Music Studios, the facility he first purchased with artist/producer David Lowery in 1994 and now co-owns with a few other partners, including Hoffman. SOM is now apparently on its fourth recording platform, in its sixth location: a large two-studio space that holds all of the gear and instruments Morand and co. have collected during 22 years of studio life.

Currently, Morand and Hoffman are midway through recording an album to be titled *In the Sun*, which Hoffman is making under the name "The Secret Storm."

"I chose a project name that says something relevant to what I'm trying to do," Hoffman explains. "I started thinking about how there's this calm exterior that we walk around with, but the emotional life that we don't necessarily share—whatever internal drama that might be going on—you can't show that. Songwriting and performing and building up songs in the studio are ways we can explore that 'secret storm' inside us."

The title track from *The Secret Storm*'s debut is out now; Hoffman and Morand plan to put the tracks out individually—many with videos—over several months, with the full-length releasing in 2016.

"The way people consume music has changed, obviously," Hoffman says. "Now you have smaller things to ask people to pay attention to: 'Watch this one video.' 'Here's a single.' Don't overwhelm anybody. In the end, the album will be almost like the archive that puts everything into context."

At press time, Morand, Hoffman, and her band (Cathy Monnes, cello and electric violin; Ethan Lipscomb, piano and keyboards; Jeff Diehm, bass; Jordan Marchini, Drums; and Tony Lechmanski, guitar on some tracks) had five songs finished, with another five in progress. Some are being tracked live in the studio, while others begin with Hoffman's vocal and guitar, and a click track—an approach that Hoffman says results in trance-ish arrangements.

In any case, Morand captures Hoffman's vocals mainly with a 1957 Telefunken U47 mic. "We used a [Shure] SM7, too," he says. "Most of the



Engineer/producer/studio co-owner John Morand with Lauren Hoffman

preamps were the Fairchild ones we have that are phono preamps from the '60s. I also used a lot of Altec stuff: the 438C and Altec 1521 integrated preamp compressor."

Electric guitars were recorded with a Shure SM57 and a Sennheiser 409, through Neve 1272 preamps, "plus some of my specialty odds and ends, like Fostex 4-track studio compressors," Morand adds.

Monnes' strings went through a Coles ribbon and API pre's. "We put her in a booth so she could be on the live sessions," Morand says. "She also uses a lot of effects, so on some songs there's not much acoustic cello; it's a lot of her playing through her Line 6 pedal. We used some tube Echoplex [delay] on a few songs."

On drums, Morand says he puts up "the normal mics, but then I'll also have three or four channels of mics that are fairly heavily processed going in. We use the [Empirical Labs] Distressor a lot. There's also places where used keying—he'd hit the snare drum and the room mic turns on, then turns off again. On the electronic side, we used a fair amount of Korg ES-1 machine along with [effects in] Reason and some Native [Instruments] stuff."

"I'm excited about Lauren's record," he says. "She started when she was like 17, and she's still getting better at singing and songwriting every year. You're lucky when you get to work with someone consistently like that."



MOTU DP 9 comes with a sleek new look, and users can choose from many visual Themes, all of which can be customized.



Fig. 1. Three of DP 9's new plug-ins: MegaSynth, Masterworks FET-76, and MultiFuzz.



Fig. 2. You can now view audio tracks as either waveforms, a spectrogram, or both.

SPOTLIGHT

MOTU DIGITAL PERFORMER 9

Upgrade features new synths, new plug-ins, and a shiny new interface

By Mike Levine

Digital Performer 9 has arrived, and it's stocked with new features, including instruments, plug-ins, and a host of productivity enhancements. MOTU even changed the default look of the GUI to a more sleek and modern one—although you can keep the old look if you want.

NEW PLUG-INS

Three subtractive-synth processing effects for guitar and bass highlight DP's new plug-in offerings (Figure 1). MegaSynth is the most fully featured of the trio, with a visually program- mable interface replete with knobs,

switches, and virtual patch cables. Play a guitar track through it and it can generate square wave, octave, and sub-octave synth tones, in up to four simultaneous voices. Alter the sounds with LFOs, a Pattern Modulator, adjustable envelopes, and pair of lowpass filters.

The other synth processors, Micro G and Micro B are dedicated guitar and bass processors, respectively, and are similar to MegaSynth, except they have simplified controls, and are designed to look like virtual stompboxes. In addition to generating the same waveforms as MegaSynth, they can also give you cool filter sweeps that are triggered by gain.

If you're into fuzz, you'll love the new MultiFuzz plug-in, which is a replication of Craig Anderton's classic QuadraFuzz distortion kit. The guitar signal is divided into four separate bands and distortion is applied to each, producing big and heavily sustaining sounds. Couple this with one of the new synth processors, and you can create monstrously fuzzed-out synth and guitar tones.

Also big news in DP 9 is the in-

clusion of MOTU's flagship synth, MX4. Now all DP users can access this versatile virtual synthesizer, which is equipped with a hybrid synth engine that can produce many types of synthesis including FM, AM, subtractive, wavetable, and more. Its sound set has been enhanced with a bank of 120 contemporary EDM sounds programmed by keyboardist/synthesist Erik Norlander.

DP 9 also adds the MasterWorks FET-76 dynamics processor, which is modeled from the legendary 1176LN Limiting Amplifier. Use it for drums, bass, vocals, and virtually any source that needs to be compressed.

PRODUCTIVITY

The Sequence Editor now offers two ways to look at your audio: the standard waveform display, or a spectrogram that shows the frequency content of the audio (Figure 2). You can choose to view (and edit in) one or the other, or stack them so you can see both simultaneously.

Longtime DP users will appreciate the new Floating Plug-In Windows option. In past versions, plug-

in windows would move behind new windows that opened, which could be annoying. That's all in the past now, as you have complete control over whether plug-in windows float or not. You can set their status with a global preference, or on a plug-in-by-plug-in basis.

Other productivity enhancements include exporting of QuickScribe scores as MusicXML files, which can be opened in Sibelius, Finale, and any notation applications that support that format. MIDI Learn has been added to audio plug-ins, making it easy to link knobs, faders, and buttons on your MIDI controller to plug-in parameters.

DP 9 also adds Automation Lanes in the Sequence Editor; Retina display support; a new Create Tracks window with lots of convenient options; search fields for Chunks, Markers, and Plug-in Preferences; Muting of MIDI notes with the Mute Tool; and a new Project Notes field that allows for unlimited text entry on a project. Watch for our full review in an upcoming issue.

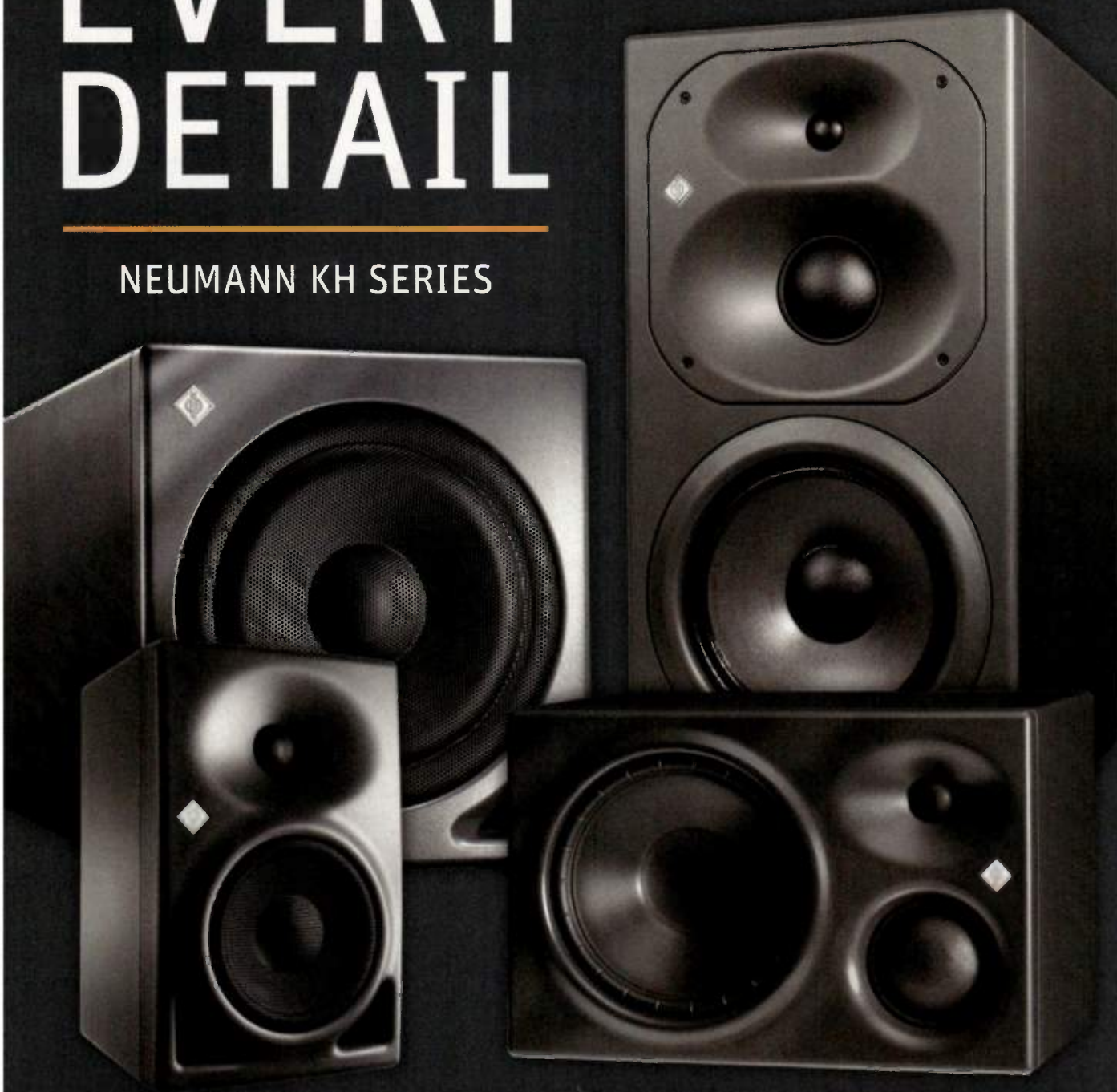


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1
HEAVYOCITY
GRAVITY: MODERN
SCORING TOOLS
Virtual instrument
\$449

HIGHLIGHTS For Native Instruments Kontakt and free Kontakt Player 5 • comes with 12 GB of content from top industry sound designers • includes 2,200 sound sources, 1,200 Kontakt presets, and 800 instrument snapshots • effects include reverb, delay, chorus, distortion, EQ, and filtering • new interface • Motion feature for adding tempo-synchronized effects • Pattern Chainer • Volume Modulator

TARGET MARKET Composers and sound designers

ANALYSIS A hybrid virtual instrument specifically designed to provide the tools needed for creating cinematic sounds.

heavyocity.com

2
LINE 6
HELIX
Guitar processor
\$1,499

HIGHLIGHTS 12 footswitches, each with graphic display and multicolor LED ring • HX modeling engine uses dual DSPs • large color LCD • hands-free editing mode • digital audio and MIDI I/O • Variax port • expression pedal and CV inputs • four assignable effects sends • microphone input • stereo pairs of XLR and 1/4" outputs • USB port • 1/4" stereo aux input

TARGET MARKET Guitarists performing onstage and in the studio

ANALYSIS The newest generation of Line 6 effects modeling available in floor and rack versions.

line6.com

3
WALDORF
NAVE (FOR MAC/PC)
Wavetable synthesizer
\$199

HIGHLIGHTS New version supports Audio Units, AAX, VST2.4, and VST3 • runs in 32- and 64-bit to fit your DAW • two wavetable oscillators per voice, as well as the 8-oscillator Überwave • 2- and 4-pole multimode filters • two ring modulators • two LFOs • three envelopes • effects include phaser, flanger, chorus, reverb, compressor, and EQ • arpeggiator • modulation matrix • comes with leads, basses, pads, and other presets

TARGET MARKET Composers and performers

ANALYSIS A welcome computer-based version of Waldorf's Editors' Choice Award-winning iOS app.

waldorfmusic.de

4
DANGEROUS MUSIC
2-BUS+
Summing mixer
\$2,999 street

HIGHLIGHTS 16-channel rackmount summing mixer with XLR and DSub inputs • three effects: Harmonics control generates tuned harmonic distortion in parallel processing mode (with Blend knob); Paralimit FET limiter is available in parallel processing mode; X-Former integrates two transformers into the mix with a knob for core saturation • the order of the limiter and distortion can be changed

TARGET MARKET Recording and mix engineers, personal studios

ANALYSIS Summing mixer in a convenient size with useful options for adding personality to your mix.

dangerousmusic.com

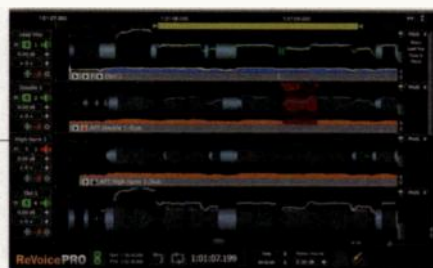
5



7



6



8



5

SAMPLE LOGIC CINEMATIC GUITARS INFINITY

Virtual instrument collection
\$599.99

HIGHLIGHTS Combines the libraries of Cinematic Guitars 1 and 2 with two new libraries: Cinematic Guitars 3 (with samples by guitarist Steve Ouimette) and Infinity • “3D mixer” morphs between as many as eight sound sources within four “soundcores” • Step Animator • Morph Animator • effects include delay, reverb, filters, and distortion • parameter randomization • for Kontakt and free Kontakt 5 Player

TARGET MARKET Musicians, composers

ANALYSIS Extensive sound library with crossgrade pricing for owners of previous Cinematic Guitars releases.

samplelogic.com

6

SYNCHROARTS REVOICE PRO 3

Standalone pitch and time-processing software
\$599

HIGHLIGHTS Automatic and manual Warp controls for altering the pitch and timing of recorded vocals and instruments • Automatic Performance Transfer for pasting the characteristics of one track to another • doubler effect • ability to adjust inflection for use in ADR situations • Revoice Pro Link plug-ins and plug-in monitors for Audio Units, RTAS, and VST

TARGET MARKET Producers, engineers, sound designers

ANALYSIS In addition to updated features, the program offers performance and audio quality improvements while supporting more DAWs.

synchronarts.com

7

APPLIED ACOUSTICS STRUM GS-2

Guitar modeling plug-in
\$199

HIGHLIGHTS Models the parts of acoustic and electric guitars: bridge, strings, soundboard, pickups, amp, and speaker cabinet • various strumming capabilities, as well as MIDI loops provided • updated compressor and EQ effects • chord recognition that automatically voices chords as if they were played from a guitar • 32- and 64-bit operation for Audio Units, AAX, RTAS, and VST

TARGET MARKET Composers, performers

ANALYSIS An impressive-sounding update that provides surprisingly realistic guitar articulations that non-guitarists can play from a keyboard controller.

applied-acoustics.com

8

PROPELLERHEAD REASON 8.3

DAW
Free to existing Reason users

HIGHLIGHTS RV7000 mkII convolution reverb • Quick Zoom using a single key • select master MIDI controller input from the rack view • browse from sequencer or rack view • Version 8.2 added the ability to easily return to previously loaded patches and support for Propellerhead’s collaborative and music-sharing services; Take vocal recorder and Figure virtual instrument sequencer, both for iOS

TARGET MARKET Reason users, beat producers, musicians, composers

ANALYSIS The update is worth it for the convolution reverb alone.

propellerheads.se



The West Oakland Music Systems Skipmin is an 8HP, skiff-friendly utility module that can add probabilistic spice to any modular synth patch.

WEST OAKLAND MUSIC SYSTEMS

Skipmin

Give your piece some chance with this quad gate skipper

BY GINO ROBAIR

One of the secrets to creating rhythmically complex music with a modular is to add a level of indeterminacy to the triggers and gates, typically by introducing logic or probability circuits. With the Skipmin (\$150), West Oakland Music Systems (westoaklandmusicsystems.info) has created an elegant and relatively low-cost way to inject musically useful chance elements into your patches.

One of the most compelling things about the Skipmin, which the developer refers to as a “quad probabilistic gate skipper,” is how easy it is to use. The module has four inputs that accept triggers and gates up to 10V, and four outputs, each with a dedicated mute button.

In addition, each output has a Skip control, which determines how likely the input will go through. Once an input voltage reaches its max level, it is subjected to a probability test (based on the setting of the Skip knob), and if it passes the test, the corresponding output delivers a +5V signal that lasts as long as the input signal stays high. An LED at each output lights when a signal makes it through.

When the knob is set fully counter-clockwise, there is a 0% chance the signal will pass; turning it fully clockwise sets the probability to 100%, so that the signal is always present at the output. The simplicity of the Skipmin is also a result of the fact that you can't visually set the probability amount (except at the extremes), so you have to play it by ear, so to speak.

Although the outputs can be used discretely to process four individual signals (input 1 to output 1, input 2 to output 2, etc.), the inputs are normalized to the outputs in numerical order. For example, patch a trigger to input 1 and it is available at all four outputs. Then if you add a trigger to input 2, that trigger now

goes to outs 2, 3, and 4 while input 1 goes only to output 1. Consequently, the normalization scheme lets you send one clock to several outputs, each of which can have its own probability setting—sweet! Moreover, if you mute the primary channel of the incoming signal, the normaled channels that follow remain active. Each Skip

knob glows blue until you press its corresponding Mute button; then it goes dark.

In addition to rhythmic chores, the Skipmin can also be used as an ersatz waveshaper. Patch an audio-rate (20 Hz or greater) signal to an input and you are treated to glitchy results that begin to resemble bit reduction as you turn the Skip control counter-clockwise. Using a sequenced melody patched to input 1, I set the Skip knob to 12 o'clock for outputs 1 and 2, then panned each output to different speakers. The timbre coming from the two outputs differed because of the probabilistic routines, even when the Skip knob was at a similar setting. As the sequence progressed, crunchy dropouts would occur at different times from either channel, creating a nice stereo effect.

Although there were times when I wished the module offered CV control over the Skip amount, one of the charming things about the Skipmin is that the interface is so straightforward. And, it requires much less rack space than bigger, more complex modules offering probability features.

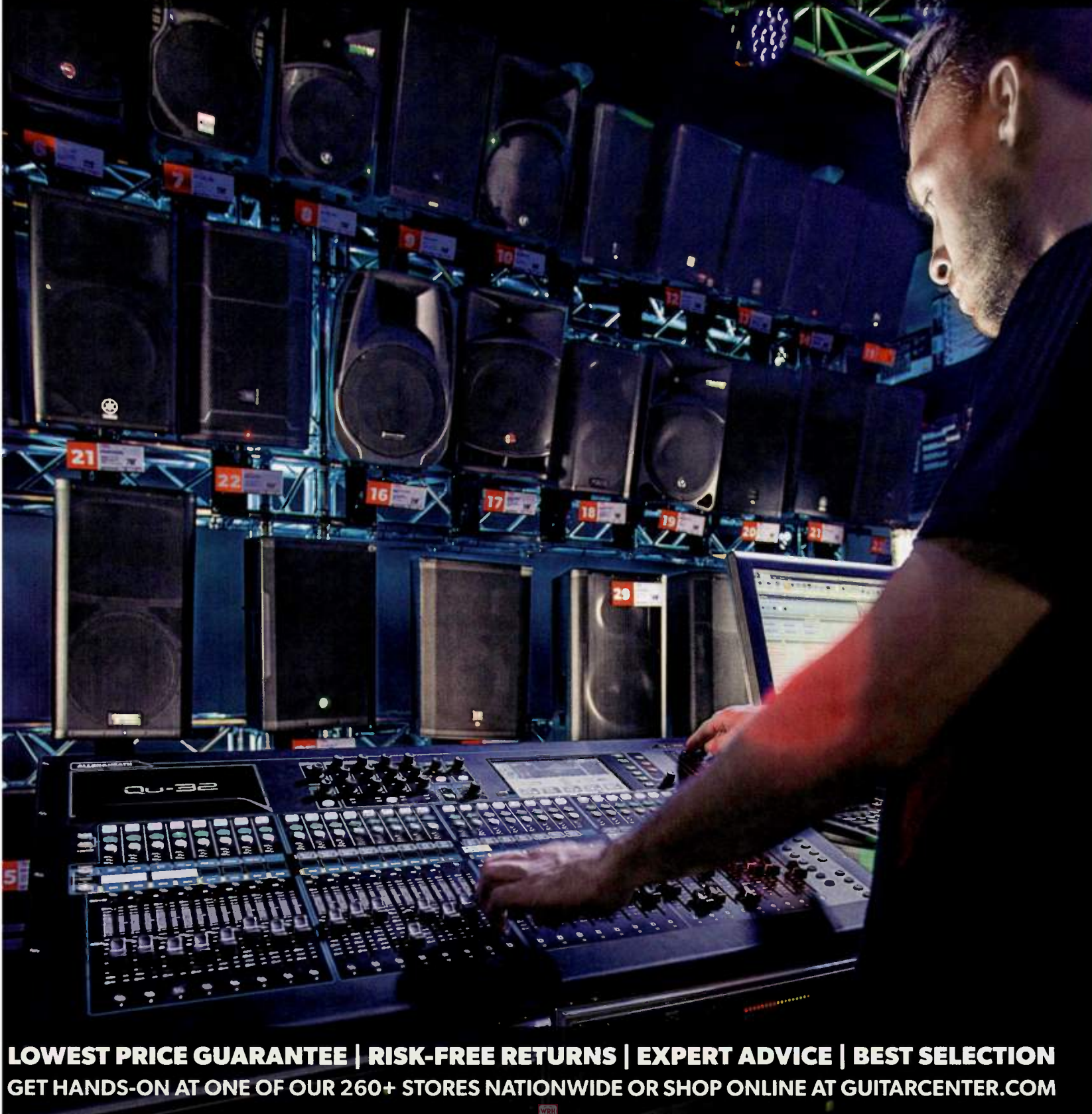
The Skipmin is definitely worth checking out if you enjoy making beat-based and West Coast-style patches that have a variable level of unpredictability. ■

Special thanks to I/O Music Technology (io-mt.com) for loaning us the module for this article.

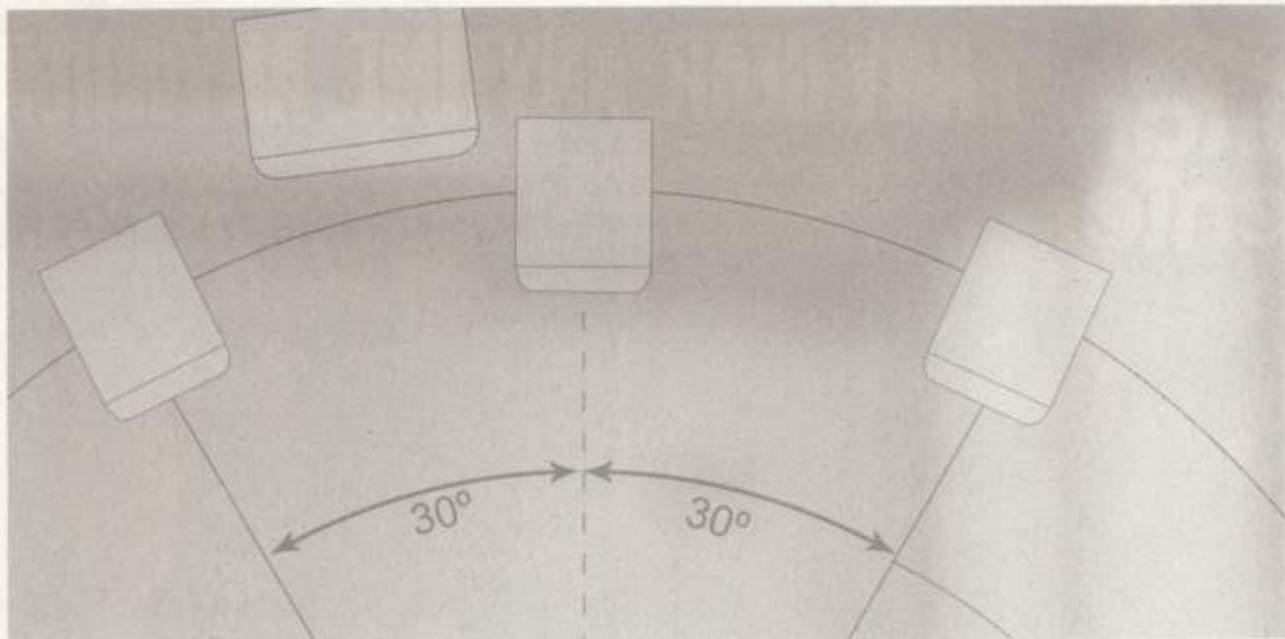


ANY GEAR, ANYTIME, ANYWHERE

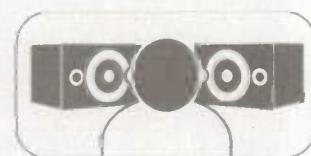
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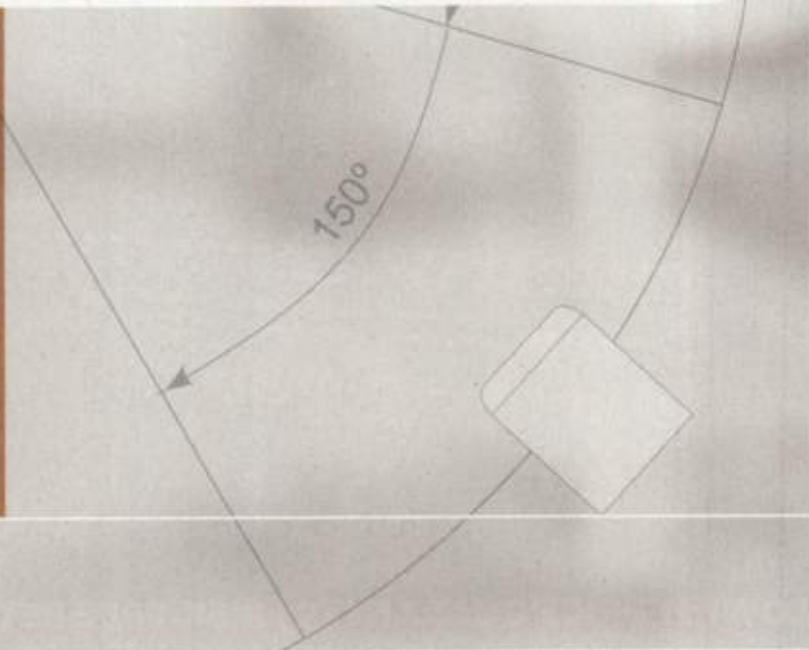
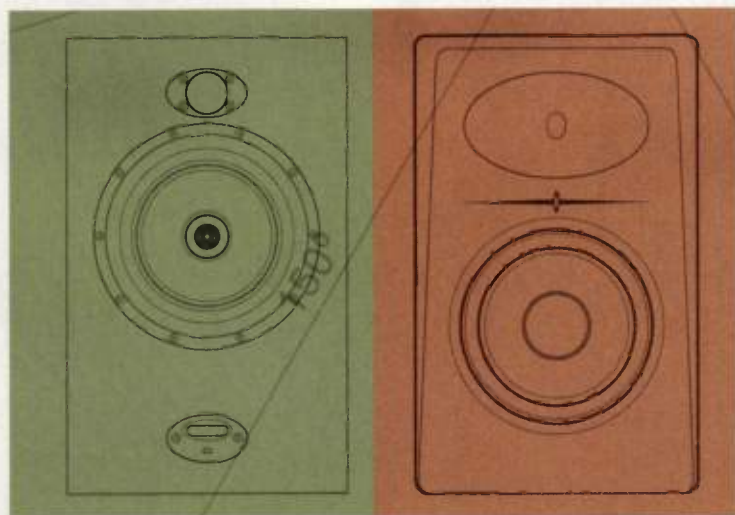


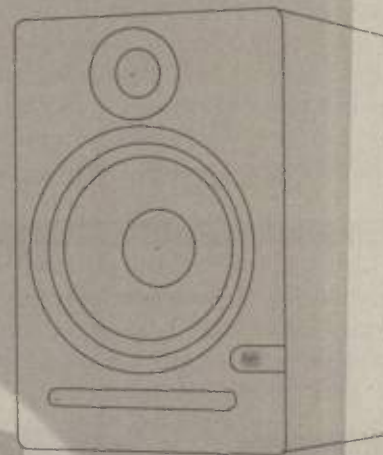
The Musician's Guide to Active Studio Monitors



Whether you're mixing music, games, or sound for picture, there's a powered reference monitor for you. We've rounded up two-way speakers for any studio scenario, from desktop and portable applications to pro-level critical listening.

BY THE EDITORS





In terms of convenience and price, it's hard to beat a pair of quality active monitors. Whether you plan to mix and master in the studio or edit effects and dialogue in a multimedia environment, you can find powered reference speakers that meet your needs in size, power, and price.

In this article, we focus on biamped, 2-way monitors for two studio situations—small models designed for use within cramped quarters or when portability is a requirement; and larger sizes suitable for mixing and other critical listening uses. (Prices are MSRP for individual monitors unless otherwise noted.)

Desktop and Portable

In this category, we look at products that are small enough to sit on the desktop or wall mount in an editing suite; specifically, models with low-frequency drivers that are 5" or smaller in diameter. In some cases, the diminutive size and low weight of the monitor will make it a good choice for traveling.



Fender Passport Studio

FENDER

The Passport Studio (\$599/pair street) system is designed for reference monitoring on the go, with two speakers that can be snapped together for easy portability, just like the models in Fender's Passport P.A. line. In this case, the setup provides 150W of Class D amplification and weighs a total of 18 lbs.

The speakers—a 5" polyglass LF driver and an inverted tweeter—are made by Focal. Like many systems intended for desktop use, the Passport Studio puts all of the electrical components in one (active) cabinet that connects to the second, passive cabinet using a single cable.

The active speaker has a front-panel 3.5mm stereo input, a 3.5mm stereo headphone jack, a volume control, plus bass and treble EQ controls. Within a rear-panel compartment are a pair of balanced 1/4" TRS inputs and the connector port for the satellite speaker. And like the Passport P.A.s, the passive cabinet has a rear-panel storage compartment for cables.

FOSTEX

The company's PM Series of personal monitors includes the PM0.3d (\$149/pair street), the PM0.4d (\$199/street), and the PM0.5d (\$349/pair street). As the model numbers indicate from low to high, the fiberglass-cone woofers are sized 3", 4", and 5", with a 0.75" tweeter in each. The power rating for the models ranges from 30W to 58W.

The PM0.4d and PM0.5d offer unbalanced 1/4" and RCA inputs. The PM0.3d is a paired system, combining a powered speaker with RCA inputs, a stereo 3.5mm input, a volume control, and a 3.5mm TRS output that connects to the passive speaker. This model also includes adhesive feet that tilt the speaker upward.

GENELEC

The 50W, Class D powered 8010A (\$395 street) is designed specifically with pros in mind for both stereo or surround work. Here, a 3" woofer and 0.75" tweeter are housed in a die-cast aluminum case that is just over 7.5" tall and weighs in around 3.5 lbs.



Fostex PX-6



Genelec 8010A



KRK VXT4



Mackie CR3



Neumann KH120

Genelec includes an Iso-Pad base for decoupling the monitors from your desktop. Threaded holes are also provided for wall mounting. Other pro-level features include an XLR input, as well as an input sensitivity switch, standby mode, and various lowcut settings, the latter of which are accessed via recessed DIP switches.

KRK

With a 4" Kevlar LF driver and 1" silk tweeter that together offer 45W RMS, the VXT4 (\$299 street) is designed for chores such as editing, sound design, or surround. The combo input jack makes it easy to interface the VXT4 with balanced (XLR and 1/4") or unbalanced (1/4") signals. As with KRK's larger active monitors, you'll find a ground-lift switch, an input level control, switchable automuting, a limiter, and a clip indicator.

For situations in which you need to protect the speakers, the VXT4 comes with a removable metal grille. Rubber gaskets are included to decouple the speaker cabinet from the grille and screws.

MACKIE

The CR3 (\$129.99/pair) and CR4 (\$199.99/pair) constitute Mackie's recent foray into budget-priced stereo playback systems for desktop and travel. As with Fender and Fostex above, these systems are sold in pairs, with one cabinet housing the active components. Cabling is included, as well as foam pads to decouple the cabinets from the desktop.

As you might expect, the CR3 has a 3" woofer, while the CR4 has a 4" woofer. A 0.75" silk-dome tweeter is used in both. The systems weigh 5.5 and 7.1 lbs respectively and are designed to work in casual and professional environments by providing RCA and balanced 1/4" TRS inputs, as well as a stereo aux input and a combination level control/power switch on the front panel.

NEUMANN

Small, solidly built, and hefty, the KH 120 (\$749) sports a 5.25" low-frequency driver and 1" tweeter, weighs in at 13.7 lbs, and provides 50W of power for each driver. As you might expect, given the price, this monitor, though small, is designed for

with the desktop in mind, the bottom of the cabinets are beveled slightly, allowing you to tip each monitor back so that the speakers aim upward toward your ears.

TANNOY

The feature set of the Reveal 402 (\$139 street) and Reveal 502 (\$179 street) go even further into catering to both professional and consumer needs. The 50W and 75W monitors, which have 4" and 5" woofers, respectively, include XLR and unbalanced 1/4" inputs. A 3.5mm stereo aux input is for Monitor Link mode, which lets you send the stereo signal to the other monitor with the included cable—convenient for casual listening. A switch on the rear panel determines which speaker is left or right.

Each model includes a high-frequency cut/boost and a stepped volume control. The bottom of the cabinet has a rubber pad for decoupling.

If you're looking for these features in a Tannoy model with a larger low-frequency driver, the Reveal 802 (\$272 street) has an 8" woofer and is rated at 100W.

professional use, particularly in broadcast and surround situations, desktop or install.

In addition to an XLR input and M8 holes for mounting, the KH 120 has output level switches, an input gain control, and three bands of EQ control—bass cut, low-mid cut, and treble boost/cut—to offset any acoustic effects due to placement. The controls and DIP switches are recessed to avoid accidental changes.

PRODIPE

Designed to be a low-cost alternative for multimedia work and general music production, the Prodipe MS 4C (€149/pair; around \$164) is a powered coaxial speaker system in which one of the cabinets powers the pair. The 4" woofers have a shielded Kevlar cone with a 1" silk-dome tweeter in the center.

The powered cabinet has stereo inputs (two RCA jacks and a 3.5mm TRS jack), a 3.5mm output to connect the second speaker, and a master level control. The pair puts out 20W RMS. Designed

Studio Reference

In this category, we have monitors with low-frequency drivers that are 6" or greater in diameter. These provide playback with a truer bass response than smaller drivers can offer, which is more suitable for mixing and mastering work.

ADAM AUDIO

Adam built its reputation on high-quality, albeit pricey monitors that feature proprietary X-ART (eXtended Accelerating Ribbon Technology) pleated-diaphragm tweeters, which the company claims provide nearly flat playback up to 50 kHz. However, Adam now offers the more affordable F5 (\$274 street) and F7 (\$449 street), both of which feature 3" X-ART ribbon tweeters.

Gibson®



Gibson Les Paul Reference Monitor

"Detailed and accurate...full yet controlled. Punchy on the bottom end and exceptionally silky smooth up top." —**Pro Audio Review**

Gibson
BRANDS

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www.gibson.com

The F5 has a 5" LF driver and is rated at 50W RMS, while the F7 has a 7" LF driver and is rated at 100W RMS. However, these Class AB monitors share other features: A balanced combo jack and RCA jack are the input choices; switches for high- and low-frequency boost/cut; a highpass filter switch for use with a subwoofer; and a level control. Rear-panel wall mounts are also included.

DYNAUDIO

Now in their third rev, Dynaudio BM Series monitors were developed for mixing and critical-listening situations. Despite the model number, the BM5 mkIII (\$729 street) has a 7" woofer, a 1.1" soft-dome tweeter, and 100W of Class D power with a DSP-controlled crossover. The BM6 mkIII (\$899 street), on the other hand, has the same driver size but Class AB amplification and greater output—a total of 150W.

The next step up is the BM12 mkIII (\$1,229 street), which features an 8" woofer, a 1.1" tweeter, and 150W of Class AB output. The desktop model, the Compact mkIII (\$629 street) has a 5.7" woofer and offers 100W of Class D power with a DSP-based crossover.

The company also offers the Alpha 50 (\$349), which has a 5" LF driver and a 65W rating. However, this model is also somewhat heavy (16 lbs), making it less portable than many of the desktop-sized monitors above. Yet it provides the same overall feature set as the larger models.

FOSTEX

The DSP-based PX-5 (\$499/pair street) has a 5.2" woofer and provides a total of 53W, whereas the PX-6 (\$599/pair street) has a 6.5" woofer yielding 78W of total output. The 1" tweeter on both models is made of polyester fiber and laminated with a urethane film.

An XLR and 1/4" combo input and RCA jack sit next to a rotary control that is used for level and tone. A FIR-style digital network filter optimizes playback accuracy. Handy features include automatic standby and level fade-in during power-up that mitigates damage to the drivers.

GENELEC

Among its wide range of high-quality studio monitors, Genelec offers the M040 (\$895 street), which

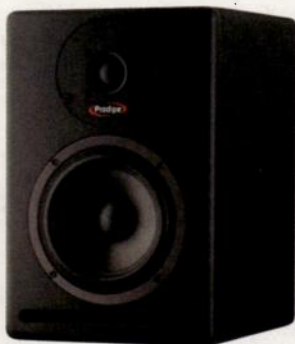
bass ports, a non-woven carbon-fiber woofer, and a 1" carbon-coated titanium tweeter.

With 6" and 8" woofers, respectively, the Les Paul 6 and Les Paul 8 are each rated at 247W and support XLR, balanced and unbalanced 1/4", and RCA input. Bass and treble boost/cut knobs and a volume control are also available, along with a standby button for saving energy when the monitors are on but not in use.

For studios that want the same design and build quality in a desktop and portable size, Gibson also offers the Les Paul 4 (\$599 street) featuring a 4" LF driver, a total output of 103W, and the same complement of rear-panel features as the larger models. (For a full review of the Les Paul 8, visit emusician.com.)

JBL

Originally developed for its M2 Master Reference Monitor, JBL's patented Image Control Waveguide yields a wide sweet spot while providing high-resolution playback. However, this enhanced waveguide technology is now available in the company's affordably priced, Class D powered, pro-level LSR3



Prodipt PRO 5 V2



Tannoy Reveal 502



Adam F7



Dynaudio BM12 mkIII



Focal Alpha 80

In addition to providing pro-level audio quality, Dynaudio keeps things simple. The BM6 and BM12 have a single XLR input, an input level switch, a 3-setting highpass filter, and an additional 3-band EQ section to help deal with boundary issues. The BM5 and BM Compact add an RCA input and include a switchable Sleep mode and remote input. All four models are bundled with high-quality speaker isolation stands made by Iso-Acoustic.

FOCAL

Focal made a big splash recently by releasing affordable monitors while maintaining the sound quality the company is known for. Featuring Class AB power, the biamped Alpha 65 (\$449) has a 6.5" woofer and is rated at 105W, while the Alpha 80 (\$599) features an 8" woofer and is rated at 140W. Both monitors have a 1" inverted-dome tweeter, XLR and RCA inputs, high- and low-shelving filters, a +6dB boost switch, a built-in compressor and limiter, and a standby mode that kicks in after 30 minutes of non-use. They weigh 21 lbs and 28 lbs, respectively.

provides a total of 130W of Class D amplification at an affordable price. This model features a 6.5" woofer and a 1" tweeter utilizing the company's Directivity Controlled Waveguide.

Suitable for stand, shelf, or wall mounting, the M040 has a combo jack that accepts XLR and 1/4" input, an RCA input, and a set of recessed DIP switches for level and low-end attenuation.

For desktop use and more portable situations, Genelec has the M030 (\$625 street), providing many of the same features as the M040 but with a 5" woofer, 0.75" tweeter, and a total of 80W output. It weighs 8.8 lbs.

GIBSON

Gibson recently made a solid foray into the world of studio reference monitors with the Les Paul 6 (\$799 street) and Les Paul 8 (\$999 street). Pricier than many models in this roundup, they're designed with high-quality audio playback in mind. Available in a Tobacco Burst or Cherry Burst finish, the Les Paul monitors have dual front-panel

Series studio monitors: The LSR308 (\$219 street) has an 8" driver, a 1" soft-dome tweeter, and offers 112W total output. It has separate XLR and 1/4" TRS inputs, a volume control, and switches for input sensitivity and HF and LF trim. (Visit emusician.com for a full review of the LSR308.)

For desktop and mobile situations, JBL also offers the LSR305 (\$129 street), which features a 5" woofer and a total output of 82W. The monitor weighs just over 10 lbs.

KRK

The popular and affordable Rokit series is in its third generation and available in three models: the 100W Rokit 8 G3 (\$249 street) with 8" driver; the 73W Rokit 6 G3 (\$199 street) with 6" driver; and the desktop-friendly 50W Rokit 5 G3 (\$149 street) with 5" woofer. Featuring Aramid glass-composite woofers, 1" soft-dome tweeters, and Class AB amplification, the Rokit G3s have individual XLR, 1/4" TRS, and RCA inputs; a volume control; and individual HF and LF controls.

The company's VXT6 (\$449 street) and VXT8

- Two discrete mic preamplifiers
 - Two instrument preamplifiers (Hi-Z, +22 dBu)
 - Two separate headphones amps
 - Connect and control two stereo speaker sets
 - Monitor mix from recording and DAW return paths
 - Individual artist monitoring signal, with talkback option
 - 10 source connections, 20 monitoring channels
 - 34V operational voltage for pro levels up to +22 dBu
 - 6 simultaneous recording channels to the DAW
 - 6 simultaneous output channel from the DAW
 - Hi-Speed USB 2.0 (480MBit/s), MIDI I/O, SPDIF I/O
 - Hot-plugging iPad recording/monitoring (Class 2 compliance)
 - 24Bit/192kHz converter
 - WIN, MAC OSX and iOS
- crimson.spl.info

spl

Handmade in Germany

Crimson \$799

USB Interface & Monitor Controller
WIN, MAC and iOS

(\$599 street) offer a step up in quality, with woven Kevlar woofers plus greater output from their Class AB amps—90W and 180W, respectively. In addition to a balanced combo input and a volume control, they feature switches for HF and LF adjust, ground lift, auto mute, and limiter. The switches are covered to protect them from accidental changes.

MACKIE

The company's MR Series is up to the mk3 level: With a redesigned waveguide and front baffle that is symmetrically bowed forward, the three new models include the MR5mk3 (\$149 street) with a 5.25" woofer, the MR6mk3 (\$199 street) with 6.5"

woofer, and the MR8mk3 (\$249 street) featuring an 8" woofer. Each model has a 1" silk-dome tweeter and Class AB amps providing a total of 50W, 65W, and 85W, respectively.

In order to support a variety of applications, the monitors include balanced (XLR and 1/4" TRS) and unbalanced (RCA) inputs with a continuously variable gain control and switches for adjusting playback response (bass boost and high boost/cut). The bass-reflex port on the rear has also been redesigned.

PRESONUS

The Sceptre monitors utilize a custom coaxial design (for speaker coherence alignment) that works

together with DSP time correction to form a technology PreSonus refers to as CoActual. The two models are the Sceptre S6 (\$599 street), with a 6.5" low-frequency driver, and the Sceptre S8 (\$749 street) with an 8" driver. Both utilize a 1"-diaphragm compression driver, with 32-bit/48kHz digital signal processing to correct frequency and time issues, and 90W of Class D amplification dedicated to the HF and LF driver of each model of monitor.

Aimed at pro and personal studios, the speakers offer balanced inputs that accept XLR and 1/4" TRS connectors, and an input sensitivity control (-10dBv to +4dBu) is included. Their electronically accessed EQ controls for low cut and high boost/cut help you adjust the monitors to fit room placement. A highpass filter is also included when you're using the Sceptres with a subwoofer.

PRODIPE

While we're on the subject of coaxial speaker arrangements, Prodipe offers a trio of such monitors—the 75W TDC 5 (€299; around \$329) with a 5" aluminum-cone woofer; the TDC 6 (€349; roughly \$384) with a 6.5" woofer and a total of 90W; and the TDC 8 (€399; about \$439), with an 8" aluminum-cone, low-frequency driver and 140W total. Each model has a 1" silk-dome tweeter, balanced XLR and 1/4" TRS inputs, and an unbalanced RCA input, with input level and high-frequency controls.

The 75W Studio Monitor Pro 5 V2 (€259; roughly 285) and 140W Studio Monitor Pro 8 V2 (€359; about \$395) 2-way monitors each feature an aluminum low-frequency driver, silk-dome tweeter, an input level control, adjustable high-frequency, and the same input selection as the coaxial models. The 90W biamplified Pro6 (€299; around \$329) has a 6.5" woofer and the same I/O and rear-panel controls, but it sports two 1" silk-dome tweeters.

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Last but not least, the company offers the Pro8-3W (€649; about \$720), a 3-way, tri-amped system with an 8" woofer (90W amp), a 4" mid-frequency driver (40W amp), and a 1" tweeter (20W). Designed for horizontal positioning, the Pro8-3W has a high-frequency control like the Pro 5 V2 and Pro 8 V2 models above, as well as a mid-frequency knob, both of which are located on the front panel. The input selection and rear-panel volume control are also the same as on the Pro-Series products.

SAMSON

New in the company's Resolv series of 2-way active studio reference monitors are the RXA models, which utilize a 2.5" air-displacement ribbon

tweeter. The RXA5 (\$199 street) pushes 70W and has a 5" woofer, while the RXA6 (\$249 street) offers 100W and has a 6" woofer.

Below the rear-panel bass port, you'll find balanced XLR and 1/4" inputs, an RCA input, high- and low-frequency boost/cut controls, and a volume knob. Wall mounts are included for installation purposes.

The 2-way Samson Resolv SE5 (\$124 street), SE6 (\$149 street), and SE8 (\$199 street) monitors (with 5", 6.5", and 8" woven carbon-fiber woofers, respectively) have a 1.25" soft-dome tweeter and front-panel bass port. The Resolv SE5 accepts RCA and 1/4" TRS input, while the two larger models add an XLR input jack and produce a total of 100W each. All three have a volume control and HF boost/cut.

YAMAHA

Yamaha's flagship nearfield HS Series studio monitors are available in three sizes—the HS5 (\$250), with 5" woofer and rated at 70W total; the HS7 (\$399), with a 6.5" woofer and 95W total rating; and the HS8 (\$499), with 8" cone pushing a total of 120W. All models have a 1" dome tweeter and are housed in MDF bass-reflex cabinets.

The monitors accept balanced and unbalanced input (XLR and 1/4" jacks provided) and include a lowcut switch, high cut/boost, and a level control. The HS Series monitors are available in black or white. (Visit emusician.com to read a review of the HS5 monitor.) ■



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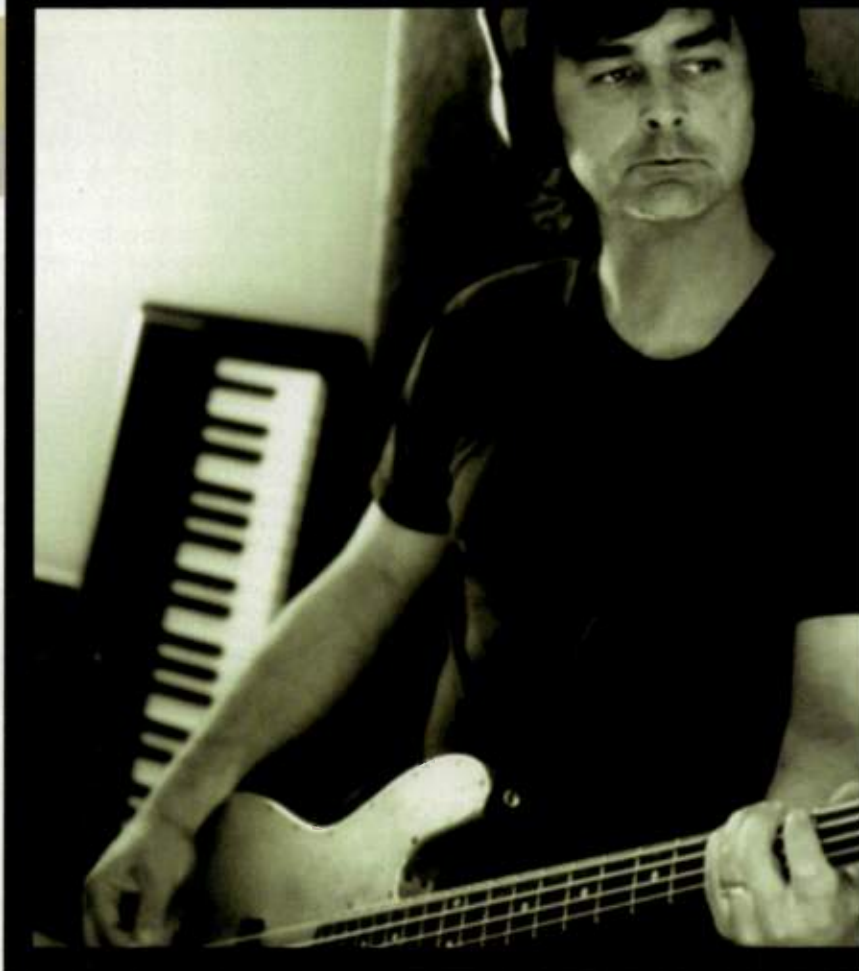
Back Without Vengeance

Veruca Salt Returns
with *Ghost Notes*

BY BARBARA SCHULTZ

WHAT triggered the reunion of smash '90s alt-rock band Veruca Salt? Another band reunion: "Now that we're finally back together, Nina and I feel like 'What the hell were we waiting for?'" says Veruca Salt co-frontwoman Louise Post. "Yet, all the stars had to align and the timing had to be perfect on a June evening in 2012 when Nina heard that Mazzy Star was playing Coachella. She said that it 'scratched her soul.' Something in her was really bugged by that—not by Mazzy Star, but by the fact that we weren't doing it."

Veruca Salt
are (clockwise,
from top left):
Nina Gordon,
Louise Post,
Jim Shapiro,
Steve Lack.





Post's former songwriting, guitar-playing, and singing counterpart, Nina Gordon, couldn't ignore that "scratch," so she composed an email, suggesting that they get together for the first time in years. "We reconnected via email—about stuff that had nothing to do with music," Post says. "We got together for dinner and we closed the restaurant down."

Veruca Salt originated in Chicago, but Post and Gordon both live in the L.A. area now—only about 15 minutes apart, it turns out—and the band's original bassist, Steve Lack, lives in San Diego. When drummer Jim Shapiro, Gordon's brother, traveled west from Chicago for a visit, the foursome decided it was time for a band reunion—socially at first.

"It was just to see each other," Post says. "We shared stories, cracked jokes incessantly, and we all apologized for a million things that were in the past. We left it with the agreement that we would get together and play. We didn't know what shape that would take—if it would just be a reunion show, or if we would write new music. But I think I had an inkling even then that as soon as Nina and I would play and sing together, we would want to start writing, and we did."

"The songwriting process for us is totally different now, though," Gordon says. "Back in the day, for *American Thighs* [the band's debut album, 1994], Louise and I wrote separately, with few exceptions. We'd write in our respective houses and bring in a song pretty much fully formed. There was a lot of collaboration on arrangements, and certainly we'd bounce ideas off of each other, but the basic song structure was intact.

"Now it's much more of a collaborative process—partly because we're much more comfortable doing that," Gordon continues. "We feel less precious about our individual voice—lyrically and literally, our singing voice. We were in our 20s and we thought that everything that came out of our mouths was gold. Now we feel like, if you've got a better idea, I'd love to hear it. It's been really fun [to write with Louise], and it's practical because neither of us has a ton of time on our hands. We both have young children. Sometimes what makes sense is just to write a chorus and then say, 'Hey, can you help me with a verse?'"

"It can feel like a lot of pressure to write on my own," Post agrees. "Now, we literally share the songs."

The writing process may have changed for Veruca Salt, but the immediate feeling on hearing their new album, *Ghost Notes*, is that no time has passed since the original lineup last recorded together. The sweet but edgy vocal harmonies, Post and Gordon's aggressive two-guitar attack and clever songs, Shapiro's inventive drumming, Lack's musical and rock-steady bass—all still there, and then some. And who better to capture the sound of the revitalized original Veruca Salt than their original producer? The band knew they had to call Brad Wood.

Wood is a transplant as well; he moved from Chi-



The band recorded in producer/engineer Brad Wood's personal studio.

cago to Southern California a dozen years ago, and produces and engineers in a studio built into a guest house on his property. "It was great to get a message from Louise in 2013—I think on Facebook—and then we talked on the phone for hours," Wood says. "She and I had lost touch as well, but she's in a great place now with her family and her career. It was nice just catching up. But to hear her describe how the band had re-formed was really heartwarming, because there's some real magic there—not just creatively, but also as friends. I knew that the first time I saw them play, before they ever recorded with me.

"In some ways everything's changed for them, and in some ways nothing has," Wood continues. "They all still sound on their instruments like they are as people. Jim is more confident as a drummer now than he was in 1994, but he plays the same way. His taste in drum fills is unchanged, and he still plays things that would never occur to me, and pulls them off. He plays to the song—accents that might just be in the vocals—or he'll capture a little bit of what Nina is doing on acoustic guitar. He delights me as an engineer, because the creativity is the same, and the execution is so much improved. He was a brand-new drummer when they started.

"Steve is one of the reasons that Jim can do some of the crazy things he does. He's like a clock, Big Ben, but he's got a subtle biting sense of humor. Nina and Louise are really intense. They always mean business when they're working on their songs. It's not a casual job to record this band. There's drama and emotion, and lots and lots of laughs. They're my



version of Fleetwood Mac. And I worked on this album for a year-and-a-half."

Veruca Salt visited Wood's studio to track clusters of songs, to Pro Tools, whenever Shapiro could be in L.A. Their first priority in every session with the drummer was to nail down his parts, because of the physical distance he had to travel. But Wood, now as then, has no interest in isolated drum tracking. He insists that the entire band perform on every track, including vocals, to protect the feel and structure of the song.

"They don't need to sing every word," Wood says. "We may replace all the guitars and all of the bass, but being in the same room, feeling the energy, using eye contact to cue section changes or the length of a pause—that's essential."

Wood's drum-miking scheme includes some of the same models he's been favoring since before he tracked *American Thighs*. His go-to kick drum mic is an Audio-Technica ATM25. "I've been using that since 1989. I will never ever get rid of it," he says. "But I used no outside mic on kick on these sessions. It didn't seem to be adding anything, so I got rid of it."

Wood used Shure Beta 98s on snare top and bottom, Sennheiser 421s or Shure KSM44s on toms, and overheads were AKG 451s with Red

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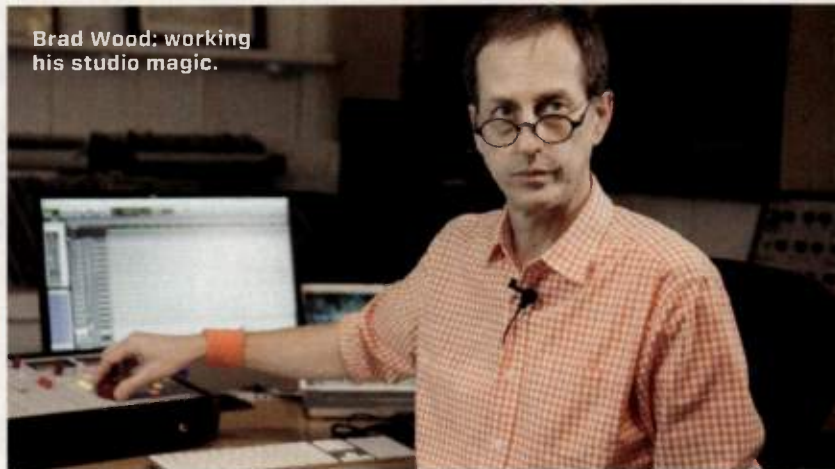
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Microphones R47 capsules. Hi-hat was captured with an AKG 451 as well, and room mics were a pair of Studio Projects CS5s, set in omni. “Those used to be \$700 mics,” Wood notes. I can’t believe how cheap those are. They’re great mics, and they’re only about half that price now.”

Farther along the drum-recording chain, “I’m a really big fan of the original Neve 9098 rackmount preamp/EQs,” Wood says. “They sound like 1081s to me—very present, which I really like on kick. I also like a Tonelux mic pre on snare, and the Rupert Neve Designs Sheldford preamp. I used a TL Audio Tube Tracker on overheads and room mics; that has a top end that I find really appealing for cymbals.”

Lack’s bass went through a Radial JDI into a Line 6 Bass Pod Pro rack unit that Wood says “sounds amazing,” noting that some of the bass parts from Shapiro’s drum sessions were keepers, but others were re-tracked.

Post and Gordon’s explosive guitar sounds emerge from a variety of instruments, amps, and cabinets—some of their own and some of Wood’s. “I played rhythm guitar on my Melody Maker. It’s got a P90 that we put in,” says Gordon. “Mostly I played through Brad’s Alessandro Beagle.”

“Alessandro makes custom amps, and I bought a Beagle used, ten years ago,” Wood explains. “It’s a monster sound that doesn’t work well live because it’s not super loud, but it’s a great studio amp, and we used it on a lot of the big, fuzzy chorus sections. I also put that through a Mesa Boogie 2x12 cabinet. Louise, in particular, had a lot of pedals; tons and tons and tons of pedals.”

“We are Gibson girls,” Post says. “I strayed from that path, regrettably, during our hiatus; what was I thinking? Now I’m playing my brown, ’70s SG and Les Paul Red Cherry semi-hollow body, as well as a very old Gibson I have—I think it’s a 225 hollow body. I may have also played Brad’s Tele sometimes. Teles always bring something different that’s nice.”

Post used her Orange amp and a Mesa Boogie Rectifier Tremoverb as well as Wood’s Beagle. “I also played through a Roccaforte, which is a fierce low-end distortion monster amp, and a Fender Twin at times,”

she says. Wood captured everything with Rupert Neve Designs RNRI and Voodoo VR2 microphones.

“I’ve given up using anything other than ribbons on loud guitars,” Wood says. “I also use a room mic, back 20 to 30 feet, to give things some stereo imagery and a little more depth.”

On the vocal side, Post and Gordon’s harmonies are as beautiful as their guitars are badass. And, as with their songwriting, their approach to vocal recording has become more collaborative.

“We initially intended to record Louise first, and then Nina, and then do background vocals, but it became apparent early that neither one was happy with her own performance, or with each other’s performances. It was frustrating not to be able to capture whatever they thought they were missing,” Wood says.

“One day, they came in early and the two of them listened back to what they’d spent all day doing the previous day. They were holding their guitars and singing along with it, and I said, ‘Why don’t you sing it at the same time? This sounds great.’”

Wood then grabbed their vocal mics from the studio—an sE Electronics Z3300A for Post, and an sE T2 for Gordon—and quickly set them up in the control room. The pair sang together, without headphones, and suddenly—a choir of grunge angels; singing together in the control room became a Plan B that Wood could keep in his pocket for times when they couldn’t make things happen in the studio.

“I put them as close together as I could, and figured I’d have to worry about leakage later,” Wood says. “That’s the engineer’s problem. Performance-wise, this is what they required, and technology was going to have to take a very distant back seat. It worked brilliantly, but it meant a lot of fader riding in the mix.

“It was a nice reminder that isolation is overrated,” he continues. “Leakage is something that can actually enhance things. It can lead you to do things you wouldn’t have considered doing. You have to get creative. I couldn’t compress nearly as severely as I might casually do with a nicely isolated vocal.”

“And then, after we did vocals and guitar overdubs, that’s when it gets fun,” Gordon says. “The

fairy dust gets sprinkled, and finishing touches go onto each song.”

“There’s a certain kind of magic with the four of us,” Post agrees. “But after that foundation is laid, Nina and I can really play. And Brad gets to do his studio trickery, and turn the songs into gems.”

Wood offers an example of the kind of “fairy dust” that went on after all the main parts were nailed down:

“A lot of times Louise would have an idea for a guitar part that would actually end up sounding more to our ears like a synth or keyboard part,” he says. “After she and Nina had laid down most of their guitars, there might be some cool little counter-melody that happened midway through the second verse, or during the bridge—something that just stood out to us when we listened to the rough mixes. I always have a lot of soft synths available in Pro Tools, and I would bring up the track and usually start playing the melody with some sort of synth patch. Almost every time, Louise would then say, ‘That sounds cool. Now let me do it.’ [Laughs]

“Then, she would come up with a more elaborate and appropriate part, and we would further dial in the sound. That’s a really big difference from 1994 when I recorded them last, when all the synths were analog and you had to come up with the sound you wanted to live with, record it to tape, and that would be it. Now, you can do it in MIDI, and we would loop the section, tweak sounds, change them, and sometimes that would send us off on another tangent and the sound would conjure another idea that we’d pursue.”

“Brad came up with a lot of studio magic and he definitely has his imprint on this album,” Post says. “We couldn’t have made this album with anyone else. I would point to the last song on the album, ‘Alternica’ to drive that point home. That song was all heart. He was so moved by the song that he wanted to take it to the highest place possible.”

“‘Alternica’ has the most beautiful arrangements,” Gordon affirms. “The orchestral parts at the end of the song are gorgeous. It surpassed what we ever could have imagined could happen, and we’re super grateful. It’s beautiful, and that was really his handiwork.” ■

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iLan Bluestone

The London-based progressive trance producer/DJ has followed his musical passion for a lifetime, and now with a slew of chart hits and the *Anjunabeats Worldwide 05* mix album, his life seems but a dream.

BY MARKKUS ROVITO

We've all heard that it takes 10 years to become an overnight sensation. Sometimes it takes 20. You'd never guess that rule applies to iLan Bluestone, though. The boyish-looking Londoner turned 30 this year, but he'd better not forget his ID on the way to the pub. His age-defying secret? Blowing off school and work for years on end to perfect his progressive-trance production techniques in front of a computer screen.

Bluestone first picked up a guitar to jam with his brother at age 9, and he felt an immediate attraction to music. But when his schoolmates started throwing parties with psychedelic trance music (aka psy-trance or Goa trance) at age 10, Bluestone had already caught the obsession that would direct his entire life. Before long he was spending his available time on early copies of Cakewalk Pro Audio. At 16, Bluestone made a remix of Mungo Jerry's "In the Summertime" that he admits was cheesy, but opened some doors for him in the music industry.

By the time he was 20, he'd landed a release on big-time trance label Enhanced Music, home of heavy hitters like Tritonal and Gareth Emery. More material followed on imprints like L8-Night Records and F! Records. However, while Bluestone was blossoming into a master technician of densely layered trance production, strong stage fright prevented him from pursuing any live performances or DJing, crucial components in building a career in electronic music.



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Bluestone at one of his mobile rigs, based around SONAR Platinum, Novation Launchkey Mini, Tascam US-366, Native Instruments Massive, LennarDigital Sylenth, and Cakewalk Z3TA+ 2, running on a Surface Pro 3 with Intel Core i7 processing.

Finally, a collaboration track Bluestone made landed him a deal around the beginning of 2013 with Anjunabeats, the label founded by some of Bluestone's musical heroes, Above & Beyond—a trio who have transcended the progressive-trance genre by writing beautiful songs that stand on their own as acoustic performances. With some of their gentle nudging, Bluestone was cajoled to begin DJing. That decision, along with his growing musical prowess and support from some of the biggest stars in electronic music, combined to create the escape velocity for Bluestone's career to take off.

Now in just the past couple of years, Bluestone has collaborated with and/or remixed his idols like Armin van Buuren, Paul van Dyk, Jerome Isma-Ae, and BT; toured the world as a DJ; and scored eight Number Ones on the Beatport trance charts. He had the pleasure of debuting one of those hits, the huge, pulsating banger "43," at Above & Beyond's live Group Therapy Radio Ep.100 show at Madison Square Garden last October.

Now ilan is celebrating the recent release of his mix album *Anjunabeats Worldwide 05* by jetting around to gigs in Ibiza, North America and back to the UK. He wrote the opening track for the mix, the appropriately titled "Take Off," which hints at a new cinematic stage in his evolution as a producer. Besides more EPs for Anjunabeats, Bluestone

is working on an ambitious album with more vocal tracks, more ecstatic atmospheres, and new heights of inspiration for his fans.

Going from not DJing at all to, in two years, doing an Anjunabeats compilation and playing Ibiza regularly is pretty quick progress.

My biggest achievement so far was playing at Madison Square Garden. When they asked six months in advance to open there for Above & Beyond and Mat Zo, I was beyond stoked. Honestly, I felt sick for about six months. When it came down to going onstage to DJ for 21,000 people, it was mind-blowing to the point where I nearly passed out. Obviously I've had stage fright, and it was a bit surreal. I had to slap myself in the face and say, "just go do it. People are here to see me, and I've got to show them what it's about." Also, I knew I was playing off a laptop with my [Native Instruments] Traktor S2 controller. I'd never had a pair of decks in my life, and it got to the point where six months ago, Above & Beyond said, "You have to get rid of the laptop and go on the decks." I picked it up, and I feel very confident now at a gig because I just walk up with one USB key to go in the decks, and one USB key as a backup. On a laptop, having a backup is very complicated. Don't get me wrong; I love laptop DJs and laptop controllers, but when it comes down to professionalism and

hearing the difference in the quality of sound, you have to play off of Pioneer [CDJs]. The quality of sound and reliability is unmatched.

So besides the equipment, what has been the antidote to your stage fright, preparation?

There's been quite a few times where I haven't been ready for a gig because I've been so nervous I couldn't focus on organizing anything. I need to get my head around what kind of crowd it is. Do they want to hear my classics, new stuff, records by other artists? Madison Square Garden was different. I knew it was one hour, and I had to specifically finish on a certain second because the jingle comes in for the live radio show. If you watch the video, I finish at the end of a breakdown of a track and it worked perfectly. I was meant to play longer, but because I cut out there, people wanted more, and it was a perfect sort of a flukey ending. Then I went to play for Armin Van Buuren at a State of Trance in the Netherlands. I played for 39,000 people, and that was absolutely mind-boggling, because you look into the audience and you just see dots, dots, dots. It's endless.

And you've stuck with Cakewalk software the whole way?

The whole way, since 1996 or '97. I had a demo version, and with like six samples in it, and I used those six samples to make the same song over and over and over again. I never really learned the piano, I just bought myself a MIDI keyboard when I was 13: a shitty Casio-style Yamaha PSR330. I used to record myself onto tape, and my brother got on guitar and played and sang. We were kids, but that's how I always knew I had a music passion. And my parents were very much behind me the whole way. So I sat at home for a few years just making music until I found my own sound. It took me a while.

You wrote the opener to *Anjunabeats Worldwide 05*, "Take Off" specifically for that mix. Is that the kind of ambient, chilled-out stuff you've talked about spending a lot of time on?

That is the vibe I'm talking about. I've got a lot of chilled stuff that I'm going to be bringing into my album—slow, downtempo, orchestrated, Hans Zimmer movie-style music combined with twisted electronic sounds. I'm just trying to be very experimental. I'm working on it as we speak. The problem is I'm touring so much. I'm very thankful I have a laptop with the new Cakewalk Sonar Platinum on it to put me to work on the go. But I just find it's very difficult without crazy speakers next to me to produce that fat kick drum.

Is that the main challenge in trying to produce music on a laptop?

I've got KRK headphones as well, but I just

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- Dave Pensado

need to be in a comfortable, big, fat chair with a nice desk and my hands spread out on a MIDI keyboard and a big screen. I don't like working on little screens. 17" even for me is pretty small.

Well, you've also talked about how big your sessions can get by layering sounds.

Oh, I layer more than 100 to 120 layers of music: loads of MIDI tracks, lots of audio, lots of freezing tracks. With Sonar, you can freeze stuff so that all the effects I have going in the background, rather than burn memory buffering it, I just freeze them so it renders them as audio. I might make a baseline with four layers of different synths all doing the same bass riff and then careful, precision EQ.

Do you set up templates to save some time with all that layering?

With Sonar, you can save effects chains you've created as a template, and that's amazing. I push a template and bang, it loads in effects and all my same synths going but with different sounds. It's pretty fast. Sometimes I love doing it manually, because creating layers within the software is easy. You just type what synth you want, push enter, and it loads within seconds. There's no buffering. Kon-takt takes a bit of time, but that's just normal. With Sylenth and soft synth stuff, it's quick.

Is the precision EQ you mentioned a specific Sonar tool?

I'm not a pro sound engineer; I like to do stuff by ear, so what's amazing about the EQ in Sonar is it shows you what audio is playing and how many frequencies it's taking off and shows a preview of the waveform. That EQ can take lots of low end off, and it just sounds good—not too digital. It has kind of a warm sound. You also can change the curve; it's very similar to Fab Filter, but it's built-in, so it's just easier to use. You've got different types of EQs and filters, analog-style compressors, and tube amps for vocals. I find the onboard Sonar tools very good for guitar and vocals. It's got built-in Melodyne, so it auto-tunes the vocal for you automatically. You can also quantize audio, so if someone sang a bit too slow, it will stretch them into time.

Have you tried other DAW software?

I've experimented with Ableton. I like it a lot for what it can do for playing live. The thing that baffles me about it is the look of the interface. When it comes to MIDI tracking, Sonar is just on another level. Drawing in MIDI with Sonar is my favorite thing. Maybe it's just because I'm used to it, but for MIDI, Sonar is very fun. It's like drawing. I like Fruity Loops as well for doing MIDI. But Sonar has this Smart Tool that knows that if you

put the mouse at a certain point of the MIDI note, you can stretch it longer or make it smaller, or if you right-click on it, it just deletes it. To copy, you hold the control button.

I'm using a simple M-Audio interface with KRK speakers and KRK Ergo. Nothing too fancy, and I'm managing to get some really high-end, crisp sound out of Sonar. In the last six months I've mastered the software.

You've mentioned vocals a few times. On your new album, will you have more vocal tracks?

Yeah, big time. I know that's the next step for me. Everyone seems to be loving my instrumentals, and I'm thankful for everyone who's supported me. At the moment, I'm writing a lot of lyrics and my own top lines. I can't sing to save my life, but I know where my voice needs to be to do a rough demo. The thing is, with the technology now and the fact that you've even got computers singing songs, I think, I'm able to get myself to sing on my future records, and that's my aim: do my own lyrics.

With the Z3ta + 2 synth, do you ever use the default presets?

I find I design my own sounds by creating layers of other sounds. I'll create one preset sound

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Aerosmith, John Lennon, Patti Smith, Cheap Trick.

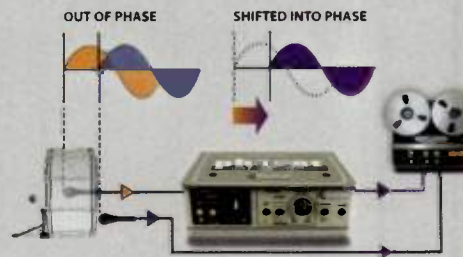
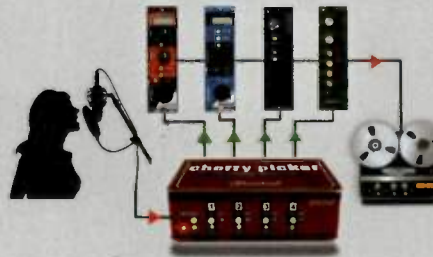
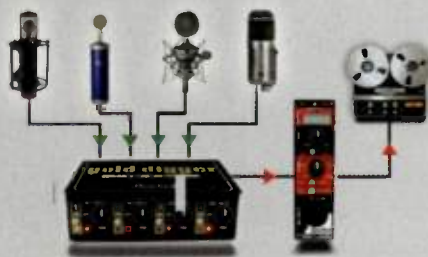


Phazer™ phase alignment tool

Add realism and depth to every instrument! The Phazer is an analog tool that let's you adjust the phase relationship between two sources such as two mics in a room so that the fundamentals arrive at the same time. Think inside and outside the kick drum, top and bottom of snare, or near and far an acoustic guitar.



"The Phazer is incredibly easy to use - the results are nothing short of dramatic."
~ Jay Baumgardner
Evanescence, Godsmack, POD, Papa Roach.





that I like, and then I'll add another bass synth behind it and then make my own bass sound or find a preset that sounds good with the others. Then I tweak those and add another sound to it, and put EQ on the top end and a bit of compression on the low end and loads of different experiments.

I know you emphasize drum selection, too.

Kick drum is key. Kick drum makes your track. If you love the kick, base your track around it.

Or do the other way around: Do the melody and breakdown first.

Do you practice the same sort of layering of sounds for your drums?

I'm always different, but I never put anything on my kick. A bit of EQ and I never have it clipping. That's it. I don't even put any compression on it. [Note: ilan uses the popular sidechain simulator plug-in Nicky Romero Kickstart to make room for the kick in his mixes.]

There are so many techniques. It doesn't really matter what software you use, it's how you draw the picture. The software's just your pen and paper. It's all just what your ear and brain portray. I'm a bit of a perfectionist with my own sound. It has to be really special. ■

To read more of Bluestone's thoughts on DJing, production, and the music business, read our extended interview at emusician.com.

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EXTC™ guitar effects interface

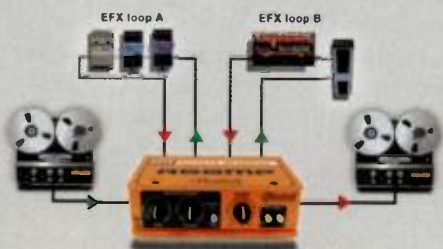
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~ Vance Powell

The White Stripes, Radiohead, Kings of Leon, Buddy Guy.



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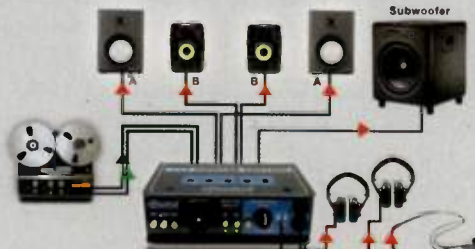
Select between two sets of monitors without adding any form of buffering electronics in between your recording system and monitors. The MC3 V2 features a pure copper connection to eliminate distortion. Turn on or off a sub and adjust the level, collapse the mix to mono and monitor your mix using headphones or ear buds.



"What took so long for this to be invented? The MC3 is a simple necessity whose time has come."

~ Bill Vorndick

Alison Krauss, T-Bone Burnett.



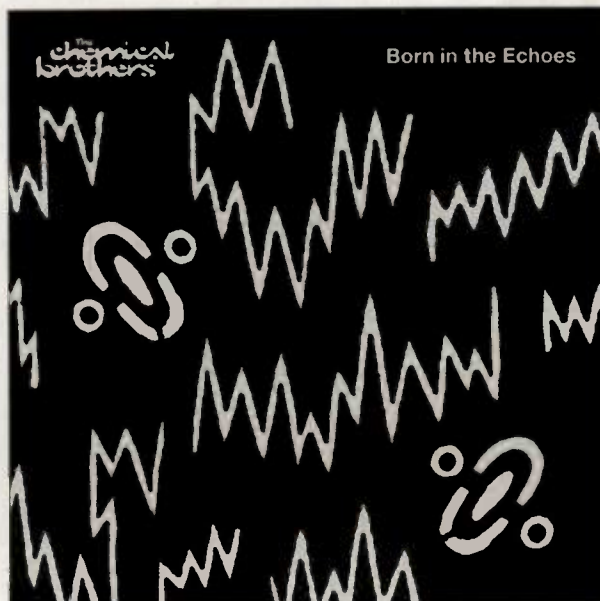
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THE CHEMICAL BROTHERS *BORN IN THE ECHOES*

ASTRALWERKS

From the first single, "Under Neon Lights," with vocals by St. Vincent, to "Go" (featuring Q-Tip), "EML Ritual" (Ali Love), and "Wide Open" (Beck), it's clear that Ed Simons and Tom Rowlands have lost none of their big-beat addled, psychedelia-enhanced freakness. Always a duo to produce solid song hooks within explosive productions, The Chemical Brothers' have created new party anthems that sound a little dated, as if Fatboy Slim can't leave the club. Smartly relying on their trademark synths, beats, iconic warbles, and treated vocals, The Chemical Brothers still party like it's 1999.

KEN MICALLEF



YO LA TENGO *STUFF LIKE THAT THERE*

MATADOR

Acknowledged as a spiritual successor to 1990's anodyne *Fakebook*, a revue of folky covers and low-key originals, this latest from Ira Kaplan, Georgia Hubley, and James McNew is an even softer-hued, seasoned collection of reworkings. Drums set to jazz brush, upright bass wistfully ambling, and reverb dialed primarily to sopping, Hoboken's finest shuffle through electrified campfire melodies and red velvet curtain harmonies. The end result is more sumptuous and hushed than anything else in the band's catalog.

TONY WARE



THE PROCLAIMERS *LET'S HEAR IT FOR THE DOGS*

COOKING VINYL

The soaring harmonies of twin singer/songwriters Craig and Charlie Reid are always worth hearing, from their early pop-ish days in the late '80s (*This Is the Story, Sunshine on Leith*) to their magnificent roots-based songs (*Persevere*, 2001), to later, more synthesized arrangements (*Life With You*). Their latest is a solid collection of introspective pop songs and romantic ballads, with orchestral flourishes, pretty organ parts, and a totally Crickets intro ("You Built Me Up").

BARBARA SCHULTZ



AM AND SHAWN LEE *OUTLINES*

CELESTIAL

ELECTRIC MUSIC The transatlantic union of Los Angeles' AM and London's Shawn Lee produces a third full-length of the pair's signature '70s-influenced, soulful, spacey grooves. *Outlines* takes its cues from soundtracks, but its distinction is in its funky pop bent. Album opener "Persuasion" sets the tone with a raindrop-like synth pattern and saucy beat, picked up in the twangy synths of "In Moments" with AM's falsetto hitting highs on the chorus.

LILY MOAYERI



CHRIS DINGMAN *THE SUBLIMINAL AND THE SUBLIME*

INNER ARTS

Using assorted instruments, including Tibetan singing bowls, timpani, and bowed vibes, with a conventional jazz quintet, vibraphonist Chris Dingman channels his inner John Muir in this beautiful through-composed work. Inspired by his journey through the American West wilderness, this album continually changes shape but not color, like a night sky between dusk and dawn. Arcing melodies circle and hover as the musicians illustrate the music with long flourishes and intimate asides.

KEN MICALLEF

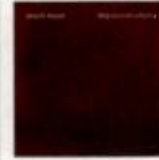


WORRIERS *IMAGINARY LIFE*

DON GIOVANNI

"I got plans for me!" Lauren Denitzio sings in "Plans," the second track on the Worriers' new album. *Imaginary Life* kicks ass as a straight-up punk record. But drill deeper, and you'll find lyrical poignancy and musical moments—harmonies and keyboard touches—that elevate this tuneful album even higher than the raging guitars and Denitzio's beautiful voice can take it. Try to imagine Natalie Merchant fronting Motörhead, and you'll start to have an idea of the Worriers' sound.

BARBARA SCHULTZ



BEACH HOUSE *DEPRESSION CHERRY*

SUB POP

Baltimore, Maryland's Victoria Legrand and Alex Scally channel dream pop's murky romanticism through keys, guitar, vocals, and reverb as their lead instrument. With their fifth full-length the duo pull back from road-tested dynamics and detach further into a "Twin Peaks" roadhouse-like recess, eschewing live drums and trebly crests for a more airless pulse underpinning eddies of smeared melody. It's a well rather than a wall of sound, balancing narrow and resonant dimensions drawn from a consistently saturated harmony chain.

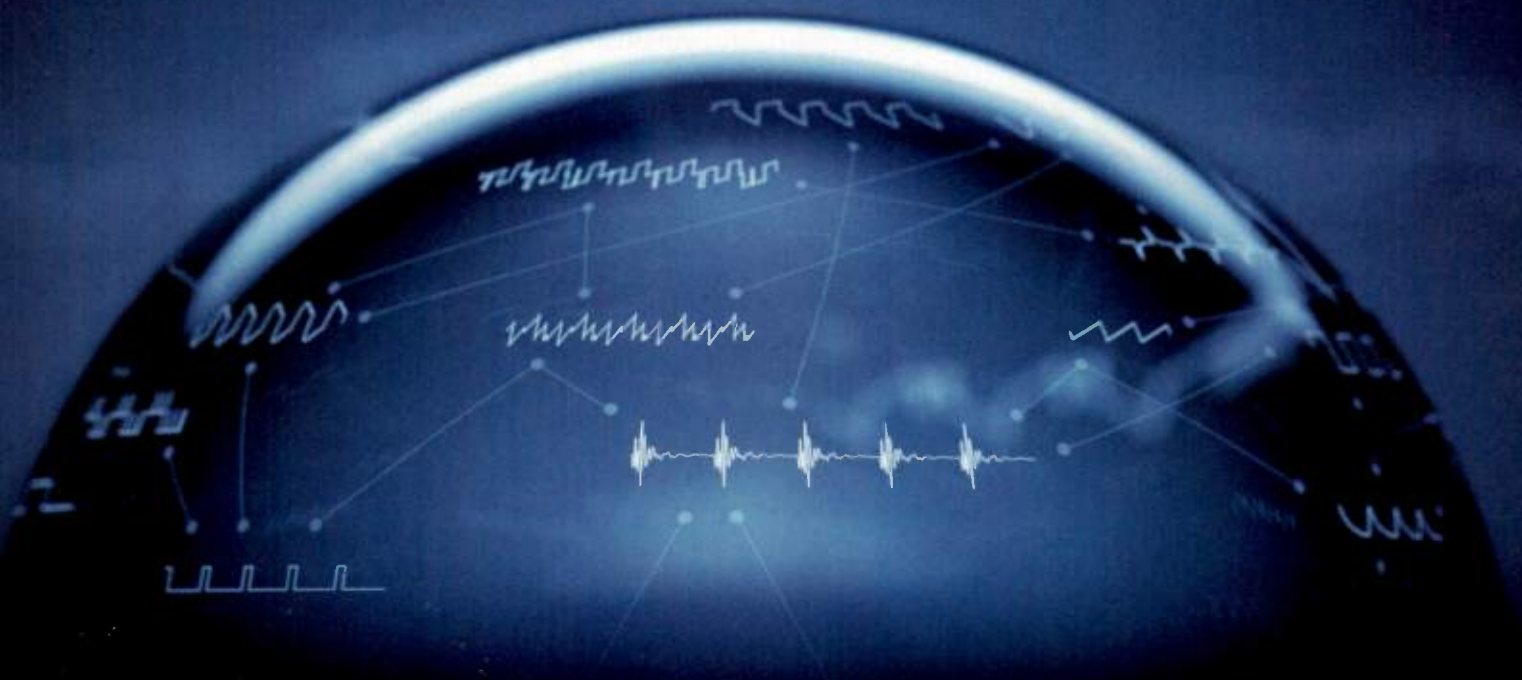
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Fig 1. The Akai Advance 49 comes with VIP software that will host all your VSTi presets in a browser, so you can search through your entire soft synth collection at once.

AKAI

Advance 49

ALL YOUR VST ARE BELONG TO IT

BY MARKKUS ROVITO

STRENGTHS

VIP software browses and loads VSTi plug-in presets. VSTi parameters map to the keyboard's controls and color display. Multi patches load eight sounds from eight plug-ins at a time. MIDI presets for major DAWs.

LIMITATIONS

Color display isn't as crisp as the smartphone displays people are used to. Can't use the Multi view and Control view at the same time in the VIP software. VIP won't load certain built-in DAW instruments. Individual sounds in a Multi can't have their own Note Repeat or Arp settings.

Advance 49: \$499 street
Advance 25: \$399 street
Advance 61: \$599 street
akaipro.com

Almost as entertaining as a viral cat video, Akai and Native Instruments' cat-and-mouse game of product development commands the attention of gear geeks in the computer music space. NI's Maschine for now has wrested the beat-production throne over the Akai MPC Renaissance, and the Akai-affiliated Air Music Tech AMPS bundle takes a worthy yet somewhat overlooked stab at NI Komplete 10's dominance. However, with the Advance series of controllers (Advance 25, Advance 49 and Advance 61), Akai has one-upped its rival NI Komplete Kontrol S series, which provided a dedicated hardware and software environment for browsing, loading, and controlling patches from any Komplete 10 instrument.

The problem with Komplete Kontrol S controllers, at least for now, is that they only work their magic on Komplete 10 instruments. Akai has responded to the backlash against that closed system with the Advance controllers. With the help of its companion VIP (Virtual Instrument Player) software, the Advance system scans all of the VSTi plug-ins on your system, after which you can browse and load the presets from any VSTi into VIP, which maps all of the plug-in's parameters to the hardware controls and slots into any DAW as an AAX, AU, or VST plug-in. (Yes, Pro Tools users can use the AAX VIP software as a VSTi host.)

Possibly in response to the Advance controllers, Native Instruments has announced that its Komplete Kontrol S controllers and software will begin to support third-party VSTs under its new Native Kontrol Standard sometime later this year. But the Advance controllers are the here and now, and they have many unique and welcome abilities in store for you.

VERY IMPORTANT ADVANCEMENT

When a new musical tool innovates, the hype train often makes more noise than the actual benefit. Yet in this case, it's tough to imagine a dyed-in-the-wool computer-based music producer who wouldn't at least lift an eyebrow over what the Advance 49 offers. The hardware begins with 49 semi-weighted velocity-sensitive keys with Aftertouch (see Figure 1). Eight rotary encoders, eight key switches, and four banks of the eight velocity- and

pressure-sensitive RGB backlit MPC pads provide hands-on control. The highlight, of course, is the 4.3" color display that, to some extent, mirrors the VIP software, so that you can browse and load VSTi patches, as well as control them and edit mappings in a large part straight from the hardware, without staring at the computer screen (see Figure 2).

Along with the VIP VSTi host software, Akai includes an excellent software package full of high-level instruments and sounds: the Sonivox Eighty-eight Ensemble grand piano plug-in; Air Music Tech's Velvet vintage keys; Xpand!2 multi-instrument; Vacuum Pro, Loom, and Hybrid 3 synths; and the Transfuser rhythm machine with 16 GB of sounds.

Those great instruments are just a few of the 358 pre-mapped VSTi settings that Akai included at launch for the VIP software. Other pre-mapped instruments include all of the NI Komplete 10


The **DLS** lets me catch
creative magical moments.
It allows me 'worry-free' mixing!

DiGiGrid Creative Audio Interfaces.

A portrait of Jack Joseph Puig, a man with long dark hair and a goatee, wearing a dark turtleneck and a blue blazer. He is looking directly at the camera with a slight smile.

Jack Joseph Puig

U2, Lady Gaga,
Black Eyed Peas,
John Mayer

A black audio interface unit with the DiGiGrid logo and 'DLS' text. It has several ports and a small display screen.

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process and offload Waves and third party SoundGrid plugins with LLM™
(real time low latency monitoring)."



Fig 2. With external power supplied by either the USB or AC jack, the Advance 49 can function without a computer connection. In addition, it can interface with MIDI gear over its 5-pin MIDI ports.

Multi-ply Your Impact

Use the power of the VIP browser and Multi patches to direct your sound design. Create a new VIP instance and start drilling down to very specific requirements, such as Styles>Dance, Instruments>Drums, or Timbres>Dirty.

For me that narrowed down 4,400 "Dance" sounds to 16 dirty-sounding dance drums. Whatever your results, start loading them up into Multi slots and throw out any that don't sound good together. You'll likely come up with something that you didn't expect at first. You may also discover that the labels for sounds in the VIP browser aren't always 100 percent accurate, but that's okay.

Mix the levels for sounds that you like together within the VIP Multi patch, and put a multiband compressor or EQ on the DAW channel to shave off or boost certain frequencies. To save a Multi, go to the VIP software window and choose File > Save Multi from the top menu.



Fig 3. The VIP plug-in with the Browser showing up top and the Control panel on the bottom.

titles, most of Arturia's excellent re-creations of vintage synths, all of Air Music Tech's instruments, and plenty of other popular ones like Sylenth, IK SampleTank 3, Korg Polysix, Spectrasonics Omnisphere, and many others.

After the VIP software scanned all of my VSTi's, I had more than 100,000 total instrument presets in the VIP browser, accessible from the hardware screen or the software, which works as a Mac/PC standalone app in addition to a plug-in. A push-button encoder and two sets of arrow keys on the Advance 49 navigate the color display for you. It took a little while to master the navigation system; the PDF manual can help, but it was rarely necessary.

It's a huge plus for the VIP browser that you can search instrument presets by Plugins, Articulations (Muted, Plucks, Portamento, Sustain, Staccato, Tremolo, etc.), Styles (Ambient, Arpeggios, Chords, Dance, Electronic, Hip-Hop, House, Rhythmic, Sweep, Trance, etc.), Timbres (Airy, Bright, Dark, Dirty, Fat, Hard, Noise, Punchy, Warm, etc.), Instruments (Bass, Drums, Keys, Synths, etc.), and by Expansions that you've downloaded from the Advance Content store within the VIP software. And you can drill down further by narrowing the results from one category. For example, you could search for only Synths with Bright timbres, or just Hip-Hop patches with Plucked articulations, and so on. You can also type in keywords in the Search field in the VIP software.

Therein lies one of the main reasons why Advance 49 costs a bill or two more than other 49-key MIDI controllers, and is worth every penny to plug-in fanatics. Depending on the way you currently pick out instrument sounds from your many VSTs, the VIP preset browser could save you hours of time on every project. Or if it doesn't save you time, it can at least help you rediscover sounds or entire instruments in your collection or lead you down creative avenues you otherwise would not have explored (see Figure 3).

PLUG-INS REIGNED IN

Once you load a plug-in preset into VIP, you can view the plug-in's interface inside the main VIP window, in an external window, or not at all. VIP has other selectable view modes, such as Browser, Setlist (a

place to store specific sets of presets and Multis to cycle through), the Control panel (which shows banks of parameters mapped to eight Advance 49 encoders and buttons at a time), the Keyboard panel, and the Multi panel (see Figure 4).

Whether you're using one of the 358 pre-mapped plug-ins, obscure shareware, or some other commercial plug-in that Akai hasn't mapped for VIP yet, the Control panel on the software or hardware display shows sets of eight plug-ins' parameters at a time, and you can tab through pages to the next set of controls (see Figure 5). For the most part, VIP's onboard mappings do a great job of prioritizing the most vital controls on the first or second control pages, such as putting the most likely filter, LFO, oscillator, and effect controls that you would want to use near the front of the page order. You can also edit these mappings. For unmapped plug-ins, VIP lays out the controls pretty much in order of appearance, so for optimal results, you may want to edit and save the settings for your most-used instruments in a more logical order.

The Advance hardware also has a MIDI Mode for controlling your DAW host software with mappable MIDI controls. Here too there are presets for controlling six major DAWs: Ableton Live 9, Apple Logic Pro X, Bitwig Studio, Cockos Reaper, Image Line FL Studio, and Steinberg Cubase. The Advance's transport controls will work in the selected DAW when in MIDI Mode, and you can quickly toggle from Control mode for VIP back to MIDI Mode for your DAW. Power users of the DAWs may be disappointed that the Advance's DAW presets aren't everything you'd find in a more dedicated controller such as the Nektar Panorama P4 for Bitwig, Logic, and Cubase, or the Novation Launchkey for Ableton Live, but having the two modes for VIP Control and MIDI helps a lot, and the MIDI mappings are editable to your taste.

MULTIPLICITY

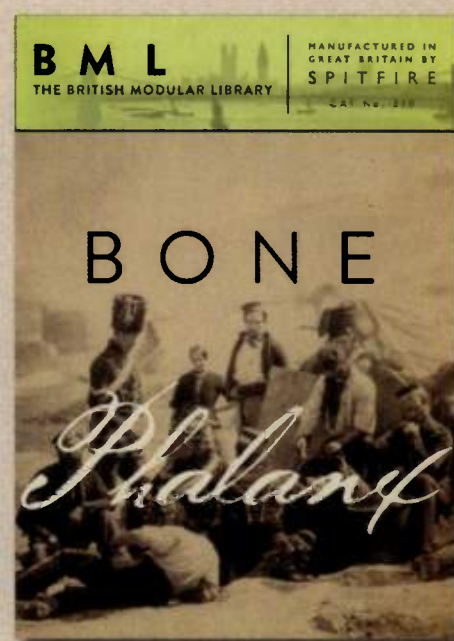
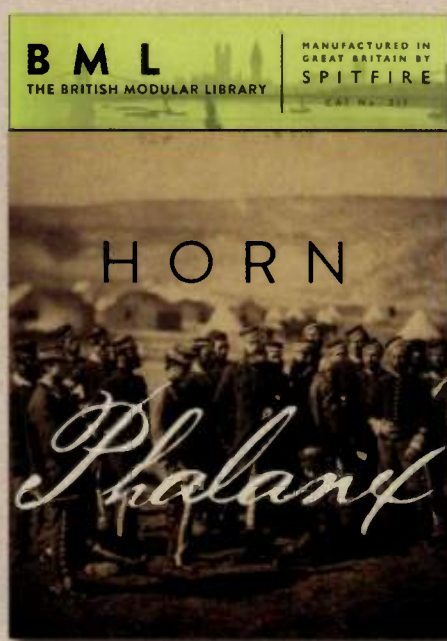
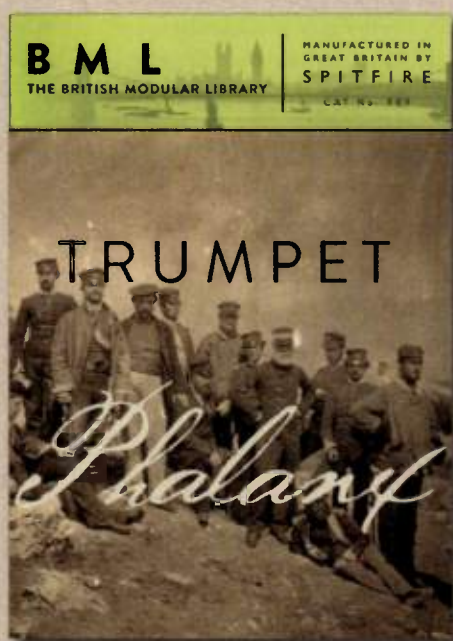
Here's another huge score for the Advance 49 that you don't get with Komplete Kontrol S: Multi Mode. Any instance of VIP can host up to eight VSTi presets for layering sounds or for creating keyboard zones with a sound or sounds assigned to a range of keys. Once you have two or more sounds loaded into VIP, going to the Multi view in the software or hardware brings up a mixer-style interface, where each sound has level, pan, mute, and solo controls, which you can alter with the hardware knobs, buttons, and pads. With a Multi sound selected, pushing the hardware Enter button lets you edit the

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Fig 4. Here, the VIP software is hosting a four-patch Multi with the Massive window shown within VIP and the other plug-ins in external windows.



Fig 5. This screen from the Advance 49 color display shows some of the MIDI presets for DAWs.

sound's keyboard range, transposition value, and MIDI channel.

Multi Mode could be amazing for setting up live performances to your exact specifications: For example, you could create a four-patch Multi in which each sound plays on one octave of the keyboard with Transpose set so that each octave plays the same pitches for each sound. You can store your Multis for quick recall and put them in a Setlist if you like.

Multis are great for using disparate instruments together to create extraordinary sound designs, for quickly auditioning sounds from different plug-ins against each other to find what you like best, or for layering up a bunch of drum, synth lead, or pad sounds to get more huge overall patches.

PERFORMANCE ENHANCERS

These days, Akai builds in certain attractive features from its legacy of MPC workstations on any

relevant product. The Advance controllers' drum pads have the feel of MPC pads, and they have the crucial and popular Note Repeat feature. With the Note Repeat button lit, holding a pad down will retrigger the sound at the specified Time Division rate, which can be helpful and fun for recording and performing rhythms. There are eight Time Division values (from 1/4 to 1/32T), which you can set from the Advance display menus or with the Time Div button and eight key switches.

The Time Div setting also affects the Advance 49's built-in arpeggiator, which has 100 pattern settings—so many that the only complaint is that there's not a more efficient way to find the pattern you want. You have to scroll through them one at a time on the Advance display. While they are grouped into useful label like SEQ (where you hold one note in order to play a repeating sequence of many notes), CHD (settings designed for chords), and SFX, it can take a while to find what you want. However, there are tons of creative patterns to absorb, and it's nice being able to quickly jump through Time Div settings with the hardware switches.

FORWARD MARCH

The Advance 49 endeared itself to me in a way that the Kontrol S49 didn't—although I do very much love the Kontrol S49. The Kontrol S49's playback enhancements using the Light Guide LED highlighted keys remain unique in the controller market. However, the Advance 49 has drum pads, detailed color screen, Control and MIDI modes for toggling between the VIP software and a DAW, and most importantly, an all-inclusive VSTi ecosystem that brings all your plug-ins' sounds together with the added creative convenience of Multi Mode.

It all adds up to an experience that you don't want to be without once you've tried it. I get the feeling that other controller makers—not just NI—will soon have to come up with some type of answer to the Advance series if they want to remain competitive at the professional price point. As it stood at the time of this writing, the Advance Series boards cost \$100 less than Kontrol S boards, so they're a premium-priced product, but also very reasonable for what you get, including a nice software package.

The Advance 49 is the perfect controller for operating the VIP VSTi host software, which also means—at least for now—that it's not the perfect DAW controller. That's one thing to think about when considering the Advance Series: Even with its helpful MIDI mode, you'll still probably want some kind of master controller for your particular DAW. I'm sure that this current iteration of Advance—while admittedly great—is not the last stop on the journey for total production control. If Akai—or someone else—can marry these VSTi hosting features with Nektar Panorama-level DAW control, that will be the next generation of a must-have product. ■

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"When I forgot to bring my Radial JDV to a session, my engineer made me go back home to get it! That's how good it is."

~ Marcus Miller

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~ Jean-Luc Ponty

"My Bassbone has 2 channels so I can use my electric and acoustic using only one channel on my amp, PLUS there's a clean, built-in DI that sounds consistently great!"

~ John Patitucci

"The Radial Firefly is a very solid, fat, clean sounding direct box. What can you say... it sounds great!"

~ Jeff Lorber

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~ Carlitos Del Puerto

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~ Joey DeFrancesco

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~ Ron Carter

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A E A

N8 and N22

ACTIVE RIBBON MICS THAT BRING PRO SOUNDS TO THE HOME STUDIO

BY GINO ROBAIR

Gino Robair is *Electronic Musician's* technical editor.

STRENGTHS

Phantom-powered for use with low-cost preamps. Solid build. Protected ribbon suitable for close-up recording and stage use.

LIMITATIONS

None

N8: \$1,098 street
N22: \$899 street
ribbonmics.com

At Sweetwater's GearFest a couple of years ago, I was given a sneak preview of a new AEA mic prototype. The company's founder and world renowned ribbon-mic expert, Wes Dooley explained that this transducer was being developed for the specific needs of the personal studio market: It would be easy to use (e.g. compatible with the average USB and FireWire interface) and able to handle the various instruments a singer/songwriter tracks at home (vocals, guitars, drums). And, of course, it would be affordably priced.



Fig. 1. The affordable and solidly built AEA N22 is ready to capture, up close, nearly any instrument you'll record in your personal studio: guitar amps, voice, acoustic guitar, and drums.

As a fan of AEA's product line, I was intrigued: While the company's classic ribbon mics are somewhat expensive, but by no means overpriced for what you get, the user does have to know what they're doing in terms of care and placement. Moreover, you need a preamp that meets the gain and impedance requirements of each mic. Of course, AEA offers preamps designed specifically for these products—the 2-channel TRP (\$895), the 2-channel RPQ (\$1,575) with EQ controls, and the single-channel RPQ500 (\$584) for 500 Series racks—but that adds to the cost of setting yourself up with a pro-level ribbon mic.

Like other mic manufacturers, AEA has addressed these issues by developing a pair of active models that specifically meet their usability and price goals, while retaining the company's trademark sound and build quality. But unlike many other companies, AEA didn't skimp by having things built off-shore: Its powered ribbon microphones are entirely built in its facility in Pasadena, California.

MEET THE NUVOs

AEA's Nuvo active ribbon-mic series includes the N22 (\$899 street), introduced in 2013, and the N8 (\$1,098 street). The N22 is designed with the needs of the singer/songwriter in mind, where close miking amps, guitar, and voice is a primary focus. In contrast, the N8 is designed primarily for miking instruments at a distance.

Priced well below a grand, the N22 is definitely positioned for the personal studio owner (see Figure 1). While the N8 is a tad more expensive than the company's R84 (\$1,035 street), as an active mic it is, again, more forgivable in terms of preamp choices and usage (see Figure 2).

The N22 and N8 share many characteristics. Each

utilizes AEA's pure-aluminum Big Ribbon design—1.8μ thick, 2.35" tall, and 0.185" wide—found in many of the company's higher-priced passive models. A custom German-made toroidal transformer is also part of the design and adds 12 dB of output level as part of the phantom-powered electronics.

Many of the specs are similar between the two models. According to the polar pattern charts, both microphones have remarkably consistent bi-directionality across the frequency spectrum (measured from 200 Hz to 10 kHz).

Externally, the N22 and N8 have the same physical characteristics, but with different finishes. (Designed for far-field recording, the N8's body is black to make it less noticeable in multimedia applications.). At 8.83" tall and weighing just over 1 lb. (without a cable attached), the machined bodies feel well-engineered and solid, and they have multiple layers of screening around the ribbon for protection. The enhanced screen makes the mics less susceptible to blasts of air from the front—perfect for vocals, loud amps, concert use, and handling by engineers who have little experience with a ribbon mic. But even with such a robust build, a standard boom stand easily supports either model. And unlike many of the other AEA mics, the N22 and N8 do not have "captive cables," but accept any standard XLR cable.

The N22 and N8 come with a foam-lined, hard plastic case, plus a mic clip that provides a marginal amount of shock relief, and a sleeve to cover the mic when it is on the stand but not in use. AEA offers a one-year warranty on parts and labor (shipping excluded) for each, which extends to three years when you register the product. Both models are available as matched pairs—great for stereo recording applications.

SOUNDS, NEAR AND FAR

Of course, what differentiates the two microphones, sonically speaking, is their frequency response. As you might expect from a directional mic intended for close-up work, the N22's low-end response is slightly attenuated to make up for the proximity effect; tested at a meter from the source sound, the frequency response starts to decrease at roughly 900 Hz, reaching -2 dB around 200 Hz. To compensate for distance recording, the N8's low-end response rises ever so slightly beginning at 500 Hz.

In the upper register for both models, the high-frequency response begins to taper off around 4.5 kHz, reaching -2.5 dB by 8 kHz. The N22, however, dips down to about -13 dB by the time you hit 20 kHz, whereas the N8 drops to only -7.5 dB at that frequency. The differences in the midrange response between the two mics looks much more subtle in the charts, but these differences really add up sonically when you put the mics to use.

The N22 brought out a smooth, organic tone

from every instrument I used it on—electric guitar amp, acoustic guitar, vocals, mandolin, marimba, and drums. With the protective screen built in, I didn't have to worry about cheating it up to a vocalist or a loud amp. And the tone didn't change significantly if the subject moved slightly off axis, which is really helpful with singers.

The deep null points and small body size make the N22 well-suited for the studio-oriented Blumlein technique that allows you to isolate the voice and guitar of a singer/guitarist from each other while tracking live: One mic is pointed at the instrument and its null point aimed at the singer to reject the voice, while the front of the second mic

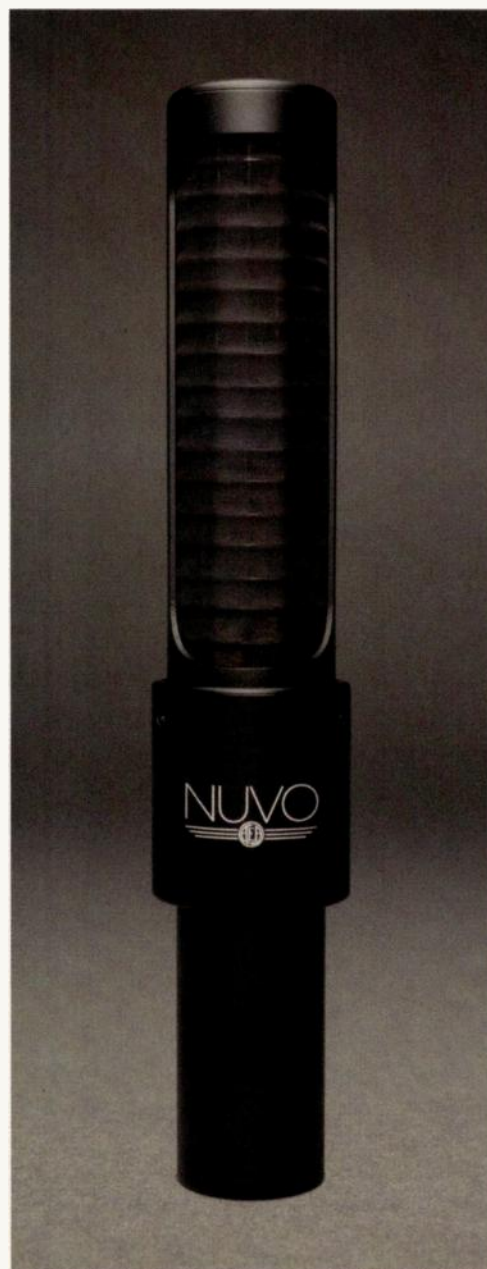


Fig. 2. Designed for miking instruments at more of a distance, the N8 is equally well-built but offers a different frequency response that helps it excel as drum overheads and on winds and strings.

is aimed at the singer and its null point rejects the guitar. (To learn more about this technique, see the December 2014 article "Capture Acoustic Guitar and Vocals with the Blumlein Technique" at emusician.com.)

As a complement to the N22, the N8 was designed to work farther from the sound source. To get a sense of that, I used both mics to record guitar parts in my living room, which has a high ceiling and a wooden floor. With the N22 placed about 2 inches from the grille of a tube amp and the N8 from 4 to 10 feet away, I was treated to a buttery direct sound from the close mic, augmented by the natural reverberance of the room in the N8.

Both mics are fantastic as drum overheads in jazz and rock contexts, though the N22 is noticeably a bit shy in the lower frequencies by comparison. Like the N22, the N8 did a nice job of smoothing out any harshness in the cymbals, but it provided an especially beefy low-mid sound that brought out the tone of the snare drum and toms while slightly de-emphasizing the sizzle of the snare. In side-by-side comparisons with the N22 as drum overheads, I noticed that the N8 provided just over a decibel more of output level.

But don't assume that the N8 should be relegated to only room miking: It sounds great and provides excellent resolution on plucked strings and percussion when set up about 3 feet away from the subject. This mic is perfectly suited for tracking bowed strings, brass, and woodwinds, where you want to capture the tone of each instrument while rejecting high-frequency harshness.

Despite its design intentions, I tried the N8 in a few close-miking situations, but with mixed results. However, after close-miking a chimney, arpeggiated guitar part with the two mics side by side on a tube amp, the N8's enhanced lows helped round out the notes nicely while smoothing out the upper partials. To enhance the guitar's upper register in the mix, I brought in the N22 about 4 dB below the N8 to create a beautiful composite tone.

PRO SOUND AT HOME

Remarkably, I had no issues while using the N22 and N8, no matter which preamps and interfaces I used, and that says a lot. After putting them up and setting levels, a slight bit of repositioning was all it took to get the sound I was looking for. Their tone accepts EQ tweaks well, but I found that careful placement was all I needed to get them to sound good in a mix.

And despite the fact that AEA has marketed the N22 and N8 for the personal studio, both microphones are pro-level products and worthy of professional recording situations. Depending on your recording needs, the N22 and N8 offer high-quality ribbon tone and resolution in an affordable and easy-to-use format. ■



Fig 1. Corresponding to the colors of Ableton Live's Session view clips, the 16 velocity-sensitive launch pads double as clip launchers and drum and instrument players.

NOVATION

Launchkey 49 Mk2

THE COLORS OF THE RAINBOW ARE IN CONTROL

BY MARKKUS ROVITO

STRENGTHS

Dynamic InControl mappings. Custom settings for Reason and FL Studio. iOS compliant, with special integration with Novation apps. Good feature set for the money.

LIMITATIONS

Documentation could use more specifics. To plug into an iPad, you have to use a powered USB hub..

Launchkey 49 MK2: \$199 street
Launchkey 25 MK2: \$149 street
Launchkey 61 MK2: \$249 street
novationmusic.com

It's an embarrassment of riches for Ableton Live users who want MIDI controllers that are dedicated to that software. They have great options such as Ableton's own Push, the Akai APC40 MKII, Novation Launchpad Pro, and others. But those are just pad controllers: For those who want a low-priced Ableton Live controller with a keyboard, Novation offers a newly updated Launchkey 49 MK2 (also referred to in some places as Launchkey 49 RGB), as well as 25- and 61-key versions. The big upgrade here is that the 16 launch pads are now colorfully lit, so that they'll correspond exactly with the color of the clips in Live's Session view (rather than having just red, yellow, and green lights as in the last version). The pads are also velocity-sensitive for better expression when using them to trigger drums and other MIDI notes (see Figure 1).

The Launchkey 49 MK2 doesn't stop at Live control, however. It has built-in InControl technology for adapting its controls to all major music software, with custom scripts for Propellerhead Reason and Image Line FL Studio, and HUI control for other software. What's more, three InControl toggle buttons let you switch sections of the Launchkey from their InControl settings to standard MIDI controls that you can map to whatever you want.

Finally, the new Launchkeys are also appropriate for operating iPad music apps through Apple Camera Connection adapters (see Figure 2).

LIVE CONTROL

Before getting started, you're advised to install the Launchkey MK2's software package, which includes control surface scripts, Ableton Live Lite,

Novation's Bass Station and V-Station plug-in synths, and 1GB of Loopmasters sample content.

Once the controller is set up for Live, the board's faders, knobs, and pads adapt to the active section of the software. In the Session view, the 16 pads provide a top row for launching clips and a bottom row for stopping them. Buttons navigate the track selected and the row of clips selected. Faders control track volume. When you select instruments, effects, or instrument and effect Rack devices, the knobs will map to the eight Macro controls of a Rack or to certain parameters of instru-

ments and effects, while the pads may play notes from a Drum Rack, for example. That's where the new velocity-sensitive pads come in very handy.

Three InControl buttons toggle the fader, knob, and pad sections from the custom Live control to standard MIDI controls, so you can use Live's MIDI Map mode to set them to whichever controls you want. That's a welcome feature for extending the reach of the Launchkey's hardware while giving the user extra flexibility. Holding down an InControl key will also let you choose to control Live's device, pan, Send A, and Send B settings as another layer of control.

The included documentation is a little light on explaining how to do everything in Live, but once you have it figured out, the Launchkey MK2 goes a long way to streamline the process of record-



Fig 2. No 5-pin MIDI I/O ports here: USB, a sustain pedal input, and a socket for an optional power adapter are all you find around back. A green underside and matching green USB cable give the Launchkey 49 MK2 an added bit of visual flair.

ing and playing back clips in the Session View, although the two rows of launch pads don't fully substitute for larger pad grids of the aforementioned Live controllers; the Launchkey is really best for keyboard players who still want some Live performance features.

REASONABLE OPTIONS

While it's mainly featured as a Live-focused controller, the Launchkey MK2 also has scripts for controlling the devices of Reason and FL Studio. I tested it with Reason 8.3, and the controller has mappings for every Reason stock instrument, effect, and mixer device.

A typical control layout for a Reason synth like Thor or Malstrom controls a filter and amp envelope with the first eight faders; the master volume with the ninth; filter, LFO, and effect parameters with the eight knobs; and on/off switches for oscillators, noise, LFOs, filters, and so forth for the first eight fader buttons; and for certain devices, the 9/Master fader button switches to a second bank or mode for the device, giving you a second set of hands-on controls for that device.

This setup for Reason will relieve a lot of the tedium that can come from trying to operate the program with just a mouse or trying to map all the devices on your own.

APP LAND

The Launchkey 49 MK2 works as a class-compliant MIDI controller for iOS devices, so you can quickly play synth apps with it, and if the app supports MIDI Learn, map parameters to the Launchkey's controls. But also with the InControl technology (which is completely firmware based), the Launchkey integrates more intimately with Novation's own free (with in-app purchases) Launchpad and Launchkey apps.

The Launchkey app is an analog-modeling synth that locates eight "nodes," or clusters of parameter values across the touchscreen. Drag the nodes across the screen to morph the sounds, or use the hardware controller's pads to cycle around the nodes and then use the eight hardware knobs to adjust their values for the filter, noise, effects, amp level, and more.

The keyboard's Track keys will also switch back and forth from the Launchkey app to the Launchpad app. The latter app is a touchscreen approximation of the Novation Launchpad hardware. It has a button grid populated with loop or one-shot samples (which you can expand with in-app download purchases), as well as eight channels of mixing with filters, levels, and highly editable tempo-based effects. Use the Launchkey MK2's hardware pads to launch sample and trigger effects from the Launchpad app,

all while the Launchkey app's synth sounds are still available on the keyboard.

This kind of iPad/controller synergy is what it takes to make the iPad a stronger force for live performance and music production, and you can come up with some strong results from the Launchkey app's excellent sounds and the Launchpad app's deep loop-remixing abilities. The one caveat is that, because the Launchkey controllers draw USB bus power from computers or from an AC adapter (sold separately), to work with an iPad, it has to draw juice from a powered USB hub and then connect to an Apple Camera Connection adapter going into the iPad.

IGNITION SEQUENCE

With so many MIDI keyboard controllers in the world, it's a challenge for any of them to stand out. The Launchkey 49 MK2 makes its case because it's a powerful tool for Ableton Live, first and foremost, nearly as capable for Reason and FL Studio, and functional for any other MIDI software. And at this price, it also won't sink your finances—it's about as low as a 49-key controller gets with this much functionality, and as a trade-off, the keyboard's construction is of acceptable lightweight quality, but doesn't have all the bells and whistles and physical robustness of more expensive options. For example, the keys are unweighted, pure synth action, which

I didn't mind at all, though others might. The simple 3-digit display just shows the 0-127 value of the chosen knob or fader.

However, where it really counts, as in the quality of the pads, buttons, and other controls, the family of Launchkey MK2 controllers do not disappoint (see Figure 3). The knobs and faders are sturdy, and the launch pads, while smaller than MPC-type drum pads, are very playable. And with the InControl toggle keys effectively doubling up the amount of hands-on control, the Launchkey 48 MK2 makes a strong case for an affordable Live controller that also works for other DAWs and iOS apps. ■



Fig 3. The MK2 version of the Launchkey is available with a 25-, 49-, and 61-note keyboard. The Launchkey 25 MK2 loses the nine fader/button pairings of the other controllers to save space.

With eight onboard pads, an integrated sound library, and inputs for additional controllers, the Alesis SamplePad Pro provides a lot of bang for the buck for just under three bills.

ALESIS



SamplePad Pro

AFFORDABLE DRUM CONTROLLER WITH BUILT-IN SOUND MODULE

BY MARTY CUTLER

Marty Cutler is not a professional drummer, but he plays one in his home studio.

STRENGTHS

Robust, responsive Pads. Expandable library via SD/SDHC card. Menu is easy to navigate. Additional trigger options.

LIMITATIONS

Flimsy plastic knobs. No individual analog outputs for internal sounds. Kit size limited to 48 MB.

\$299 street
alesis.com

When it comes to laying down MIDI drum tracks, a set of pads that can be played with either sticks or fingers is handy to have around. SamplePad Pro from Alesis is just such a controller, but one with onboard sounds and the ability to add your own samples and integrate additional controllers.

The playing surface has six 4.5"x3.5" pads and two horizontal strips that also serve as triggers, all with the right balance of firmness and bounce. The pads display their parameters in the LCD when struck. The front offers a slot for an optional SD or SDHC card, a main volume knob, and a separate volume control for the headphone output. Overall, the playing surface benefits from a solid build, though the knobs feel flimsy. While that isn't a deal breaker, I'd advise handling it with caution if the unit travels outside your studio.

With only an LCD and four buttons, the user interface is Spartan yet intuitive to use. The left and right cursors are used for changing values or moving to a submenu. Global parameter pages such as velocity curves, metronome setup, MIDI parameters, and sample import require you to press multiple buttons simultaneously, as do file saving operations.

In addition to standard MIDI I/O and USB connectivity that handles MIDI and sample import, the rear panel hosts two unbalanced 1/4" analog outputs; a 3.5mm stereo input with level control, for use with an external audio device when practicing or gigging; and four external trigger inputs: kick (which accepts a switch or trigger), hi-hat (switch or continuous pedal), and two pads (one of

which handles single- and dual-zone controllers). An additional footswitch jack accepts dual or single switches and can be used to control kit selection and tempo, among other things. Although it would be nice to have

additional analog outputs that could be assigned to individual kit pieces from the internal sound bank, at this price, providing only stereo output is an understandable compromise.

SamplePad Pro includes a nice-sounding library of kits and samples, though the internal kit pieces are limited to two separate velocity layers, with no round-robin sample rotation. To save and load additional files, or to upgrade the firmware, you will need to purchase an SD or SDHC card. Capacities up to 32GB are supported. While that would hold a lot of kits and samples, the size limit of a complete kit is 48MB, and a maximum of 512 files can be stored on a card.

Inevitably, you will want to connect SamplePad Pro to the outside world, and you can, thanks to its USB and MIDI ports. Using USB, I fed SamplePad Pro's triggers to a variety of software drum programs—FXpansion BFD 3 and Tremor, Vir2 Instruments Studio Kit Builder, Heavyocity DM-307, XLN Audio Addictive Drums, Toontrack EZ-Drummer, and Native Instruments Kontakt hosting Studio Drummer. This allowed me to enjoy the expanded palette, dynamic expression, and other features afforded by more sophisticated drum software while using this convenient controller.

SamplePad Pro's easy programmability, responsive pads, and well-stocked expansion options make it a great tool for the home studio or for live performance. And with a street price below \$300, it is an exceptional value. ■





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SOFTUBE

Transient Shaper

TWO-BAND PLUG-IN FOR SCULPTING ATTACK AND SUSTAIN

BY MICHAEL COOPER

Michael Cooper is a recording, mix, mastering and post-production engineer and a contributing editor for *Mix* magazine. You can reach Michael at michaelcooper@bendbroadband.com and hear some of his mixes at www.soundcloud.com/michael-cooper-recording.

STRENGTHS
Sounds great. Clip and Fast/Slow functions expand sonic possibilities. Easy to use. Inexpensive.

LIMITATIONS
No A and B work-spaces.

\$99, \$89 street
Softube.com

Transient Shaper (VST, VST3, AU, AAX) is a dynamics processor that lets you increase or decrease the attack and sustain envelopes of a signal. But unlike a compressor or expander, Transient Shaper has no threshold control; it processes signals to the same degree regardless of their amplitudes. That allows you to, for example, put an equally sharp point on both loud and quiet snare hits or increase the sustain of all notes in a guitar solo that goes from a whisper to a roar.

Transient Shaper provides an adjustable crossover-frequency control that splits the signal into two bands before further processing shapes its attack and sustain. Clockwise rotation of the Sustain and Punch controls past their noon positions, respectively, boosts the input signal's sustain and attack, while rotation counterclockwise from noon attenuates the same. Switches for Sustain and Punch select which of the two bands each will process and alternatively provide for executing wideband (full-bandwidth) processing. Split-band operation lets you, for instance add sustain to only the bass frequencies on a floor-tom track while increasing the attack of the stick strikes' high frequencies.

Fast and Slow switch settings affect how Punch processing sounds. The Fast setting is best at detecting sharp transients and also processes a shorter portion of each transient; that makes the Fast setting produce a more pointy sound than the Slow setting when boosting transients. A Clip function causes the output signal to softly clip when its level reaches or exceeds 0 dB, adding subtle distortion and reining in levels; an associated clip indicator lights when clipping is occurring.

When you hover your mouse over a control, a readout in the GUI's bottom strip displays its cur-

rent parameter value. Two Gain Change meters show boosts and reductions in level in respective high- and low-frequency bands as a result of the plug-in's processing. Two peak meters show respective left- and right-channel output levels.

Adding wideband punch and low-frequency sustain to kick and snare tracks enhanced

their attack and made them sound beefier. Cranking Transient Shaper's output-level control and activating the Clip function increased the drums' average levels, giving them more oomph.

Transient Shaper also sounded great on stereo room mics for drums. I set the crossover to around 400 Hz and switched the Sustain and Punch controls to process only the low band. With this setup, I could crank both controls to explode the room without the cymbals' high frequencies making my ears bleed.

Reducing wideband sustain and goosing high-frequency punch above 1,350 Hz enhanced the staccato effect of a palm-muted electric guitar vamp, solidifying its groove. The Slow punch setting prevented the accentuated pick strikes from sounding glassy, and the Clip function helped sit the track in the mix by giving it a consistent level.

Cutting the low band's sustain and boosting punch above 4 kHz—using the Fast setting—attenuated an arpeggiated acoustic guitar track's boomy upper-bass frequencies and added pleasing high-frequency sparkle and detail.

I wish Transient Shaper included A and B work-spaces (for comparing different control setups). That aside, Transient Shaper is simple to use and a great-sounding plug-in. And the price is right! ■

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SAMPLE LOGIC

Bohemian

UNUSUAL AND CINEMATIC INSTRUMENTS FOR KONTAKT 5

BY MARTY CUTLER

\$299.99
samplelogic.com

IT'S a no-brainer that Sample Logic would follow its Arpology with new instruments driven by the same brilliant Step-Animator and Effects engines, while emphasizing unusual sound-design. Its latest effort, *Bohemian*, provides more than 9 GB of content based on exotic acoustic instruments, often with extensive synthesizer processing to create morphing sounds that have organic qualities. The library utilizes Native Instruments' free Kontakt 5 Player or Kontakt 5.4.3 or higher.

The instruments were recorded at Skywalker Sound, and the studio's sweet, natural ambience is particularly noticeable in the folder of beautifully recorded traditional instrument patches—arguably the primary focus of the library—most of which do not rely on reverb settings. These original sounds include hang drums, blossom bells, tongue drum, kalimba, didgeridoo, harmonic tubes, bowed cymbals, and other exotic instruments.

Patches are organized as Atmospheres, Instrumentals, and Percussives at the top layer, with subfolders based on more spe-

cific qualities below. For example, the Instrumentals folder holds Arpeggiated, Metallic, Synths, Traditional, and Winds subfolders. You're likely to find arpeggiator-ready patches in other folders with a pattern already in place waiting to be switched on. Others are easily pressed into service as arpeggiated patches thanks to the accessibility of the Step Animator. A pop-up browser offers a wealth of pattern presets.

And *Bohemian* doesn't skimp on multis, which are broken down by Construction Kit, Instrument Stacks, and One Note Glory categories. Many of these are huge, and designed to sit center-stage in your production. They range from full-spectrum, evolving pads to droning, rhythmic atmospheres.

Bohemian is another high-water mark in Sample Logic's collection of sound libraries. With the Step Animator, the hefty effects section, and synthesis tools, it's a versatile and customizable instrument that should find its way into film scores as well as imaginative electronic music productions in general. ■



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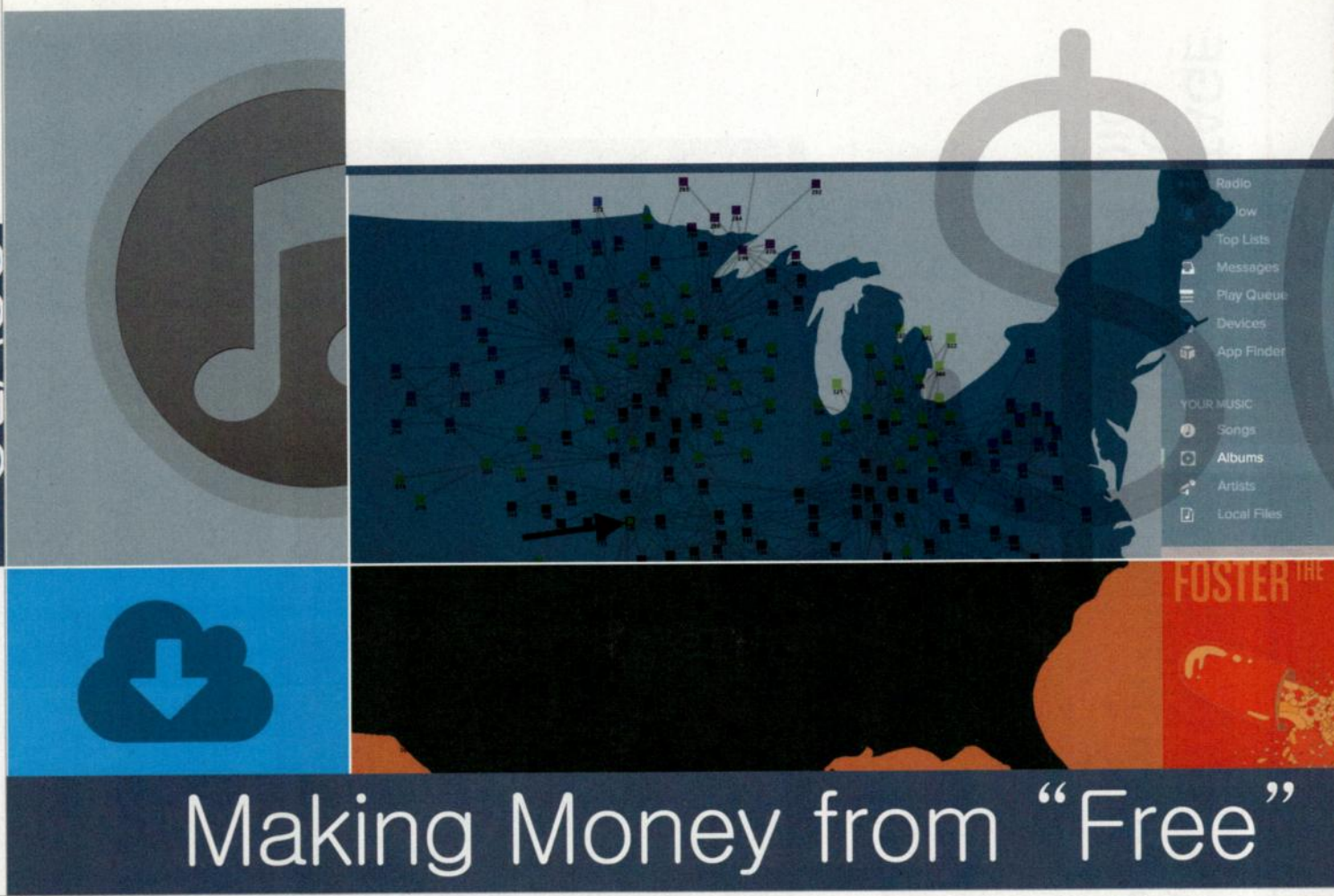
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Your Music Has Value, Even If You Give It Away

**BY RANDY CHERTKOW AND
JASON FEEHAN**

Randy Chertkow and Jason Feehan
are authors of *The Indie Band Survival Guide* (St. Martin's/Griffin),
now in its second edition.

Today's musicians are often asked to give away their music for free. Fans, creatives, and even for-profit enterprises such as television studios, production houses, software companies, and other media ask for free uses of music.



Perhaps the best-known example of a music giveaway in recent memory is the month of free downloads that U2 and Apple offered, via iTunes, when U2 released *Songs of Innocence* last fall. It's rumored that Apple actually paid the band for all of those downloads, believing that the promotion would be worth it for all concerned.

But most musicians are not Bono, and can't necessarily afford to risk their livelihood by giving away what they create. One of the biggest issues that musicians navigate today is, how to promote music without devaluing it, because once anything is assigned a low value, it becomes pretty difficult to raise the price later.

You can avoid this problem by giving your music value: Always require *something* in return for your music, even if it's not a direct payment. Using the techniques below, you'll ensure that your fans, potential licensees, and content creators attach value to your music. You'll find that you can even make money from "free" distribution of your music. Plus, you'll get exposure, and you'll motivate fans and clients to want to work with you in the future and keep coming back to you for music.

GIVING YOUR MUSIC TO FANS FOR "FREE"

The biggest problem with giving away music to fans is, it's hard to convince them to buy it after they've already received it. To avoid this problem, take a page from the videogame industry's book and make your fans "unlock" the music by giving you something else of value in return.

Game companies often invite people to download games for free, so the game can find its fans—those who will pay for the full game. The industry turns downloaders into customers (rather than freeloaders) by giving away just a single level, letting fans buy more abilities in the game, or providing just the beginning of a longer story. This free strategy only works if what you give away can lead to monetization in the future. Here are some specific techniques to use with your fans:



Giveaway promotion on steroids: U2 made their album *Songs of Innocence* free to iTunes users for a month after its release.

Provide Samples, not Singles. Try using techniques such as streaming, sharing a music video, adding audio bumpers to a non-streamed track, or giving away a demo or live version of the song rather than giving away what you're trying to sell. We covered these strategies more fully in an *Electronic Musician* article in the July 2014 issue called

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Trade Social Actions for Tracks. Trading tweets or likes for tracks can be done by simply asking, or via services and applications that help you promote your work by sending the download link after fans take the action. The apps are a somewhat artificial way to boost your online activity, yet, if used in this way, can be considered a legitimate and different way to ask fans to promote you to their friends and followers—something you should be doing anyway.

Use Affiliates. Using services like Rhapsody's affiliate program (Rhapsody.com/affiliate), you can provide fans with a special affiliate link to your song and get money for each person who signs up to use their service. This can make you as much, per signup, as you could get for selling an entire album.

Provide Music as a Reward. Tracks are excellent rewards for crowdfunding sites such as Kickstarter (kickstarter.com) or GoFundMe (gofundme.com), as well as patronage sites such as Patreon (patreon.com). While you don't get paid for the track directly, you can use it as a reward to get pledges and patrons, which can be worth far more.

Remind Fans You're Trying to Make a Living. Make sure your fans know that while you're giving away individual tracks, you do need to make a living off of your music, and you would appreciate any purchases they make. Then, offer singles, albums, merchandise, or links to their patronage site. Another approach is to let people set the price for your music, all the way down to free, and see what they do. For those who have done this, on average the money earned is close to the retail price per album, or better.

LICENSING MUSIC FOR "FREE"?

When it comes to licensing your music, it's important to make sure you own two copyrights: one in the song composition, and one for the sound recording. So when someone wants to use your music in a video for free, they're asking you to give away not one, but two licensing opportunities.

When someone asks you to license your music for free, you should consider it just the start of negotiations. As the sales saying goes: "Never open with a discount." You should always make it clear to them that there is a monetary cost for each license you grant, even if ultimately you let them use it for free or a substantially low cost. Start with a number that's high enough that you feel comfortable, so if you do give away the music this time, you lay the groundwork for future agreements.

Also, take the time to understand the potential licensee's project as well as you can before negotiating a fee. Find out whom you're dealing with, the nature of their project, what they want to use the music for specifically, and who's behind the production.

Ask what the music budget is—a question that might make people feel less comfortable about asking you for free music; it could even prompt them to find some money for you. After learning all you can, a simple Google search might reveal that there are deep pockets behind the project. Ask whether they intend to sell their work, where they want to broadcast/show it, and whether distribution will be worldwide or just local. All of these facts will help when you work out the contract.

When it comes to licensing your music, it's important to make sure you own two copyrights: one in the song composition, and one for the sound recording.

Once you do your research, follow the steps below to get the most out of your licensing terms, even if you are offering your music *gratis*.

Question "Promotional Value." Licensees will often say to you that their use of your music will help people discover you. In other words, the placement has a promotional value worth the cost of the license. You should be skeptical of this unless what they are providing is clearly written into the contract. To ensure you get promotional value, ask for as many of the terms below as possible:

- Artist and track info card shown on screen, so fans can find the song on their own.
- Album cover shown on the screen.
- Track info mentioned by the announcer.
- Tweets/social media mentions about the song (including specifics how many mentions and for how long they will service the song).

- Artist and track info added to the credits.
- Song added to the cue sheets for the Performance Rights Organization's (PRO) performance royalties and backend revenue.

If someone asks to use your music for free in a placement but refuses to provide any of the above, then they aren't serious about helping people discover your music and giving you promotion. Without firm commitments in writing, your can end up simply as background music. So, always work on adding these terms into your contract, whether you are getting paid monetarily or not.

Limit Your Terms. Savvy licensees will ask for "worldwide" and "perpetual" rights to your music. In other words, they want to be able to use it globally and forever without having to come back to you to pay additional money. Both of these terms cost extra money in a license negotiation. If the licensee wants to use your music for free, then you should build in as many of the limits and restrictions below as possible:

Limited Time: The license should be for a limited time rather than "perpetual," especially if you are allowing use of your music for free. Perpetual licenses block you from ever being able to offer an exclusive deal to other parties, and prevent you from making future deals on the same music with the same licensee. Because of this, perpetual licenses are usually worth more money than a limited-time license.

Limited Use: Limit the use of your music to a specified purpose, such as a particular show or video. Or, limit the way that it can be used, such as on the air, but not for sale online or in a DVD. The more limited, the better it is for you in case they want to license your music for future purposes.

Limited Area: Rather than give worldwide rights, restrict the use of the music to a specified area, like the U.S., so that if the project extends to other countries, the licensee will have to renegotiate another license with you.

Non-Exclusive: There's no reason to grant a free license with an "exclusive use" clause. Giving exclusivity to your music blocks you from being able to license it to other parties. If you agree to exclusive rights, you may not only be letting the music be used for free, but you will also lose the chance to make other licensing money from it.

Make Use of Step-Up Deals. Independent films, shows, or projects may not have much of a music budget, but you can work a different kind of deal to help them with music while sharing in their success. A step-up deal starts out with low-fee or free use of your music, but grows in proportion to the success and revenue the project earns. These terms are included in your license agreement, which outlines the mechanics of paying out higher fees as the project's revenue increases. This may require some trust in your clients, because you'll need them to do some accounting to track the project's revenue, as well as commit to paying you. But the advantage is that the license is only free to start; the agreement grows into one that pays at a rate that the licensee can afford.

Backend Revenue: Get What You Deserve. One of the stronger arguments that television and movie production studios make about gratis placement concerns the backend revenues that you can get from performance royalties. These revenues generate whether they pay for the license or not, but some higher-

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profile shows and production companies suggest that this should mean that they can use your music for free or for less money because you will be paid elsewhere. Of course, higher-profile productions can afford to pay more money for royalties, and you should try to get some money for the use of your music—even if the amount is small—if only to point out that your music has real value.

For every song that you license out, you should make sure that you register the PA (Performing Arts) and SR (Sound Recording) copyrights for your music, and perform all of the performing rights organization (PRO) registrations. This includes composition registration, as well as SoundExchange and ISRC registrations. Otherwise, even if your song gets played on network television or within a movie, you won't get any royalties.

Also, any licensee who suggests there are back-end revenues for you to collect should provide proof they are sending in the required cue sheets that PRO organizations need in order to generate royalties for you. Ask them to send the cue sheets to you so you can verify them.

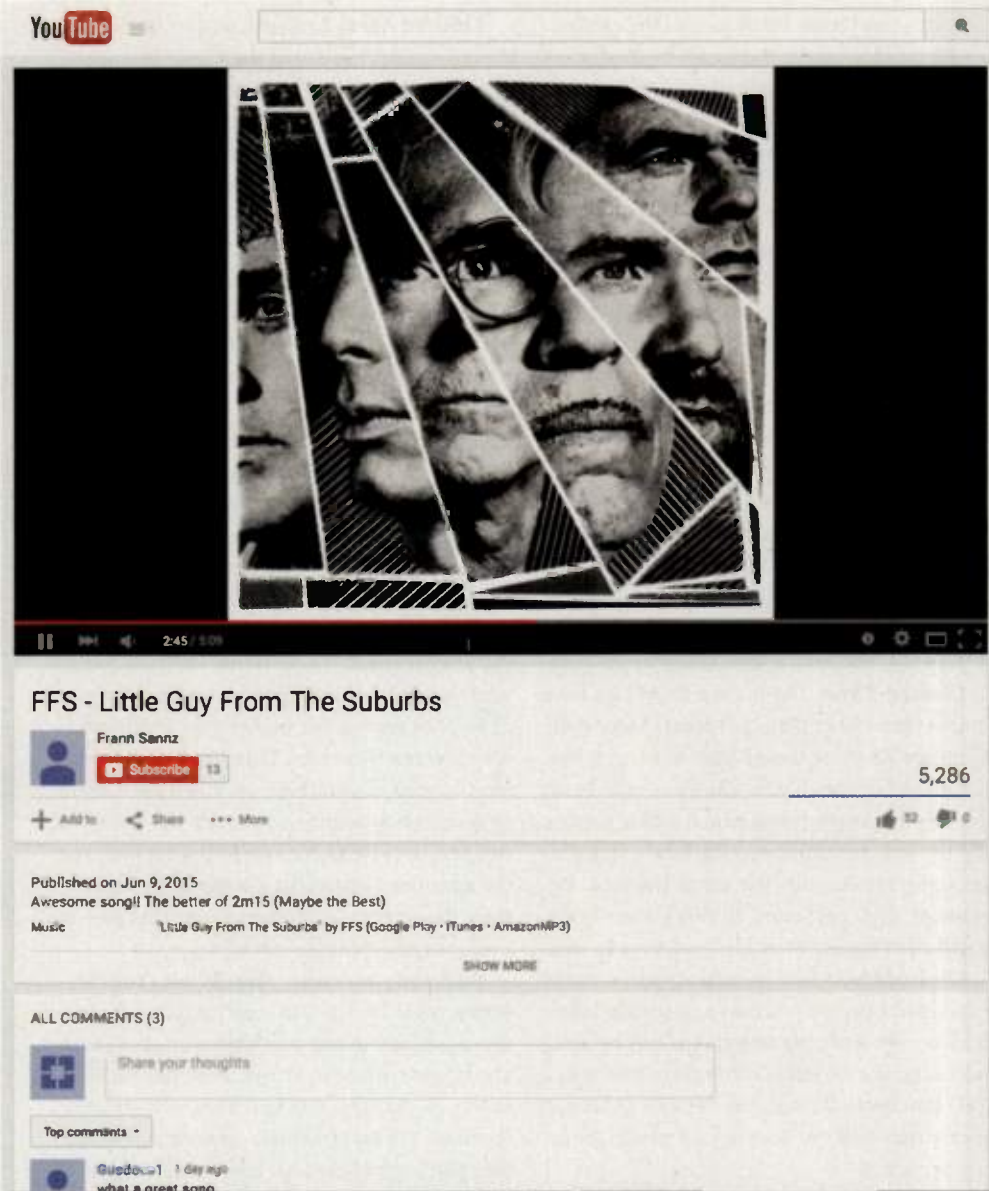
GIVING MUSIC TO CONTENT CREATORS

Today there are more content creators than ever making videos or using music in creative ways. Many of them don't understand licensing or copyright laws, and they may inadvertently infringe on musicians' copyrights.

Ignorance of copyright restrictions is no excuse for using your music without permission, or neglecting to pay copyright holders. But don't overreact. If someone finds a creative use for your music and it's getting views, don't force them to take it down. If a piece of music becomes popular, then there are always ways to get something out of it, or even monetize it, depending on the platform. Consider the following ways to address these less-sophisticated users of your music:

Use YouTube Content ID. The most common infringement from content creators is through YouTube. You can leverage the YouTube Content ID feature in order to monetize the use of your music. Rather than forcing the YouTuber to take the infringing content down, just upload your songs (and your videos in case someone's using a clip from them) to the ContentID page (youtube.com/content_id_signup). It will allow you to choose whether you want infringing works to be taken down, allowed but tracked, or to pay you the advertising revenue that the video generates.

Links Equal Love. A website or web presence that uses your music can always send its audience your way. The easiest (and most trackable) way to do this is for them to provide links to you and your music. These links should include where to buy the track online as well so they can help drive sales.



When fans or content creators post your music on YouTube, make sure they include links to your site, and places where listeners can purchase your music.

Push Promotion. Similar to the licensing section above, any uses of your music should include links as well as social media mentions, tweets, blog entries, or other explicit coverage. These are much more active forms of promotion for your work than simple links. If you can leverage their fan or customer-base and reach a whole new audience, letting them use your music for free could bring you new fans and sales.

The bottom line is, remember that your music has value; otherwise, fans, licensees, and content creators wouldn't be asking for it! The ability to sell your music is ideal, but even "free" can work for you if you make sure you get something for every track that you give away. Do all of this right, and there will be more business, revenue, and opportunities for you and your music in the future. ■

If someone finds a creative use for your music and it's getting views, don't force them to take it down.

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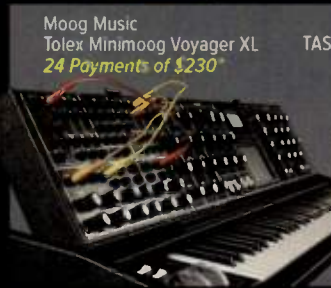
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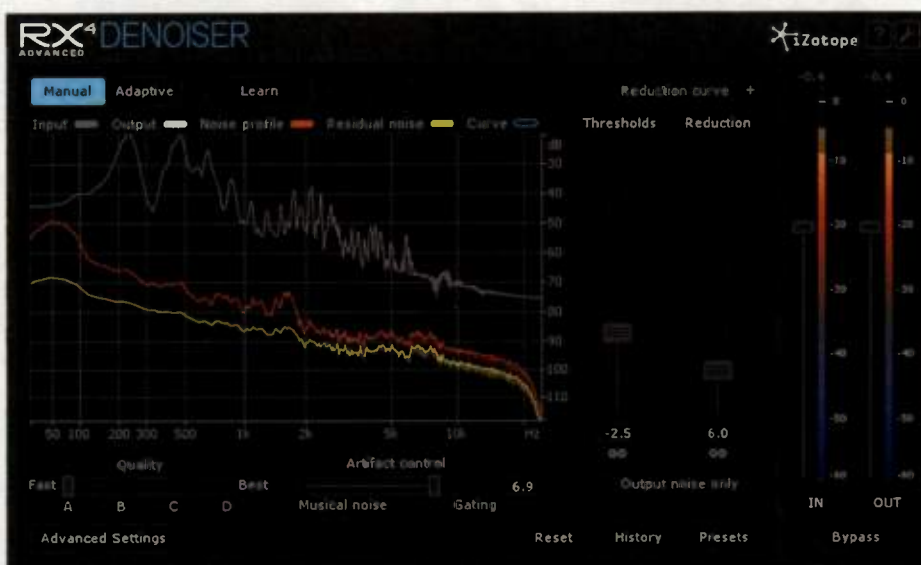
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Fig. 1. iZotope's RX4 Denoiser plug-in should always be placed before any dynamics processing and EQ.



Chain of Tools

The order in which you place plug-ins is critical in post-production

BY MICHAEL COOPER

Michael Cooper is a recording, mix, mastering and post-production engineer, and a contributing editor for *Mix* magazine. You can reach Michael at michael.cooper@bendbroadband.com and hear some of his mixes at soundcloud.com/michael-cooper-recording.

In many applications, the order in which processing is applied to tracks is ruled by creativity. But in post-production for film and video projects, the main objective is improving the sound quality of tracks, many of which were probably recorded in uncontrolled environments. Unfortunately, daisy-chaining plug-ins in the wrong order during post-production can actually make these tracks sound significantly worse in some respects.

In this article, I'll show you how to order processors correctly for the best possible sound on dialog tracks, since those usually present the biggest challenges in post-production. It's not practical to suggest an ironclad order for chaining plug-ins for every dialog track, as each one may require something different. It's more feasible to discuss how *not* to arrange plug-ins, as specific configurations will consistently degrade the sound or, at the very least, make your workflow considerably more difficult. This will be my approach, and I'll use iZotope RX4 Advanced (a leading post-production software suite) to illustrate key points.

BEWARE THE NOISE FLOOR

It's common for untreated dialog tracks to fluctuate widely in level. Resist the temptation to maximize, limit or compress a dialog track before removing broadband noise using RX4's Denoiser

plug-in (see Fig. 1). Compressing the dynamic range makes low-level signal—including noise—louder with respect to either peaks or average levels (or both), where desired signal resides. A higher noise floor makes it all the more difficult to remove enough noise without introducing ugly artifacts. That is, the closer in level the noise floor is to desired signal, the harder it becomes to set a noise-reduction threshold that isolates the two so you can throw out the chaff while keeping the wheat.

Similarly, let the film producer or videographer know that you prefer they don't ride fader levels before you process the tracks. Any track they give you that has fader automation rendered will also have a noise floor that moves up and down in tandem with their fader action. The changing noise floor will make it harder for you to set an optimal threshold for the entire track in your noise-reduction software.

continued on page 72

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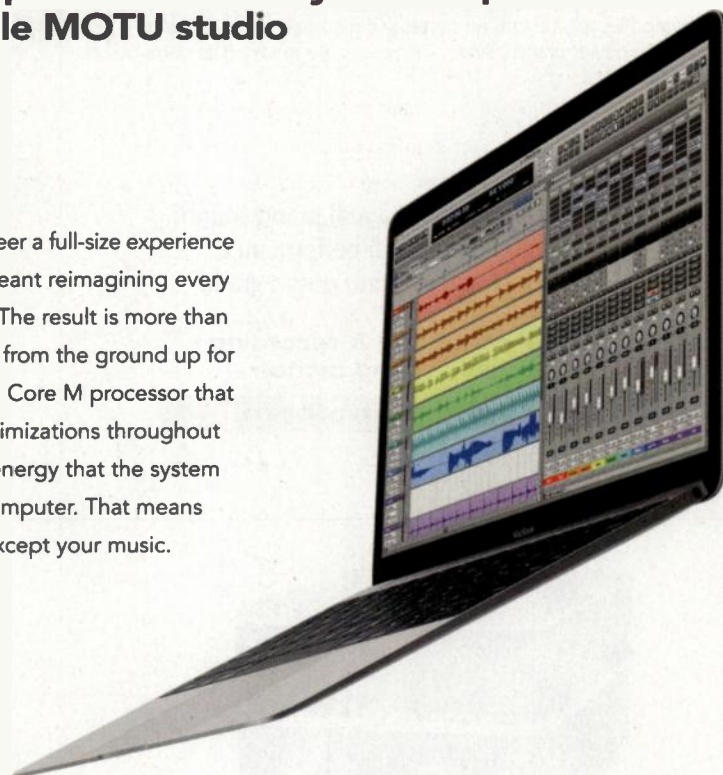
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Making Over a Home Studio Space

How to use acoustic materials to turn a spare room into a mix room

STEVE LA CERRA

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

We all love our toys, but one aspect of the studio that often gets overlooked is the room itself. Your listening environment influences every decision you make about recording and mixing, from how much low end the kick drum needs to how loud the tambourine should be in the chorus. Sadly, many people ignore this fact of life: The room is the most important component in the monitoring chain.

The *Electronic Musician* editors challenged me to a duel, posing the question: How would you turn a spare room into a usable mix room? Lucky for me, they said “mix room” and not “live recording room.” Creating a space for recording live instruments would mean serious construction and materials to ensure that the neighbors wouldn’t be calling the cops.

A mix room, however, doesn’t necessarily require that sort of isolation between internal and external sound, provided you don’t plan to monitor at excessive SPLs, and that your neighbors don’t have a thrash metal band in their living room. A mix environment does require thoughtful placement of speakers, the listening position, and room treatment. Don’t confuse room treatment with isolation. Room treatment addresses the way sound behaves *inside* a room; it does not affect the isolation of sound.

The *Electronic Musician* editors know about my collection of Star Wars action figures, and the spare room where they live. This will be the mix room. The spare room is rectangular, 14 feet, 2 inches long x 11 feet, 9 inches wide, with a ceiling height of 7 feet 9.25 inches. Without making your eyes glaze over, I’ll just note that this is fairly good geometry. We want to avoid rooms that are cubes,

or where one or two dimensions are the multiple of another (for example, 10x20x10 feet).

Figure 1 shows the empty room and Figure 2 shows placement of some of the gear. You’ll see two large windows on one side, and hard surfaces all around. The entire “wall” behind the mixing position is a closet with mirrored doors. Don’t blame me—they were there when I moved in. Monitors are a pair of Focal Alpha 80s, and while the speakers are capable of sounding very good, the room is not. There are tons of reflections and—in spite of the room’s small size—I measured a reverb time in the vicinity of 1.3 seconds. It’s tough to hear what the speakers are producing because you hear way too much room. Raising the volume of the speakers makes matters worse.

Room treatments to the rescue! We turned to our friends at GIK Acoustics (gikacoustics.com) to help us tame this beast. The folks at GIK made suggestions for speaker placement as well as for the type and quantity of treatment that would help improve the sound of the room.

FINDING THE SWEET SPOT

Generally your listening position should be centered between the side walls, roughly 38 percent of the room’s depth from the front wall (the front



Fig. 1. The blank canvas, with many reflective surfaces.



Fig. 2. Gear is placed in the room. The monitors are Focal Alpha 80s.



Fig. 3. Room treatments from GIK Acoustics are brought in to help tame the reflections.



Fig. 4. Placing GIK 244 bass traps behind the speakers cleans up our low mids a great deal.

defined as where the speakers will be placed). In this case, that's about 65 inches. We want to avoid placing the listening position in the middle of the room because that's where room 'modes' tend to be more pronounced (see "In Treatment" below). The speakers and listening position should form an equilateral triangle, with the apex about a foot behind your head. If you have access to an RTA (real-time analyzer), make measurements at the listening position. (One affordable acoustic analysis program is the FuzzMeasure tool (\$99), available at supermegaultragroovy.com/products/fuzzmeasure/). Make additional measurements closer to and farther from the speakers in increments of six inches. Observe if the frequency response changes for the better; you want to listen at the spot where the response is flattest. If you don't

have access to an RTA, use your ears: Listen to familiar recordings for balance across the spectrum, with no frequency range emphasized.

IN TREATMENT

Every room has fundamental acoustic issues and they typically start in the corners where low-frequency sounds collect. When the wavelength of a sound coincides with a room dimension, a "room mode" or resonance develops and there will be peaks and dips in the volume of that frequency at certain locations in the room. If you happen to be sitting in one of those areas, you will misjudge the balance of your mix. This problem is pronounced where two boundaries meet (like a wall and the floor) and even worse where three boundaries meet (e.g. two walls and a ceiling).

It's probably not an exaggeration to say that *all* corners require treatment. In this room, I started with six of GIK's Tri-Trap Corner Bass Traps (47 high x 23.5 wide x 16.5 inches deep). The front corners of the room are critical; in Figure 3, you'll see two Tri-Traps, one atop the other in each corner (just made it under the ceiling!). Behind the listening position we have one Tri-Trap in each corner; eventually we'll stack two more as per the front. The Tri-Traps target absorption in the low end but also provide absorption up to 5,000 Hz so that the room's frequency response is not skewed toward the high end.

The next issue is dealing with early reflections from nearby boundaries that smear the stereo image and hinder our ability to judge ambient content. They also cause comb filtering because the

reflections can be out of phase with the direct sound. We don't quite want each ear hearing *only* its respective speaker (that's a bit unnatural, sort of like listening on headphones), but we want to greatly reduce the "crosstalk" by creating a reflection-free zone (RFZ) at the listening position.

To accomplish this, we need treatment for the side walls and ceiling. Side wall treatments are GIK's 2-inch FreeStand Acoustic Panels, 24 wide x 60 high x 2 inches deep. They have feet, making it easy to adjust their location. Where to place them? Use the age-old trick: Get a friend and a mirror. Sit at the listening position while your friend slides the mirror along the side wall. When you see the reflection of a speaker in the mirror, mark the wall using a black Sharpie. (Your spouse will love that.) Basically, you need to place panels anywhere you can see the reflection of either speaker from the listening position. In Figure 3, you can see four 2-inch FreeStands, two on either side of the listening area. Note that they rise higher than the top of the speakers.

Tape the mirror to a broomstick and use the same technique to place ceiling treatment. In this room, I needed at least two of GIK's 244 Bass Traps with FlexRange Technology mounted as a "cloud" above the listening position. This will be part of phase two: The old tile ceiling won't support the Clouds, plus

the ceiling fan's gotta go, so we'll be putting in a new ceiling. But in the interim, GIK suggested we place the 244s directly behind the speakers (see photo 4), with the speakers as close to the wall as possible.

Here's an oxymoron for you: With the room treated, I can now hear the silence in my recordings and mixes.

This made a huge improvement in the low-mids, cleaning them up considerably.

Two GIK 4-inch FreeStand Bass Traps behind

the listening position kill the reflections from those pesky mirrored doors (no friend required this time. I knew those ugly mirrors would come in handy!). An option down the line is to add two more 4" FreeStands, or frame out the closet, fill it with insulation, and turn it into a giant bass trap.

THE SOUNDS OF SILENCE

Here's an oxymoron for you: With the room treated, I can now hear the silence in my recordings and mixes. I can hear when instruments and voices *stop* sounding because the room reflections no longer unnaturally extend the decay time of recorded sounds (particularly in the low end).

Treating the room made numerous other improvements: Previously, the room suffered from "one-note bass," but now it's easy to hear pitch in bass and bass synths. RTA measurements made before and after treatment show improvements in the frequency response, notably at 63, 80, and 100 Hz (13, 9, and 7 dB flatter, respectively). Stereo imaging is greatly improved—when an instrument is panned, its location is clearly defined, and the center image is rock-stable. Making decisions regarding reverb and delays is easier, and translates to other systems with consistency. Dynamics have more impact, and the overall listening quality is heads and tails above the non-treated room. ■

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Any EQ upstream of noise reduction will shape both the signal you want and the noise you don't.

WHEN TO EQ

It's also not a good idea to apply equalization to a track before removing broadband noise. Any EQ upstream of noise reduction will shape both the signal you want and the noise you don't. That's not a minor point when you consider that equalizer settings are often revisited and fine-tuned—sometimes multiple times—during mixdown. If you instantiate Denoiser post-EQ, you'll have to readjust its threshold (or the breakpoints that adjust processing depth for each frequency band, if you've crafted a custom noise-reduction curve across the spectrum) every time you reset an EQ parameter. There's enough to keep track of in post-production sessions without having to go back constantly and reset a noise-reduction threshold that was previously dialed in perfectly.

Interviews recorded in small, live rooms are of-

ten plagued by boomy or muddy room tone. If you need to use RX's Dereverb plug-in (see Fig. 2) to remove excess room tone—or reverb, for that matter—from a track, be sure to place the plug-in in an insert before equalization (and possibly in front of other processing, as well). Once you've attenuated the bassy room tone with Dereverb, you'll often find the dry voice doesn't need as much low-frequency EQ cut as you previously thought. On the other hand, if you apply EQ before Dereverb you might end up cutting the dialog track's low frequencies too much. Even a bright voice can excite bassy room resonances, and the dry component of the voice can all too easily end up being thinned too much by EQ cut before the room tone on the track is sufficiently diminished. And similar to using EQ before noise reduction, every time you fine-tune the EQ you'll need to readjust settings in Dereverb again. Always treat room ambience before applying EQ.

DYNAMIC GOES BEFORE STATIC

This last tip is more of a helpful suggestion than a hard and fast rule, but it should nevertheless help you produce better-sounding tracks faster (even in music production). When both static and dynamic EQ are needed on a track, you'll likely get the best results if you apply dynamic EQ first. By applying

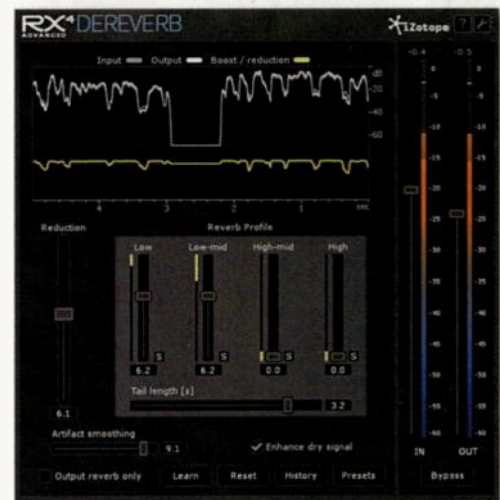


Fig. 2. iZotope's RX4 Advanced Dereverb plug-in reduces reverb and room tone in four independent frequency bands. For best results, it should generally be placed before any EQ.

dynamic EQ (or multiband compression, its close cousin) to fleeting peaks and troughs in isolated frequency bands, you corral the track into a more or less static spectral response. That makes it much easier to identify what's consistently wrong with the track's tone from start to finish. Static EQ finishes the job. ■

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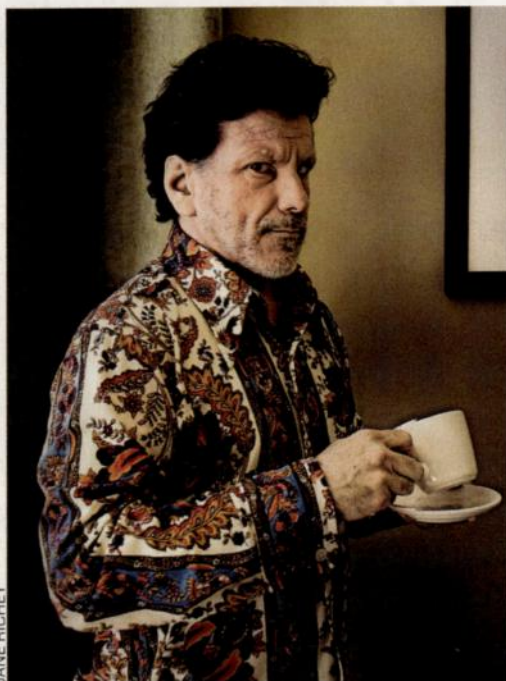
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Monitors in Moderation

Get what you can afford and allow your tastes to mature

BY GINO ROBAIR

Let's cut to the chase: For critical listening situations in the personal studio, such as mixing and mastering, you want to avoid monitors that are flattering or that make your music sound exciting, either by boosting the highs or emphasizing the lows. Rather, your goal should be to assemble a system that reveals any aspect of a mix that is out of balance.



However, monitors are only one part of the equation. Other aspects that determine the resolution of your critical listening environment include room dimensions, surface materials, and where furniture sits in the space.

While discussing room treatment in the March issue of this column, I mentioned the importance of having your studio analyzed before investing in, and installing, acoustic treatments when you're serious about creating a trustworthy environment for critical listening. Room analysis can be expensive on the front

end, but it will save you time and money in the long run.

To some people, this level of investment sounds like overkill. But I'm not suggesting that you need anything exotic, such as thousand-dollar speaker cables. Rather, in order to increase the quality of your work, at some point you will need to examine your listening environment *acoustically* and correct any issues that alter audio playback in ways that might not be easily heard in the listening position.

This is important to remember when shopping for monitors, either for the first time or when upgrading. Buying the most expensive set you can afford isn't necessarily a good idea. You have to keep them in balance with other aspects of your studio's level of resolution, which includes the quality of your microphones, preamp, and audio interface. Moreover, you need to know what you're listening for in order to get the most out of the purchase. And you need a room that supports the resolution you are working with.

Let's use the metaphor of the human voice to represent a studio playback system. Consider how much the physical characteristics of your vocal tract (among other things) affect the sound emanating from your vocal cords. The interplay between all of the parts—from the vocal folds to the lips—play a role in how your voice's personal "playback system" sounds.

Now let's use your speaking/singing apparatus to model how a room can affect the sound emanating from your monitors. Try this simple experiment: Play a continuous sound from your smartphone's tiny speaker, but aim the speaker into your wide open mouth; next, silently shape the words "wow wow wow" as the sound plays. Instant talkbox!

Next, look at your studio and where the speakers sit in relation to all the materials in the room. Although you can't move the walls and boundaries as fast as you can move your lips when silently mouthing "wow," each surface in the space is impacting the soundwaves that leave your monitoring system in a similar (though stationary) way. Your ultimate goal in the studio is to minimize any coloration the

room might add to what emanates from your monitor speakers.

LOCATION LOCATION LOCATION

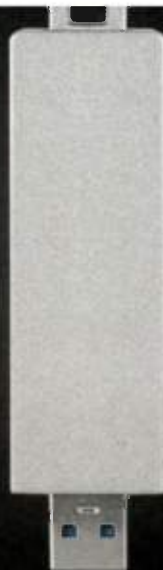
A colleague of mine is part owner of a small studio that has steadily increased its client base. Consequently, he and his partner have been upgrading their gear whenever they can afford it. When he is not engineering or playing gigs, he writes product reviews, which have occasionally included near-field monitors.

When it came time to upgrade the studio's monitors, he and his partner brought in an acoustician to help optimize the room so that the new system sounded its best in the main mix chair. Immediately, the two engineers heard the difference that proper positioning makes (not to mention other important room tweaks). And from that point on, my colleague would no longer review near-field monitors again: With his listening setup perfectly dialed in, there was no way he was going to change a single thing to test other products.

Mind you, these guys were already doing high-quality work. But like many pros, they continue to strive for greater resolution in their work environment. And often, it's only after you've spent countless hours using a particular set of tools with acute focus that you are able to hear the finer details in a higher grade of equipment.

Now let's step back for a moment: You don't need to have a perfectly tuned room to hear the difference between most near-field studio monitors. Even in a casual environment, it's surprisingly easy to tell them apart. (The caveat, of course, is that you have to make sure that you're always sitting in the sweet spot for the pair you're auditioning, in order to avoid phase issues and other anomalies.)

These days, many companies produce high-quality active monitors at relatively affordable prices, allowing you to get a reasonable amount of resolution on a tight budget. But don't think you need to overspend on products that are currently out of your league. Allow yourself to grow into higher-resolution audio naturally over time, as your studio and ear mature and your budget allows. ■



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