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THOME



MARK RONSON Inside His Star-Studded Fourth Album

> TV ON THE RADIO The 'Seeds' Studio Sessions

> > Dirty Little Distortion Secrets





REVIEWS

iZotope Ozone 6 Propellerhead Reason 8 Audio-Technica AT5045 Sample Logic XOSPHERE Novation Audiohub 2x4 AIR Advance Music Production Suite Wasaphone MKII Heavyocity Master Sessions







Alpha 65 - \$449ea

Focal Alpha Series

The all new Alpha studio monitors series redefines the level of performance you can expect from an affordable monitoring system. Equipped with 100% Focal drivers and robust class A/B amplifiers, the Alpha series will reveal your music like never before.

www.focal.com



Alpha 80 - \$599ea



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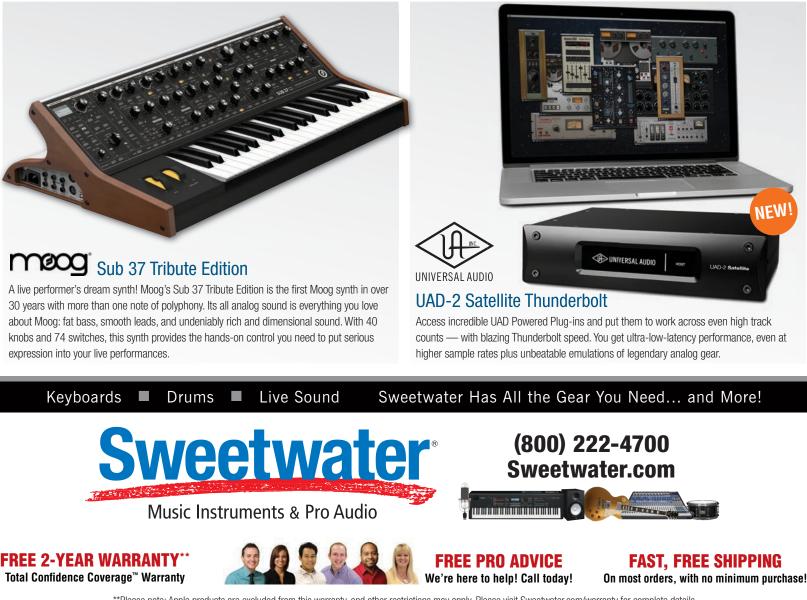
Steinberg Cubase Pro 8

More potent than ever --- and even easier to use! The latest version of Cubase gives you a powerful DAW with new workflow tools, added control over editing and effects, and much more. You get unlimited audio and MIDI tracks and unprecedented flexibility, so you can work the way you want. Take your projects from inspiration to polished mixes, all inside Cubase Pro 8.



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The smart way to add realistic drums to your music! EZdrummer 2 is really three amazing tools in one: a phenomenal drum and percussion virtual instrument, an expansive library of MIDI grooves, and an environment that lets you combine these sounds and MIDI grooves to create perfect drum tracks for any style of music. Call Sweetwater and find out more!



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ONTENTS NTS NTS





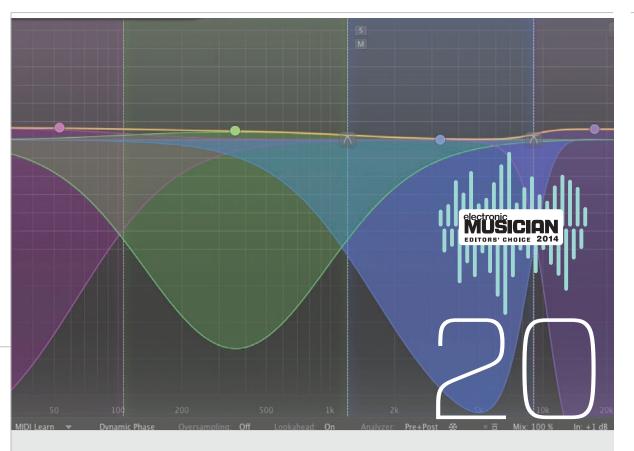
NEW GEAR Products from Telefunken, Roger Linn, Numark, M-Audio, and more!



MOD SQUAD Synthesizers.com keyboards and controllers



Avoid impulse shopping for gear.



EDITORS' CHOICE AWARDS

Our staff and contributors spend countless hours examining and comparing all the best new products, and once a year we get to play favorites. We've chosen the best of the best—31 exceptional pieces of studio equipment selected for their sonics, solid construction, innovation, and value.













PRODUCTION Dirty little secrets about using distortion



MASTER CLASS Nine \$0 music-marketing strategies



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TV ON THE RADIO Blending acoustic and electronic sounds, the perennial experimenters recorded their album Seeds in shifts in a new So Cal studio.



PLAYLIST New releases from Cracker, Cut Copy, Ghostface Killah, Sleater-Kinney and more!



MARK RONSON

For his own smash fourth album, multi-Platinum producer and artist Ronson handled everything from performance to mic placement. He takes us inside the concept and process behind Uptown Special.



















Diaphragm Instrument Mic













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MKII

Low-Fi

Microphone



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Dave Smith

Designed and built in California

insight Spoiled for Choice

WE KNOW how lucky we are here at *Electronic Musician*. As gigs go, it's hard to beat the opportunity to try out cutting-edge music gear on a daily basis. So we consider ourselves extra-privileged to be able to honor the best new products in our annual Editors' Choice Awards.

Each year, our staff and reviewers take stock of the hundreds of new music technology products that have been released in the past twelve months (AES show to AES show, to be specific) and painstakingly narrow the list down to a few dozen favorites.

What makes a product an award winner? Although sound quality takes top priority, we're aware that musicians are also dealing with limited resources, so we look for products that offer useful and/or unique features, in a package that won't break the bank.

One of the great things about music technology is that game-changing products can come from both not only from corporate giants but also from small-timers in their garages, and this year we honor both (and all kinds of innovators in between). Join us in congratulating our honorees, beginning on page 20.

"Best Of" anything is subjective, so we'd like to hear from you. What were your favorite products to be released in the past year? Let us know at ElectronicMusician@ musicplayer.com.



SARAH JONES EDITOR sjones@musicplayer.com

electronic MUSICIAN

WEB HIGHLIGHTS This month on emusician.com

NAMM 2015

Follow our complete, up-to-the-minute NAMM Show coverage, straight from the Anaheim Convention Center. Tune in starting January 22!

Plus...

Check out our Editors' Choice Awards slideshow New Web Column: The DIY Advisor

Read our expanded Renegades of Rhythm tour report Learn more Arturia iProphet tricks Tutorial: Cable Soldering 101

...and lots more!

Mujjo Touchscreen Gloves

gadget geek 💛 👘

Recording on location in lceland? DJing at an ice rink? Or just want to stay connected during your cold commute?

With the Refined Touchscreen Gloves from Mujjo (\notin 20, or approximately %25), you won't have to expose your digits to freezing temps just to use your touchscreen device. These



stylish, black gloves are knit with silver-coated nylon fibers for all-over conductivity, and feature extra-warm fleece lining and silicone grips to help avoid the dreaded device drop.

app tip Arturia iProphet

Vector synthesis at your fingertips

BY MARKKUS ROVITO

SEQUENTIAL CIRCUITS' one-and-only digital synth—the beloved Prophet VS vector synth—rises anew with the simulation Arturia iProphet for iPad (iOS 7 or later, arturia.com). This adaption retains all the essential features, such as the four oscillators with a joystick mixer for crossfading between them, but preset editing becomes easier with greater hands-on controls and displays. The following steps help you edit vector-morphing presets and then bring iProphet into a larger production environment.

Tap on the four red LED Wave displays to choose your four oscillators from 127 waveform types.

2. Tap ENV TIME On to automate the Mixer joystick with an envelope. Now adjust the four Time knobs to control the time

between Mixer envelope points while playing notes to hear the changes.

3. In the upper right-hand corner, tap the Vector page button to edit the oscillator frequencies and fine-tuning in the OSCS section (see screenshot). In the Envelope Mixer, drag the envelope points to different spots and hear the changes. Also try some Loop settings to repeat the envelope automation by the number in the Repeat field.

To exploit the Mixer envelope's repetitions, return to the Main screen and tap the AMP ENV display to edit it. Create longer envelope stages to sustain the note.

5. To open iProphet within the free sequencing/recording TableTop app, open TableTop, start a new session, tap the



Keyboard icon in the upper right corner, and then drag iProphet from the device list onto Tabletop to use it with other instruments in full productions.

Hit the iTunes App Store to pick up iProphet for \$9.99.

ASK!

I NEED TO BUY CABLES FOR MY STUDIO AND WOULD LIKE TO GET YOUR OPINION ON WHICH BRAND HAS THE CHEAPEST AND BEST THAT I CAN GET.

ROD DAVIES BENNINGTON, VT VIA EMAIL



Unfortunately, when it comes to quality audio gear, *cheap* and *best* rarely go together. Although so-called accessories such as cables and stands are an integral part of your setup, this is where people are most likely to skimp when they outfit their personal studios. You can have the best mics, preamps, and speakers in the world, but you've wasted your money if you use them with cables with lousy shielding or flaky connectors.

That's not to say that you need to spend thousands of dollars on products made with exotic materials, either. A number of companies focus specifically on these studio products, and cables of any useful length (25 feet for mic cables, for example) can run you \$15 to just over \$50 each.

The most cost-effective solution for XLR, TRS, and even regular instrument cables is to build them yourself, and the DIY skills required to do this are elementary and easy to master. Simply order a length of cable that will cover your needs, purchase the connectors, and then solder them on. This is what pro studios do, because they want to have control over every aspect of the signal path, and it's significantly cheaper to make them than to buy off-the-shelf cables of the same quality. While you're at it, you can create all the cable varieties you need—XLR (male or female) to TRS, balanced 1/4" headphone extension cables, and so on—each color-coded by length for easy, at-a-glance identification.

For a step-by-step guide to building your own cables, visit emusician.com/solder101. THE EDITORS

The SHE'S singer Sami Perez builds cables at Women's Audio Mission in San Francisco.



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

SCRATCH THEATER DJ Shadow and Cut Chemist Pay Tribute to Afrika Bambaataa's Vinyl on Tour

MARKKUS ROVITO

ON NOVEMBER 25 AT THE BEAUTIFUL FOX THEATER in Oakland, California, DJ Shadow and Cut Chemist wrapped up the Renegades of Rhythm tour, a notable moment for hip-hop and DJ culture. The tour launched in early September in New York out of an idea: Before retiring Afrika Bambaataa's monumental record collection to Cornell University's archives, Shadow and Cut would take the vinyl relics for one last spin.

The hip-hop heads ate up every minute of the DJs' choreographed interplay, as they deftly slipped between well-planned track lists and

bouts of furious turntablist freestyling on six decks. They laid out a trip through time, playing the funk, disco, soca, calypso, West Indian, West African, electro, and early techno and hiphop classics that not only spawned a million samples but also propelled a cultural phenomenon around the world.

The somewhat muddy sounds from records up to 40 years old only fed the mood of joyous nostalgia. However, the big-



gest ovation came when the boys deviated from their scratch routines. Cut Chemist took to an ancient drum pad machine of some sort, while Shadow proved that he's a seriously funky drummer when laying sticks to a drum pad, and the

two launched a frenetic beat session that sent the crowd on a bullet train to cray town.

After two full sets the DJs, like a fireworks finale, let rip one last blast of feverish finger work on the turntables for a thunderous roar of approval. It occurred to me that as some DJs were busy doing photo shoots for their endorsement deals, these two artists were rehearsing a fully realized, collaborative show and actually performing music on what-even after 30 to 40 years-is still a new-ish instrument.

I BELIEVE IN A SOCIAL SAFETY NET, I BELIEVE NO ONE SHOULD STARVE, EVERYBODY SHOULD HAVE A ROOF OVER THEIR HEAD, EVEN HEALTH CARE, BUT NO ONE IS ENTITLED TO BE A SUCCESSFUL ARTIST."

Critic Bob Lefsetz, commenting on YouTube sensation Pomplamoose's money-losing tour in The Lefsetz Letter, November 26, 2014

Renegades of Rhythm

DJ Shadow & Cut Chemist play

Afrika Bambaataa

IN THE STUDIO

>>> Liam Hayes with Nathan Cook BY BARE

BY BARBARA SCHULTZ

ARTIST/SONGWRITER LIAM HAYES MADE HIS LATEST RECORD, *SLURRUP* a terrific fusion of '60s punk and psychedelia—with engineer/producer Nathan Cook in Minbal Studio in Chicago. On *Slurrup*, Hayes is supported by Cook's friend drummer Eric Colin Reidelberger, who in turn brought bass player John San Juan to join the project. "We spent three months working on pre-production and rehearsing the songs that Liam had written," Cook recalls. "As we worked on developing the music, the feeling of what the album might actually be began to emerge."

All analog and all original, the album was tracked to Cook's 1965 Scully 280 and '70s Otari MX7800 1-inch, 8-track machines. "Then I did a tape transfer of the basic band tracks to my Studer A800 24-track 2-inch so that Liam had more tracks for overdubbing and layering elements against the band tracks," explains Cook, who also mixed the album on the studio's 1970s Quad 8 Ventura console.

Those layers included multiple guitar and keyboard parts, performed on vintage instruments that perfectly fit the feel of the songs: "Guitars and keyboards were amplified and miked with an SM57 and a Coles 4033, which were blended to one track on tape," Cook says. "The guitars were a sanded-



down Telecaster and a '60s Vox Tempest 12-string electric going into a 1963 Fender Tremolux, '60s Fender Vibroverb, Hiwatt 50 combo, or a Leslie. The keyboards were a Wurlitzer, Fender Rhodes, and Farfisa compact."

Hayes' voice also has a natural '60s vintage quality. Cook says he captured vocals with an original Telefunken U67 and "a cheap Oktava MK 012. Vocals went from the Quad 8 preamps into an LA2A to tape. I also used an SPL Transient Designer, Manley ELOP, tape delays, and an EMT 140 plate reverb. During mixing, elements were re-amped through '70s effects boxes. I constructed tape loops for 'Channel 44' and 'Theme from Mindball.' The only plug-ins we used were Glade plug-ins, to sweeten the smell of the studio."

SPOTLIGHT Cubase 8



With Cubase Pro 8 (\$599.99) and Cubase Artist 8 (\$329.99), Steinberg has made significant improvements to an already robust, full-featured DAW. The audio engine has been completely rebuilt to improve audio processing performance, particularly with multitimbral, disk-streaming instruments, while the GUI has been enhanced with an easier-to-read Inspector and Track list and the ability to dock the MediaBay and VST Instrument Rack windows.

Top among the new workflow features is the addition of VCA faders that let you control a group of faders with one master: Now, you can combine fader automation curves and omit redundant automation. Each channel strip now gets an updated EQ module, and Cubase Pro 8 adds group routing for multiple channels, buses, and stems, as well as wave meters within the mix console. On top of that, Pro 8 fully integrates VST Connect SE 3 into Cubase, allowing you to record audio and MIDI data remotely over the Internet.

Instruments and effects also get a bump up. Along with Groove Agent SE 4, you get Acoustic Agent drum kit, which includes 20 style patterns, and the Allen Morgan Rock-Pop Toolbox featuring 30 construction kits. Also worth noting are the effects, particularly the Multiband Envelope Shaper, Multiband Expander, the VST Bass Amp, and the Quadrafuzz v2 distortion module. And check out the new Chord Pads, Chord Assistant, and MIDI tempo detection when you're ready track parts into the program

To learn more about Cubase Artist 8 and Cubase Pro 8, visit steinberg.net/cubase.



1 Telefunken M60 FET

Small-diaphragm condenser mic \$595 (cardioid only); \$995 (all three capsules)

HIGHLIGHTS Telefunken's first FET-based, solid-state condenser microphone, featuring a discrete Class A amplifier • supports TK6X interchangeable capsule system (featuring cardioid, hypercardioid, and omnidirectional polar patterns) • 20Hz to 50kHz (±2dB) response • custom American-made transformer

TARGET MARKET Professional and personal studios

ANALYSIS Designed for recording percussion and acoustic instruments, the M60 FET uses the same capsules as the company's ELA M260 smalldiaphragm tube mic system.

telefunken-elektroakustik.com

2 Roger Linn Design LINNSTRUMENT

3-dimensional, multitouch MIDI controller **\$1,500**

HIGHLIGHTS Controller configured with 8 rows of multitouch sensors that capture velocity, as well as x, y, and z axis data independently • each row is divided up into evenly spaced, 0.75" squares, each with a 3-color LED below it to indicate the status • channel-per-note MIDI mode • standard MIDI and USB ports • lightweight and portable: 22.5" x 8.5" x 1"

TARGET MARKET Musicians and composers

ANALYSIS A state-of-the-art controller for expressive music making.

rogerlinndesign.com

3 NUMARK N-WAVE 360 DJ monitor speakers \$99 street

HIGHLIGHTS Active monitors with 3" low-frequency driver and 1" silkdome tweeter illuminated with a blue LED • 60W peak power • amplifier is in one of the speakers; monitors are connected using a TRRS cable • 80Hz to 20KHz frequency response • bass-boost switch • front-panel volume control • rear-panel bass port • RCA inputs • 1/8" stereo audio and subwoofer output

TARGET MARKET DJs and personal studios

ANALYSIS Low-cost and portable powered monitors for desktop use.

numark.com

4 AUDIO-TECHNICA AT8024 Camera-mountable

condenser microphone **\$249**

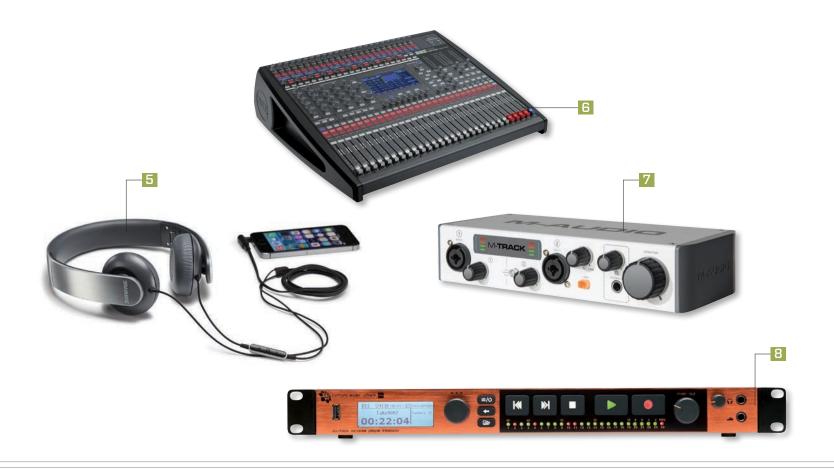
HIGHLIGHTS Fixed-charge mic designed for use with DSLRs, video cameras, and camcorders • operates in mono or mid-side stereo mode • 40Hz to 15kHz frequency response • 3-position input pad • 80Hz lowcut filter • mic powered by a 1.5V AA battery • integrated shoe mount • includes permanently mounted 6' cable with 3.5mm stereo output plug • isolation via shockmounts • includes two windscreens and battery

TARGET MARKET Musicians and videographers

ANALYSIS A ruggedly built yet lightweight mic that is competitively priced.

audio-technica.com

All prices are MSRP except as noted



5 SHURE SRH144, SRH145 AND SRH145M+ Stereo headphones \$39-\$49 street

HIGHLIGHTS Entry-level, collapsible headphones with padded headband and adjustable ear cups • the SRH144 has a semi-open-back design and enhanced high-frequency response • the SRH145 is closed-back and offers more low end • the SHR145m+ includes an inline mic and remote that is compatible with Apple iOS devices

TARGET MARKET Musicians and music enthusiasts

ANALYSIS Low-cost headphones with a low-profile design for casual listening.

shure.com

6 BBE MP24M Digital mixing console \$1,999.99

HIGHLIGHTS 24 Class A mic preamps
8 aux sends and 4 subgroups with
32-bit floating-point DSP processing
2 stereo aux line inputs • AES/
EBU output • 2 digital effects engines
inputs have compressor, gate, HPF
and LPF, and 4-band parametric EQ
stores 100 scenes • remote mixing
using iDevice or PC • 2.4GH wireless
connectivity for stereo playback

TARGET MARKET Live sound, houses of worship

ANALYSIS A compact digital mixer that offers BBE Sonic Maximizer processing.

bbesound.com

7 M-AUDIO M-TRACK 2x2 USB audio interface \$99

HIGHLIGHTS Updated version of the company's 2-channel USB bus-powered interface featuring improved preamps • metal chassis • 24-bit, 96kHz resolution • two inputs on XLR/ 1/4" combo jacks • input 2 accepts instrumentlevel input • balanced 1/4" TRS outputs • zero-latency monitoring • headphone jack with dedicated level control • LED meters • bundled with Ableton Live Lite

TARGET MARKET Musicians, project studios

ANALYSIS M-Audio's low-cost stereo interface gets a new case and updated mic preamps.

m-audio.com

CYMATIC AUDIO UTRACK 24 24-track recorder and player \$999 street

HIGHLIGHTS Records up to 24 tracks simultaneously at 24-bit/48 kHz to USB drive (not included) in FAT-32 format • 24 analog inputs and outputs on D-Sub connectors • 24-channel playback • 5-second pre-record buffer • input level metering, including input focus mode • MIDI I/O • word clock I/O

TARGET MARKET Concert venues, touring bands, houses of worship

ANALYSIS The device can also be used to record and play soundchecks to let you hear how you sound through the PA.

cymatic-audio.com



DIGITECH JAMMAN VOCAL XT Vocal looping pedal \$149.95 street

HIGHLIGHTS XLR input with dbx mic preamp and +48V phantom power • XLR output • 10 minutes of loop time and unlimited overdubs with undo and redo • 24-bit, 48Hz resolution • supports JamSync automatic synchronization • ability to clear loop memory independently of playback • individual LEDs indicate Play, Record, and Overdub modes • 9VDC power supply included

TARGET MARKET Vocalists

ANALYSIS A highly portable looper that can be synchronized with other pedals in the JamMan line.

digitech.com

D YAMAHA DBR-10, DBR-12, AND DBR-15 Powered loudspeakers \$529, \$659, \$899 each

HIGHLIGHTS Based on the DSR- and DXR-series powered P.A. speakers • Class-D amplifiers (up to 1,000W) with built-in digital signal processing • crossovers feature linear phase FIR filters • D-Contour dynamic multiband processing • max SPL of 132 dB • compact and lightweight plastic enclosure • can be used as wedge monitors on the floor

TARGET MARKET Live sound, houses of worship

ANALYSIS An affordable P.A. system that offers a big sound while remaining lightweight and portable.

yamaha.com

11 KOSS PRO4S Studio headphones \$149.99

HIGHLIGHTS Uses newly designed SLX40 transducer element • D-shaped, aluminum ear cups with leather-wrapped memory foam • detachable cord can be inserted into either ear cup • audio passes through to the jack in the unused ear cup for daisy chaining • headband includes mesh-wrapped foam • folds flat

TARGET MARKET Musicians, engineers

ANALYSIS Studio headphones designed to fit well and feel comfortable during extended periods of use.

koss.com

12 NATIVE INSTRUMENTS TRAKTOR KONTROL S8 All-in-one DJ system \$1,199

HIGHLIGHTS Two decks, each with eight color-coded pads • touch strips for pitch bend, vinyl scratch effects, and more • four mixer channels with standalone mode

- 24-bit, 48kHz audio interface
- XLR and RCA master outputs

• MIDI I/O • two high-resolution displays for viewing waveforms and performance panels • Remix Deck view with eight dedicated faders

TARGET MARKET DJs and beat producers

ANALYSIS The company's new flagship digital DJ system includes Traktor Scratch Pro 2 software.

native-instruments.com

All prices are MSRP except as noted



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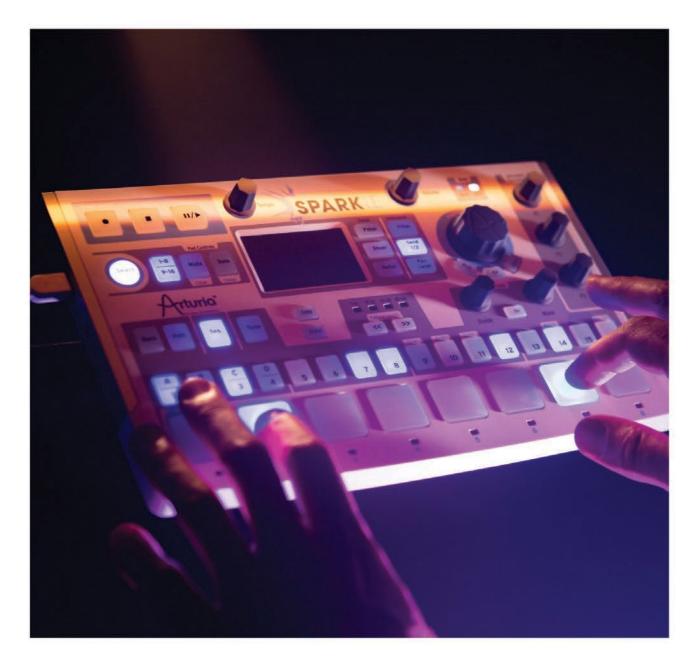




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Combining the power of analog synthesis, physical modelling and samples, through the intuitive workflow of a portable hardware drum machine, SparkLE is a highly creative beat production center.

SYNTHESIZERS.COM

Keyboards and Controllers

A comprehensive system for modulars and MIDI

BY GINO ROBAIR

F ew companies are as serious about MIDIbased keyboard controllers for modular synths as Synthesizers.com. In addition to its 37- and 61-note keyboards, the company offers a slew of related modules to meet a variety of playing styles. Although the controllers are designed for use with 5U, Moogstyle Synthesizers.com modules using 1/4" jacks, they work flawlessly with Eurorack and Frac Rack systems with the help of 1/4"-to-3.5mm cables.

The velocity- and channel pressure-sensitive QKB keyboards have semi-weighted Fatar keybeds set into a metal frame, with solid walnut ends sold separately. The keyboards are fully programmable, allowing you set four splits, enable velocity and pressure curves, and select channel and transposition. Two MIDI inputs can be used for additional controllers that merge data with the main keyboard. The QKB feels solid and is a real pleasure to play—you'll want to use it as your main controller.

Synthesizers.com offers a number of keyboard bundles around common controller configurations, but it's just as easy to design your own: Add control modules directly onto the keyboard frame (mounting holes are provided) or within boxes designed to hold 1, 2, or 4 modules. Start with the Q174 MIDI Interface Module (\$264) to get 1V/ octave signals for pitch, gate, velocity, note priority, and gate behavior, along with continuous controller and an additional voice of CV/gate signals. The Add In jack accepts CVs for transposition and pitch bend. The Q174 can also be used on its own as a MIDI-to-CV/gate interface.

I strongly recommend supplementing it with the Q175 MIDI Interface Aid (\$130), which provides portamento (switchable to linear or exponential), an arpeggiator (1 and 2 octaves, up or down), MIDI Thru, and another MIDI Merge input.

Synthesizers.com offers an array of single-control modules, including a joystick, a ribbon, a force-sensing touch-pad, a knob that also senses pressure, a dualaxis thumb-stick, a stompboxstyle button, and a foot-pedal

interface. My review system included the Q181 Wheel (\$145), Q181EB Expression Block (\$175), and Q181V1 Whammy Bar (\$225). All of these modules have an adjustable Auto Gate function, which sends a gate signal when the controller is moved, as well as a Switch gate that is activated when the controller gets to the end of its travel. In addition, these controllers have three-color status LEDs, which you can configure via internal jumpers—very handy.

The Wheel, available for pitch-bend or modulation control, offers three voltage ranges, provides a useful amount of resistance and feels solid. The Expression Block is equally robust. Reminiscent of the triggering device on an Ondes Martenot, it can be used for pitch, modulation or gating. I enjoyed using it to transpose an arpeggiated pattern up a whole step.

Though the Whammy Bar looks like a gimmick, it's an agile and flexible controller. And you can be remarkably precise with it after a bit of practice; it's my favorite device for adding pitch bend. A dual-axis Whammy Bar (\$285) is also available.

No matter what configuration you choose, Synthesizers.com controllers combine old-school functionality and feel with modern, high-quality design and parts.

Abbey Road Studios

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CFX CONCERT GRAND

VIRTUAL PIANO

Garritan placed the awe-inspiring Yamaha CFX Concert Grand Piano in Abbey Road Studio 1, where award-winning engineers used the world's greatest mics and equipment to create a stunning virtual instrument. Every facet of this project reflects the perfection that only the most passionate can produce.

"...sounds absolutely beautiful, with exquisite tonal detail, powerful lows, glassy highs and a level of expressiveness that has to be felt to be believed." - **Computer Music**

"...this instrument really excels where most others fail: hearing it solo..." - Downbeat

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The 2015 *Electronic Musician* Editors' Choice Awards 31 PRODUCTS WORTHY OF YOUR 31 PRODUCTS WORTHY OF YOUR

BY MICHAEL COOPER, MARTY CUTLER, SARAH JONES, STEVE LACERRA, GINO ROBAIR. MARKKUS ROVITO. AND GEARY YELTON

Of all the issues that we put together each year here at *Electronic Musician*, February is the most fun. That's when our editors and reviewers convene for many, many hours, comparing notes about which products stood out in the previous year. But this isn't a beauty contest or a way to give undeserved recognition to our advertisers. Rather, the curmudgeons who put their reputations on the line in every issue make sure that each Editors' Choice Award is earned; the products must be notable and outstanding, either in their exceptional build and sound quality, unique or innovative features, or by providing the best value.

So instead of trolling the gear forums in November, this surly band of stubborn and highly opinionated critics argue about what *is* and *is not* award-worthy. Once the dust settled, 31 products (released within the eligibility window between AES 2013 and AES 2014) made the cut this year.

So, let's hear it for the 2015 Editors' Choice Award winners, and give an extra round of applause to the creative men and women who developed the tools we use to make our dreams come true.



It's Extra Spatial! MAKE NOISE ERBE-VERB Now you have voltage control over time and space

What do you get when you combine the talents of an innovative DSP engineer with a boundary-stretching hardware company? From the creative coding of soundhack's Tom Erbe and synth manufacturer Make Noise comes the Erbe-Verb, a stereo reverb module designed for a greater purpose than simply re-creating resonant chambers. With voltage control over every parameter (size, decay, predelay, dampening, wet/dry mix, and even reverse), as well as a built-in modulator and the ability to lock to a pulse, this Eurorack module is a compositional toolkit that can be utilized anywhere within a patch-from sound source to final destination. Although the Erbe-Verb excels in its traditional role of adding spatial dimension to your sounds, once you put this module in your rack, you'll never look at reverb the same way again.

My First Modular LITTLEBITS SYNTH KIT Don't forget to let the kids use it once in a while

While modular synthesizers are fun and powerful, they can be very intimidating to the uninitiated. littleBits, in collaboration with Korg, tackled that problem single-handedly with the Synth Kit, a collection of 12 magnetically stackable, single-function, colorcoded modules. In addition to providing an excellent introduction to synthesis for children and adults, the Synth Kit sounds so good, you won't hesitate to use it on a production. The kit provides a complete synth voice-a resonant lowpass filter styled on the classic MS-20, a pair of oscillators, a delay, a keyboard and step-sequencer, and a miniature powered speaker, among them-that you can extend with the company's growing library of modules. Additional modules cost as little as \$7.95 and include lights, logic functions, sensors, motors-you name it. The bottom line: It's a great-sounding synth that everyone can enjoy.

Ribbon Art Nuvo AEA NUVO N22 *An active ribbon mic that anyone can afford and trust*

Whether they're used as drum overheads or on vocals, guitar amp, piano, brass, and woodwinds, ribbon mics are a great asset in the home studio. But to get the best results from a passive ribbon, you need a preamp with enough gain and the correct impedance to keep the tone from suffering-two conditions desktop interfaces rarely meet. With this in mind, AEA developed the Nuvo N22, which combines the company's popular Big Ribbon technology with phantom-powered JFET electronics and a custom transformer. The result is an active ribbon mic that doesn't compromise sound quality, yet fits the needs of the personal studio-affordable price and small enough to easily position. And with its ability to handle high SPLs, it works equally well on guitar amps, drums, and percussion.



EveAnna's Greatest Hits MANLEY CORE *All-in-one channel strip for two Gs*

When we heard Manley Labs was releasing a standalone reference channel strip that included some of the best features of its product lines and that it would street for \$2k, we were all ears. Core provides the entire signal path you need for cutting pro-level vocals or instrument tracks: a Class A tube-based mic preamp, a solid-state DI (suitable for guitar, bass, and line-level gear), 3-band EQ, a compressor, a limiter, and analog metering. In addition to the excellent sound quality and build that Manley is known for, we were very impressed by the user-friendly design that anyone can figure out. And with the compressor placed ahead of the preamp, as well as a brickwall limiter at the end, you'll never be caught off guard by sudden level changes that would otherwise ruin a keeper take.

Honey, I Shrunk The Preamp! FOCUSRITE RED 1 500 SERIES Add some beef to your Lunchbox

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When it came to the 500 Series this year, Focusrite made us see red! With a modular reissue of the highly prized Red 1, the company brings the neutral sound and excellent performance characteristics of this classic single-channel preamp into a format and price range well suited to personal studios and pro facilities, alike. Built to the original design spec, including the same input and output transformers, the Red 1 500 Series has a no-nonsense feature set—a stepped gain control, phantom power, a polarity switch, and backlit VU meter with selectable calibration level—that provides the transparent gain and extra headroom you need to bring out the best in your mics. Now you can find out what your microphones really sound like.

A Kick in The Cans BLUE MO-FI Active headphones for an active lifestyle

Mobile devices such as iPads and iPods increasingly find their way into the musician's workflow. Unfortunately, their underpowered headphone output can compromise playback quality. Blue took that as a challenge and designed Mo-Fi, powered headphones designed to sound great with any playback system. Using an all-analog signal path, the amp is designed to get the best performance from the 50mm dynamic drivers, ensuring high output with very low distortion. You can switch on low-end emphasis (no DSP used here!) or turn off the amp and use them in passive mode when listening on a highoutput system. The amp's battery can be recharged via USB. Inspired by the suspension system of Formula One racecars, the headphone's ergonomics make them comfortable to wear for long periods. Blue pulled out the stops with Mo-Fi, making it a shoo-in for an award this year.







Fascinatin' Rytm ELEKTRON ANALOG RYTM Analog with a dash of digital

In order to offer what today's beat creators need, drum machines arguably require greater flexibility than the average synth. But Elektron went even further with Analog Rytm. More than an eight-voice analog drum machine, Analog Rytm enhances its excellent-sounding electronic percussion with sample playback capabilities, all of which are controlled by a dozen pressure-sensitive pads that provide Aftertouch. Your patterns can have up to 12 tracks, and the Analog Rytm will play eight voices simultaneously, along with a dedicated FX track for each voice, governing delay, reverb, distortion, and compression. Analog overdrive and a multimode filter add even more power to the sound. Because of its malleable timbral capabilities and real-time processing, Elektron Analog Rytm was an obvious standout for an Editors' Choice Award.

Synths With Moxie YAMAHA MOXF SERIES *Mo' betta keys*

With the MOXF keyboards, Yamaha borrowed many excellent features from its high-end workstations and served them up at roughly half the cost. In addition to sounds from the Motif XF and XS, the MOXF has 128-voice polyphony, circuitmodeling effects, and a Performance mode that lets you combine voices and deploy them through the arpeggiator. The MOXF tops it all with a powerful 16-track sequencer: You can play everything in from start to finish or drop in ideas from the exhaustive library of phrases. Because the keyboard's USB connection transmits audio data, you can use the workstation's stereo inputs to record external sources directly to your DAW, simultaneously with your sequences. The MOXF's affordability, coupled with a wealth of sonic and creative tools, made it a no-brainer for an Editors' Choice Award.

HI-FI WI-FI TASCAM DR-44WL The new Golden Age of wireless

In the densely populated field of handheld digital recorders, it takes a lot to stand out from the crowd. but this year the DR-44WL has done just that. For starters, it can record up to four tracks at 24-bit, 96kHz resolution using its built-in mics and XLR combo jacks. But the feature that knocked it out of the park is the built-in wi-fi capabilities-no router necessary: The DR-44WL will hook up with a smartphone, iPad, and other mobile gadgets. Tascam offers an app for Android and iOS devices that can control the recorder remotely, publish your tracks directly to social media, or send the data to your computer. Other useful features, such as built-in reverb and simultaneous PCM and MP3 recording, helped propel the DR-44WL to the top of our Editors' Choice list.



Brutally Analog ARTURIA MICROBRUTE SE *Small footprint, big sound*

Who knew that so much power could derive from a diminutive, 25-note keyboard? The MicroBrute has a fully analog signal flow that starts with three simultaneously available waveforms and the Overtone Oscillator to thicken the sound. You control the oscillator mix with a Control Voltage. But the tone of the instrument comes from the resonant, multimode Steiner-Parker filter, which is great for creating basses, leads, and rich percussion and effects when you take advantage of all the crossmodulation capabilities of the onboard patchbay. Throw in a step sequencer and a wide-ranging LFO that can sync to it, and you're in for some excellent frequency or amplitude modulation.

Double Fantasy WAVES/ABBEY ROAD REEL ADT Surpassing Lennon's wildest dreams

Reel ADT emulates the sound of "Artificial Double Tracking," pioneered at Abbey Road Studios in the '60s for The Beatles. Because track count was precious, the engineers used a spare tape machine to create doubling effects. The source sound was routed to a secondary tape deck that was recording and playing back in real time. The physical distance between the record and play heads created the doubling effect. But Reel ADT goes further by allowing you to advance or push back the double for pitch variations, with separate tape saturation emulation for the dry and processed signals. And it models the wow and flutter characteristics of those machines, letting you tweak the modulation time to create effects such as flanging and phasing. Try it and you'll see why it's a winner this year.

Get Your Kicks On Route 66 MOTU 1248 *Paving the way for AVB networking*

Boasting the capability to route a whopping 66 audio channels (32 in x 34 out), the 1248 is the flagship of MOTU's new line of audio interfaces, and the first Thunderbolt interface to incorporate 48-channel mixing and AVB networking. The 1248's 48-channel digital mixer provides modeled analog EQ and compression and can source signals from the physical inputs, audio channels from host software or audio network streams while providing seven stereo aux buses, three audio groups, and a reverb bus. AVB networking enables the 1248 to stream hundreds of channels of audio between multiple interfaces and computers. A wi-fi router may be connected directly to the 1248 using a standard Ethernet cable, enabling the 1248's mixer to be controlled via smart phone or tablet. In a word, wow!







Available At These Preferred Retailers

HarbingerProAudio.com HARBINGER

of applications. All of them offer premium mic preamps with plenty of From the stage to the studio, from podcasts to rehearsals, your performance should always be the central focus...and with Harbinger versatile, no-nonsense mixers offer an affordable solution for a variety LvL Series mixers, that's exactly where you land. These rugged, and 5-channel configurations, at your Harbinger dealer today. not your gear. Check out the Harbinger LvL Series, available in 12, 8 features top quality built-in effects. Now you can focus on your music... headroom and they're loaded with features you need, like assignable AUX IN routing, 5-segment LED meters and more. The L1202FX even

L502 5-Channel Mixer - 🔘 o o o o ð 9 2-3 0 S 0 XUN. 4-5 0 : • ٢ Y ۵¢ 0 O. :) ♥ ۲ : ٢ O Ô 0 0 10 ੁ**-**-9-10 0 = = = O 0 Ôi 0 11-12 HARBINGER POWER 00 0-0 HITE 0.0 U LVL STR <u>ه ک</u> - \sim 124 1 i Yat \bigcirc 10 ... LVL AUD NOWER 0 0 00 L802 8-Channel Mixer 0 Ó 0

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A Little Less Talk and a Lot More Axes PEAVEY REVALVER 4 *How about some guitar models to play through those amp models?*

With ReValver 4, Peavey has taken its modeling work to a new level by introducing the stunning ACT (Audio Cloning Technology), which profiles the sound of your guitar and then imbues it with the sonic characteristics of another-either electric or acoustic. The superb new RIR 2 Cabinet Simulation module is another notable addition. With its easy-to-use interface, you can select among many great-sounding speakers while gaining more control over room ambience and mic placement than before. For live use, Peavey added Gig Mode to the standalone version, which lets you load banks of your favorite presets into a large, easy-to-see GUI. Between its impressive new features and its revamped interface, ReValver 4 is bound to shake up the competitive guitar-ampand-effects-modeling market.

Thunderbolt and Lightning UNIVERSAL AUDIO APOLLO TWIN The Apollo has landed ... on your desktop

apollo | twin

Many musicians have been waiting for a more affordable model of the Apollo interface to come out, and their patience was rewarded this year. Available in Solo and Duo versions, the Apollo Twin costs less than half the price of the larger units, but offers the same pristine audio quality and UAD-2 plug-in access, along with the speed of Thunderbolt connectivity. And though it's sized for the desktop, it's no slouch in the I/O department, offering two mic/line inputs, an instrument input, and six analog outputs. And you can expand the number of inputs via Lightpipe. The included UAD Console application is great for controlling the interface and setting up monitor mixes. Thanks to the speed of the Thunderbolt connection, latency is virtually imperceptible when tracking. The Apollo Twin easily grabbed an award this year.

Winning the Battle of The Bands FABFILTER PRO-MB Multiband dynamics processing that provides extra flexibility

fabfilter Pro-MB

The Pro-MB compressor/expander plug-in got our attention not only because it offers excellent sound quality, but by virtue of bringing a new and more intuitive approach to the multiband dynamics paradigm. Instead of the customary user-adjustable crossover points to delineate the frequency bands, Pro-MB allows you to create bands at specific center frequencies. This allows you to focus the processing where you want it most. Pro-MB lets you apply either downward or upward compression or expansion to each band, and gives you a great deal of adjustment flexibility. In addition, you can choose between stereo or MS mode for each band you create, and apply sidechain filtering. For simplifying the task of multiband processing, without any sacrifice of power or sound quality, we bestow an Editor's Choice Award on Pro-MB.

Monster from the Deep



After lurking in the depths of u-he headquarters for many years, Bazille has finally been released into the world. A modular monster synthesizer combining digital oscillators (FM, phase distortion and fractal resonance) with analogue-type multimode filters that ooze quality. The Multiplex offers ring modulation, amplitude modulation and much more, and there are tons more modulation capabilities: LFOs, ramp generators, modulation maps, lag processors, rectifiers, sample & hold, looping envelopes—plus a unique 8-snapshot morphing sequencer. Rounding off the features are four classic effects, including tube distortion and spring reverb.

Download now, and start patching: www.u-he.com







Let's Be Clear (And Wide) JBL LSR 305/308 Putting space between your ears

Initially developed for the flagship M2 Master Reference Monitor, JBL's Image Control Waveguide technology has made its mark on the company's affordable 300-Series Powered Studio Monitors. Both models feature a 1-inch soft-dome tweeter mounted on the Image Control Waveguide; the 305 employs a 5-inch woofer while the 308 has an 8-inch low-frequency transducer. The speakers are bi-amped using Class D amplification providing maximum SPLs of 108 (LSR305) and 112 dB (LSR308). Radiused edges on the cabinets minimize diffraction and its detrimental effects on stereo imaging. All of this technology contributes to the LSR305/308's ability to throw a wide yet stable sound stage. A wide sweet spot means that you can listen without placing your head in a vise, and the HF driver's ability to resolve detail will let you know exactly what's in your recordings.

Right on Qu ALLEN AND HEATH QU-24 Cue up multitrack recording—without a computer

Allen & Heath has packed some impressive processing muscle into the Qu-24. Each input features a parametric EQ, compressor, gate, highpass filter, and phase reverse while each output has a 31-band graphic EQ, compressor, 4-band parametric EQ, and delay for time alignment purposes. The SuperStrip gives you access to these parameters, while a color touch screen provides additional control. Like other live mixers, the Qu-24 features a multichannel USB DAW interface, but it offers something we haven't yet seen: integrated recording and playback computer. A&H's Qu-Drive supports recording and playback of up to 18 streams of audio simply by connecting a USB drive to the front panel. Onboard routing and transport control means you can create multitrack recordings of live performances and leave the computer at home. There's a winner for ya.

The Un-MIDI-Gated Champ ICONNECTIVITY ICONNECTMIDI4+ The last MIDI interface you may ever need

Commer 00 ala

iConnectivity has another hit on its hands. Like last year's award-winner, the iConnectMIDI4+ helps you integrate iPads and iPhones into your Mac- or Windows-based studio setup. It not only routes data among your MIDI instruments, computers, and iOS devices, but lets you connect as many as 19 pieces of gear into a music-production network. It can also send eight channels of audio between three computers or iOS devices. Use iOS apps as if they were hardware synths in your DAW. Process DAW tracks using iPad effects or instruments using computer plug-ins. With DIN connectors, USB, and Ethernet, you get 64 MIDI ports with 16 channels per port-that's 1.024 MIDI channels, folks. And the iConnectMIDI4+ pulls it all off with nary a hiccup. Simply put, you won't find another MIDI interface that does everything it can do.

One Plus One Equals Four DAVE SMITH INSTRUMENTS PRO 2 Who knew that

digital oscillators could sound so fat?

Thirty years ago, Dave Smith's Sequential Circuits Pro-One was everything you wanted in a monosynth. But today's synthesists demand more of everything, and the Pro 2 aims way beyond the Pro-One's lofty achievements to score a bulls-eye. With the ability to play four notes paraphonically, a user interface designed for real-time expressivity, a multitrack sequencer that records and plays back parameter changes in layers, and a bank of CV connections that give it modular capabilities, the Pro 2 could be the best synth that Smith and company have ever unleashed. Those features wouldn't amount to much without terrific sound, and that's where the Pro 2 impresses us most. Versatile analog filters and some of the warmest digital waveforms we've ever heard ensure that the Pro 2 is destined to win the hearts and minds of electronic musicians everywhere.

KENNETH CROUCH MUSICIAN. PRODUCER. CREATOR.

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Effortlessly switching from classical to jazz to pop, Kenneth's commanding presence at the keys has been sought after by musical luminaries. And when you hear all of his color and expression, from delicate to thunderous, you don't want to miss a single moment. Hear every note and nuance with the Zoom H5.

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Is That a Grand Piano In Your Pocket? GARRITAN/MAKEMUSIC ABBEY ROAD STUDIOS CFX CONCERT GRAND Get Bentley sound on a Hyundai budget

What makes an award-winning virtual piano? Start with Yamaha's no-holds-barred project to build the world's finest instrument-the 9-foot, \$180,000 CFX concert grand. Next, enlist Abbey Road Studios' world-class engineering staff, superior acoustics, and massive microphone cabinet to record every sonic detail of every single note. Finally, enlist Gary Garritan's sample-editing wizards to turn the whole shebang into a software package that costs less than a cheap guitar. The CFX Concert Grand lets you alter mic placement, keyboard touch and tuning, and the listener's location, as well as dial in just the right amount of sympathetic vibration, sustain resonance, and pedal noise. Then, add a touch of convolution reverb to crank up the realism. Garritan's CFX is so close to playing the real thing, it's our number-one choice for recording.

So Easy, Even a Drummer Can Use It TOONTRACK EZDRUMMER 2 *An intuitive way to quickly create customizable drum tracks*

Don't let the name fool you: EZdrummer 2 may be simple to use, but it offers pro-level sounds and features. Included are five drum kits, extra kick and snare drums, a revamped mixer, and a comprehensive library of grooves encompassing a wide range of genres and time signatures. However, the search engine is what makes it special. Tap a rhythm using either a mouse or MIDI controller, and EZdrummer 2 will search its library, find similar grooves, and display them based on how closely they match your original performance. Then, drag and drop your grooves to complete an arrangement without leaving the program. EZdrummer2 has many powerful features that make it an excellent app for writing and arranging, but it's the killer sounds and intuitive interface that helped it garner an award this year.

One Step Beyond SAMPLE LOGIC ARPOLOGY *Take your MIDI patterns to the next level*

Arpology is more than just a virtual instrument with a large and varied sample collection; it also features Sample Logic's new Step Animator, a powerful step sequencer/arpeggiator that gives you control over stutter rate, transposition, panning, length, and many other parameters. Arpology's sample library draws from a range of instruments, as well as sound effects and field recordings. You can even create Step Animator patterns, and then drag and drop them onto MIDI tracks in other virtual instruments in your DAW. Spice up the internal sounds with integrated sonic trigger effects, LFOs, and more. Control the app from a tablet via TouchOSC, providing an even deeper editing interface than you get on the plug-in itself. Arpology is an innovative and inspiring product that we couldn't help but recognize this year.

vord

"... if you want one software piano that can cover any musical genre, is equally facile onstage or in the studio, and makes zero sonic compromises, Ivory II is the platinum standard. Long live the king!" —KEYBOARD MAGAZINE



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You Got the Fever, We Got the Cure XFER RECORDS SERUM Wavetable synthesis was never this simple

Electronic musicians are gushing over Serum, one of the hottest soft synths we've seen all year. Nothing makes it easier to create unique and usable new sounds in so little time. In addition to delivering dynamite factory presets, this versatile plug-in serves up tone-sculpting capabilities that other synths just can't match. Start with the included wavetables or build your own from scratch. Split them into frames, shuffle them, and morph between them. Shape your sounds with filters and modulators, as well as drag and drop LFOs and envelopes wherever you need them. You can even import your own samples to use as modulation sources. Serum's graphic user interface makes it easy to see what you're doing every step of the way. It all adds up to a fun-filled timbral playground.

A Bazillion Possibilities U–HE BAZILLE An FM synthesizer that makes programming fun for a change

Departing from the DX7 paradigm, Bazille is a modular FM synth that provides virtual cables and multiplexers that you can patch for days. Oscillators are wildly configurable, offering three simultaneously available sound-shaping types-Phase Modulation (FM), Phase Distortion, and Fractal Resonance. You can generate complex and animated single-oscillator sounds before you even modulate one oscillator with another. Add a pair of Lag Generators, a couple of multimode filters, a modulation step-sequencer, and user-drawn waveforms, and you're still just getting started. The scalable, anti-aliasing user interface is a serious boon for anyone who has to squint at a DAW all day, and the Oscilloscope reflects your every move continuously and clearly. Bazille's brilliant design and unique sounds put it at the top of a banner year for soft synths.

Get Your Groove on HEAVYOCITY DM-307 Bang on the drum (machine) all day

We've come to expect great products from Heavyocity, and the DM-307 doesn't disappoint. Our reviewer called it "Anything but conventional, serving up processed and warped drum sounds with apologies to no one." The DM-307 offers an impressive collection of more than 60 kits, 1,200 loops, and 300 performance multis. In addition to using MIDI notes to trigger its kit sounds, you can create and stack grooves using a step-sequencer interface. Effects such as distortion, filter, pan, delay, and lo-fi can be added in several different ways, including globally, on individual sounds, or via the Advanced Trigger FX function, which lets you momentarily trigger effects using MIDI notes. Overall, we found DM-307 to be a superb beatmaking environment, featuring compelling and musical content, and that's why we tapped it for an Editors' Choice.

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All 12 plug-ins. New Effect Rack. No Dongle Required.

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Now get all 12 Soundtoys plug-ins in one package – including the acclaimed EchoBoy, Decapitator, and the new PrimalTap retro delay with freeze. Use them individually, or in the powerful new Soundtoys Effect Rack. Mix, match, tweak, and save all your favorite effect combinations.

Soundtoys 5 gives you endless creative freedom – and now, with iLok optional, the freedom to work however, and wherever, you want. The only effects solution as powerful as your imagination.

"I use Soundtoys on every mix I do."

- Dave Pensado





Glitches Brew KYMATICA SECTOR Warp time with this massive groove editor

One look at Sector's circular matrix tells you it's not like any iPad app you've seen before. Open a project, press some buttons, and make sounds like nothing you've heard before. Sector is absolutely the fastest way to slice and sequence samples to add glitch to your groove. Start by importing a beat or a phrase and chop it into time slices called sectors. Connect sectors to other sectors and control the odds that one will automatically play after another, creating a Markov chain of variable probability. Randomize the connections at will, connect all or any of the sectors, and turn the matrix inside out. Apply warp commands to bend time for scratches, chirps, and sweeps. Use the interactive sequencer to override the probability matrix in real time. We like to think of Sector as a game of chance that lets you collaborate with serendipity to make music from the future.

Turn On, Tune In, Plug-Out ROLAND AIRA SYSTEM-1 Come for the hardware synth; stay for the software host

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The crown jewel in Roland's Aira line is the System-1, a modeling synth featuring proprietary Analog Circuit Behavior technology that delivers a dizzying array of beautiful synth timbres, all quickly programmable from 73 controls. The 4-voice instrument excels at smooth or crunchy basses, lush pads, screaming filter leads, bell/chime tones, and all manner of noisy and belchy effects, in polyphonic or the immensely dense monophonic Unison modes. The powerful arpeggiator with Scatter variations make System-1 a beast for performance and spontaneous recording. What really puts it over the top is that the keyboard can host a Plug-Out software synth (akin to a DAW's plug-in instrument) and act as its dedicated MIDI controller-with or without a computer connected. System-1 includes an impeccable re-creation of the classic SH-101 analog monosynth, with SH-2 Plug-Out hot on its heels.

Chop Screwy IZOTOPE BREAKTWEAKER Insert your beats into the Matrix

This year, iZotope BreakTweaker created a buzz by literally creating buzzes, glitches, and insane breakbeats in remarkable new ways. Designed in collaboration with BT, the program is a six-track mini-workstation comprised of a sequencer, the MicroEdit Engine, Generator (a wavetable synth), and a 2GB library of monster one-shot samples suitable for the latest styles. In BreakTweaker's "isorhythmic" sequencer, you can vary the time signature of tracks so that beats evolve as they loop. You can stretch notes to any length; divide them into 1,024 unique slices; add tension, slopes, and curves to shape the contour and rotation of the slices; and then apply effects. Generator comes with a library full of crazy wavetables, LFO shapes, and envelopes to create drums or other sounds. Once you use it, there's no going back.

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Propelling Your Workflow PROPELLERHEAD REASON 8 It's never been easier to get into the creative zone

With Reason 8, Propellerhead got back to basics, giving the user interface its biggest overhaul yet, but without deviating from its rack structure. The new searchable Browser houses all of Reason's instruments, effects, utilities, sounds, and patches for easy access. You can double-click or drag Browser elements to the rack or sequencer to create devices and tracks. New colored highlights on rack devices indicate when, for example, the device is in patch-browsing mode or when parameter changes have been recorded to the sequencer. Control bars have been touched up for a clearer, cleaner look, and the new Amp and Bass Amp devices from Softube sound spectacular and can transform hum-drum sounds. But it's the simplified workflow that will have you opening Reason 8 instead of your other DAW over and over againjust like it used to.

The Antidote to Screen Stupor NUMARK NV All eyes are on this dual-displayed controller for Serato DJ

While the benefits of DJing with a laptop are evident, over-reliance on the software display leads to the glassy-eyed "Serato Stare," that can strip some of the luster off of a live DJ performance. Numark's solution is the NV controller for Serato DJ software (included). The NV integrates two fullcolor displays that sync to Serato DJ and show the most important info for full 4-deck mixing: deck views, effect views, looping, and cue point views. Now you can rock the house with your focus on the DJ decks and mixer. The NV is a complete DJ controller in its own right. Color-coded, velocitysensitive pads with 10 performance modes; touchactivated EQ, effects, and filter knobs with intelligent interactivity; and a full-complement of hardware controls over Serato DJ make this an ideal controller for performance-oriented DJs.

Let's Get Physical NATIVE INSTRUMENTS KOMPLETE KONTROL S SERIES KEYBOARDS Hardware and software soulmates make beautiful

music together

The Komplete Kontrol S Series keyboards fulfill the dream of many devoted Komplete software-bundle users by providing an integrated controller and browsing system for the thousands of instrument sounds in Komplete 10 and Komplete 10 Ultimate. Through the Komplete Kontrol software host, the keyboards offer fast hardware browsing and loading, as well as fully mapped plug-in parameters to the eight encoders and mini-displays. The Komplete Kontrol system also adds a deep arpeggiator and brilliant Scale and Chord modes, which assign Komplete Kontrol S keys to play only notes of a selected scale, and/or to play certain chords from a single key. Not only that, but the Kontrol S's Light Guide LEDs illuminate above each of the keys to enhance the Scale and Chord modes or to indicate zones, or special functionality for Komplete instruments. Now you know why they call it Komplete!

UIST

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Following the Funk on Uptown Special

As a producer, what do you do when you've hit Platinum so many times only your accountant can keep score? When your name rolls off musicians' tongues in the same breath as such heavy hitters as Dr. Dre and Don Was? For Mark Ronson, who is not only a producer but a recording artist in his own right, the next thing to tackle after multiple production successes (Amy Winehouse, Adele, Paul McCartney) and artist triumphs (three acclaimed solo albums) was the same venue that tests all musicians: the road.

> "[producer] Jeff Bhasker [Kanye West, Fun, Jay-Z] and I were up one night late, it was like 2 a.m. and we were brainstorming," says Ronson, taking a break from rolling tape at Electric Lady Studios in New York City. "Then Jeff had this idea: 'Let's drive through the south and find the singer. We'll call it Mississippi Mission.' He had this whole concept. It started as a kind of eccentric idea; then we got in touch with someone who could get us in to hear the big choirs



at these amazing southern churches. We flew to New Orleans then drove to Baton Rouge, Memphis, Jackson, Chicago, and St. Louis."

Eventually surrounding themselves with an eclectic cast that included Stevie Wonder, Tame Impala vocalist and multi-instrumentalist Kevin Parker, Miike Snow vocalist Andrew Wyatt, Dap-Kings drummer Homer Steinweiss, bassist Nick Movshon, Dap-Kings guitarist Tommy Brenneck, ace studio bassist Willie Weeks, guitarist Carlos Alomar, drummer Steve Jordan. Ronson and Bhasker flew to New Orleans then hit the Deep South, road running on the hunt for a singing star who could make their dreams come true. Perhaps they were looking for the next Amy Winehouse or Adele; perhaps they were looking for inspiration beyond New York and L.A. Who they found was 23-year-old gospel singer Keyone Starr. Not long after, with recording time booked at Memphis' cathedral of soul, Royal Studios (home to Al Green "I didn't set out to make a funk record, but once we got to Memphis, the groove was inescapable. On all of my records, groove is the unifying factor."

and production mastermind Willie Mitchell) and with lyrical contributions from Pulitzer-winning author Michael Chabon, Ronson's fourth album, *Uptown Special*, was born.

Ultimately recorded and mixed at twelve different studios from coast to coast, *Uptown Special* delivers surging, shiny R&B in the Bruno Mars-led "Uptown Funk," dreamy chill-essence episodes with Tame Impala's Kevin Parker, '70s styled lounge lizards with Andrew Wyatt, sizzling James

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~ Tommy Lee Founding member - Mötley Crüe.



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~ David Rideau

Engineer/producer - Janet Jackson, Sting, TLC, George Duke and Jennifer Lopez.



"The Primacoustic is up and kicking butt at my new studio in Santa Monica. I love the way the control and tracking rooms sound now... and so does everyone that records here!"

~ Butch Walker

Engineer/Producer - Avril Lavigne, Fall Out Boy, Pink, Sevendust, Hot Hot Heat, Simple Plan, The Donnas.

"I love the way the control and tracking rooms sound now... and so does everyone that records here!" ~ Butch Walker Brown-bent hip-hop with rappers A\$AP Rocky and Mystikal, and club-dazzling southern soul with their discovery, Keyone Starr.

Uptown Special's production credits are just as dizzying: Studios included Daptone, Royal, Mixstar, Ronson's Zelig Studios, Cherry Beach, Levcon, Bhasker's Enormous, Dunham, Electric Lady, Germano, Azari Studios, and Atomic. Engineers included Ronson, Tom Elmhirst, Boo Mitchell, Charles Moniz, Josh Blair, Ricardo Damien, Artie Smith, Joe Visciano, Kenta Yonesaka, Jason Staniulis, and many more.

Though *Uptown Special* is the product of both tape and Pro Tools, of multiple musicians stomping the groove, of live performances cut to click and without, the album is unified and passionate, glossy as the cover of Vogue. For Ronson, who handled everything from playing instruments and placing mics to running the Studer and falling asleep on his MCI 500 Series board, total control paid off.

We don't get to talk to many artists who also produce, roll tape, and handle practically all of the engineering duties on their records. Well, [Willie Mitchell's son] Boo Mitchell was invaluable at Royal Studios. He would say, "This is where Pops put the U47." But as far as effects and plug-ins, and how I want them dialed on the

Pultec, all those things, I only know that. Even if it's somebody else turning it, I knew where it sounded best.

Given that you mixed the album at 12 different studios, how did you achieve a uniform sound?

Most of the rhythm tracking took place at Royal in Memphis. The drummers were Homer Steinweiss from the Dap-Kings, Steve Jordan, and Kevin Parker from Tame Impala-I like all of those drummers because though they are very different, they all have a specific feel and a touch. They all appeal to me aesthetically so there must be something similar about their drumming. Sometimes we'd occasionally switch out a snare drum or lean more heavily on a mic. But for the most part, I always start with the drums. That was my first instrument even before I knew how to mike a kit. I was a fledgling DJ spending every weekend going to record stores like A-1 and Sound Library (both in NYC's East Village) looking for that break. It was always about the kick and the snare. That's why when I first went to Daptone Studios when we were doing [Amy Winehouse's] Back to Black and I heard engineer Gabriel Roth recording Homer on drums; I didn't realize that you could still make drums sound that magical. It was a life changing moment for me. That's a lot of the glue. And also, Jeff Bhasker and I wrote all of these songs, unlike most productions now when 20 writers are on each song. I didn't set out to make a funk record, but once we got to Memphis, the groove was inescapable. And all of my records, groove is the unifying factor.

So you and Jeff took a road trip through the Deep South to find a great singer?

Yes. I began writing in Venice Beach with Jeff at his studio. We had "I Can't Lose." Jeff sang the demo. And he is good. It's funny to hear his demos of songs that he did with Alicia Keys or Kanye West. But we wondered 'Who can sing this song?" We needed our own Chaka Khan singing in 1977.

How did you hold auditions?

Sometimes we just went to choir rehearsals. We were looking for singers, but to be honest, it was a pure pleasure to go to the churches and hear the roots of the music I love. That was inspiring. And we didn't want to go into churches holding auditions. That seemed wrong. We had two lowkey camera guys with us and told people we were making a documentary about the evolution of soul music of the Mississippi, which we are. We were making a soul record, so let's film the trip. But in Jackson, Mississippi, it was hard to get into

performance, amazing results!



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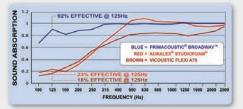
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~ John Rzeznik - Goo Goo Dolls.



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a church on a Friday. So in some cities the choirs would get their best singers to come down and sing into a mic with a P.A. for us.

What did they sing?

We asked them to sing a church song or one pop song and one secular song. As you can imagine there wasn't one bad singer in the bunch. You're spoiled for voices. But we wanted a specific tone and voice that we had in mind. We heard a good 40 or 50 singers. Keyone came out and as soon as she opened her mouth, Jeff and I both knew. She had that slight rasp where the voice breaks. It's the bit that I always love. Pure singing is incredible of course, but it's that Lauryn Hill thing, right where it breaks, that I've always responded to. It was the voice I had been imagining while we were writing the songs. By the time we got to Memphis, we asked her to come up. She had never recorded on a mic.

There were some singers we came across that were excited about the prospect but they wouldn't leave Memphis to record in L.A. 'cause then they'd miss their choir practice, which they wouldn't do. It's the opposite of what goes on with *American Idol* where people learn to sing because they want to be famous. Some of the gospel singers would say "I know I can sing a Beyoncé song and kill it, but if I'm not singing it for the Lord, I don't feel it the same way."

What were the challenges of working with a singer who had never recorded?

It could have been a problem, but Keyone is so fast. And Jeff is more than one of the best producer/ songwriters of his generation. He is Berklee educated, but he understands a great pop melody. He also studied pedagogy at Berklee. We'd be with Trombone Shorty at this school he set up in New Orleans with all these little kids. And after seven minutes, Jeff had the whole room of kids singing this song! He can make people so comfortable. I've never worked with another producer on my record, and it made me realize what a great producer does on the other side of the glass. A great producer makes you feel like you can almost do anything, like you have superpowers. So when you go in the booth, you think "Of course I can do that. I can do anything!" He got me playing some things that I didn't think I was capable of playing. Jeff not only co-wrote the songs with me, he would sing the songs to Keyone and within two hours he had her singing "I Can't Lose."

Nuts, Bolts, and Tape THE UPTOWN SPECIAL SIGNAL CHAINS

Engineers Josh Blair and Ricky Damian pushed the faders at Mark Ronson's Zelig Studios in London, where Ronson and Bruno Mars cut the single "Uptown Funk," and where various overdubs were tracked for *Uptown Special*. Pro Tools 10 HDX was the recording software of choice. Ronson used his MCI 500 Series console for signals and preamps, along with



Avalon 737, UA 610-2, Chandler LTD-2, and Altec 1566, Pultec EQP-1A3, and Fairchild 670.

"For drums," Blair explains, "generally the setup starts with two RCA 77DXs, one placed above the kit at around one meter from the toms and the other at knee level between the kick drum and the snare: These two mics give a nice portrait of the whole kit, and by moving them around it's possible to balance the sound of the different elements.

Ronson and Bruno Mars at the MCI console in Zelig Studios

Usually two other mics are placed above the kit: a Neumann U47 and a Unidyne 545. Having these three very different mics above the kit allows Mark to find the perfect sound by blending the different sounds together. If needed, spot mics were included: Sennheiser MD421 for toms or kick, AKG D12 for kick, Shure SM57 or Unidyne 545 on the snare, and Sennheiser 451 on hi-hat. There are generally no room mics. For 'Uptown Funk' at Zelig, the setup was two RCA 77DXs, Sennheiser MD421 on floor tom, AKG D12 on kick, Shure SM57 on snare and 451 on hi-hat."

Guitars were literally recorded across the globe, but Damian knows the Zelig setup: "On 'Uptown Funk,' the guitar was recorded in Toronto. It's a Harmony guitar through a DI and a Mutron Bi-Phase. At Zelig we did a Fender Stratocaster to a Fender Vibrolux, miked with the Unydine 545. That went to the MCI pre and the Studer A800. Bass was a Fender Precision Bass into a Cinemag DI, or a Neumann U47/ Altec 1566/Pultec EQP-1A3/dbx 160 to tape and Pro Tools."

Though Bhasker played the bulk of the keys, Blair says "I know the Roland SP60 was the main synth for a few songs, but I've no idea about amps. There is also a talk box being used, but I don't know the model. You're also hearing Minimoog and Rhodes."

The funk horns that saturate "Uptown Funk" were miked with an RCA 77DX (trumpets), Shure SM7 (saxophone), and a Reslo for trombone. All mics went through the MCI desk and were compressed with two UREI 1176s, UA 1176 and Retro Sta-Level.

Finally, though vocal mic details were difficult to ascertain, Blair states, "The brand and model of mic used for Kevin Parker, Mystikal and Keyone Starr was a Neumann U47 into the MCI pre through Pultec EQP-1A3/UREI 1176 into the Studer into Pro Tools. For 'Uptown Funk,' Bruno sang in the control room with a Shure SM7."

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"Half of the drums are cut to click, half are not. That makes overdubs tricky, but it's nothing they didn't do back in the '70s and '80s."

Had you been to the Deep South before?

I was born in England, then grew up in New York City. I had never been to the Deep South, except for New Orleans, but New Orleans is many different things. It was such a great experience. That's when you realize "these people are just like me; I was just raised somewhere else." I had never been to Memphis because Elvis is not my thing; I went to Detroit for Motown. But the minute I got to Memphis, I was totally bowled over by the vibe. That's when I wanted to make the whole record there. When you're at Stax, Sun, even at the Lorraine Hotel where Martin Luther King was shot, it's such a heavy vibe and an amazing,



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joyous place all at the same time. It's hard enough to get people to come to New York or L.A. to record, like Kevin Parker from Tame Impala is from Perth, Australia, but he came to Memphis. That's the beauty of it, too—we were all so cut off from our regular sh*t. There was no being disturbed by anybody; we were just able to work. Kevin plays drums on the intro song where Stevie Wonder is playing harmonica, and he's singing background vocals all over the record.

Describe your experience working at Royal Studios in Memphis.

We were using all their mics and preamps; they have the same MCI 500 Series desk as I have in London. I'd have been up for 15 hours and was zoning out, sprawled out on the console and having this surreal experience. "Where am I?" I wondered. I'm leaning down on the same mid-'70s desk I have at home, looking at the exact same desk. "Where am I again?" They actually have the MCI tape machine that came with the 500 Series desk, whereas I have a Studer A800 in London. All the rhythm tracks were cut to tape. It's not the Al Green desk; they inherited their MCI from Compass Point in the Bahamas, so it's the same desk that Sly and Robbie did all the Tom Tom Club stuff on. The API that Al Green recorded on is upstairs at Royal.

What were your go-tos on the record?

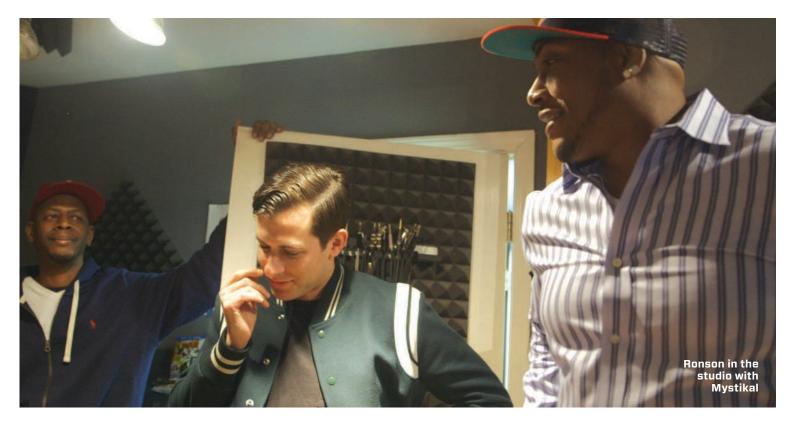
The thing I run through the whole record is this pedal, the [Analog Man] Ampeg Scrambler; I used that on a lot of the guitars. But all the instrumentation on this record is pretty consistent. There's a lot of Clavinet because I wrote a lot on a Clav at Jeff's place in Venice. I just like the color of it as opposed to my last record, which was heavy on synths. This was Clav, piano, Wurlitzer, a lot of Moog Micromoog, which Jeff likes. He uses the Moog Voyager on his anthemic stuff with Kanye West and Fun., but on this we went back to this old Micromoog.

You've played me a bossa nova track from the album with Andrew Wyatt from Miike Snow on vocals. That's the jazziest thing you've ever done.

I don't even know what those chords are. I wrote that at Jeff's place in Venice Beach. I have so much respect for Jeff as a writer. I was trying to write something he would like. In L.A., studios are often in a modest pool house, but you can always see a palm tree from any spot in his studio. I couldn't write a song like that in London.

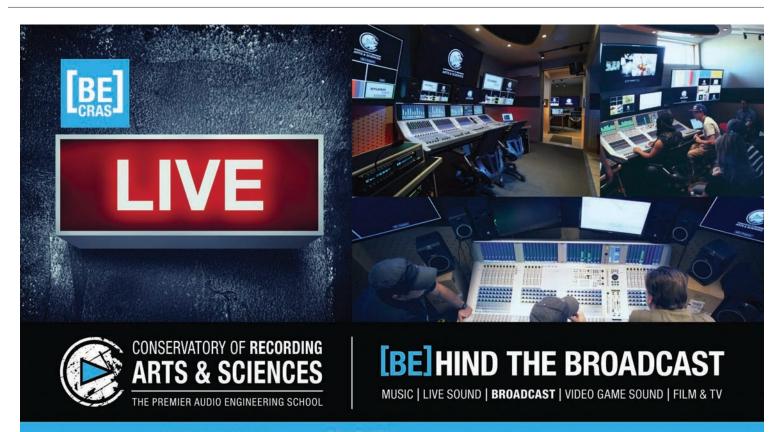
Andrew Wyatt also sings on "Heavy and Rolling." That's a very '70s-style song, with slap bass, a fuzz guitar solo, and lush Wurlitzer chords.

At the end of that song, I took out the click so everybody could feel the groove. Most of the time we cut drums live, and bass is always live with reference keys. Half of the drums are cut to click, half



are not. Most of the time with Homer, I never cut to click. That makes overdubs tricky, but it's nothing they didn't do back in the '70s and '80s. Willie Weeks plays bass on two tunes. He was just there in Nashville. He doesn't do slap bass usually, so I had to ask him really respectfully. "Please?" You worked at so many different studios. What was done where?

Well, let's see. Purple Palace is rapper A\$AP



CALL US TODAY AT (855) 647-2409, OR VISIT CRAS.EDU TO FIND OUT MORE ABOUT STARTING YOUR CAREER IN AUDIO 2300 East Broadway Road, Tempe, Arizona 85282 Consumer information available at: www.audiorecordingschool.com/consumer.html Rocky's apartment, where we cut his vocal. Zelig, of course, is my new studio in London, where Bruno cut drums on "Uptown Funk" and all of the vocal overdubs. Cherry Beach is in Toronto; that's where we did bass and final vocals on "Uptown Funk." Enormous is Jeff's house in Venice Beach. Mixstar is Serban Ghenea's studio, who mixed some of the tracks, including "I Can't Lose."

The experience at Royal seems to really resonate. There are very few studios left that have vibe. They don't even have to be from

the '60s or '70s. When we were in Memphis we stopped one night and recorded some demos at Sun; they have a great engineer. And I have the old one-inch Scully machine from Sun at my studio in London. The next day we went to Royal. As soon as I walked into the room—you can see that over time Willie Mitchell kept adding fiberglass insulation

until the hand claps were just dead. It's just a magical room, and not only because it has the original gear. On the intro track to the album, actually where Stevie Wonder is playing harmonica, we used the same electric bongo machine used on Ann Peebles' "I Can't Stand the Rain." We had to have that on the record! And it's a big room, too, so we knew we

could record and get a great vibe. These were some of the more high-fidelity recordings I have made. There's no one-mic-on-the-drums scenario. It was more about getting the sh*t to sound pristine. Or my version of pristine. It was intimate; green felt everywhere. After a couple hours, I knew Royal was the place for us.





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TV on the Radio

On *Seeds*, Dave Sitek and crew combine simple tracking techniques and elaborate instrument layering in all-night studio sessions in Sitek's studio in Los Angeles

BY KEN MICALLEF

WHEN WE last spoke with TV on the Radio's mastermind, Dave Sitek, in 2008, his Brooklyn, New York, Stay Gold studio was literally going up in flames. The band eventually recorded and released their third album, *Dear Science*, which was greeted by international raves. But as restless as they are wildly creative, change must be in TVOTR's DNA.

TVOTR followed *Dear Science* with 2011's *Nine Types of Light*. That year, the band suffered a catastrophic loss when 36-year-old bassist, organ and piano player, sampler, programmer, and Rhodes guru Gerard Smith succumbed to lung cancer.

Vocalist Tunde Adebimpe and guitarist/keyboardist Sitek moved to L.A., while guitarist/keyboardist Kyp Malone and vocalist/bassist Jaleel Bunton remained in New York City. "For me personally I felt like I had reached a plateau in New York," Sitek explains. "I wanted to try something different. There was no energy left in the street anymore for me. My back was against the wall just to stay in New York and I wondered what I do could with my time if my back wasn't against the wall." Now ensconced at his Federal Prism studios in Glendale, California, Sitek and TVOTR tracked their fifth album, *Seeds*, like late-night shift-workers. No more than two members were in the studio at a time, working on each other's tracks and possibly trading ideas telepathically as engineer Zeph Sowers pulled single, double, and triple-duty.

Working late-night hours can have its benefits and its dangers. "When you're high as sh*t at night in L.A., it's going to make it into the music," Sitek laughs. "There's something really enchanting about this city. I am perpetually expecting our alien overlords to return and take power. L.A. seems like the kind of city were you would see their approach. 'Look, here they come!' And the Santa Ana winds carry some kind of crazy magic in those unexpected blasts of warm air."





Performed and produced by Sitek and TVOTR, tracked by Sowers, and mixed by Matty Green (Taylor Swift, Lady Gaga, Bruce Springsteen), *Seeds* is pure TVOTR, an album that operates perpetually at 4am, ably blending electronic and acoustic drums, taking advantage of vintage analog synthesizers,

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exploring unusual instrumentation and tried-and-tested recording processes, and sounding like 22nd century club music driven by 20th century soul.

Seeds' opener, "Quartz," buzzes over trampling drums and joyous vocal hollers. "Careful You" fuses burning blue-eved-soul vocals and dead-eyed robotic rhythms. The raging "Winter" as well as the buzzing "Could You" reveal some classic Roger Mc-Guinn-style Epiphone guitar. Interstellar space is explored in "Test Pilot," jangled guitar twisting into serenely orbiting synths. "Oh, here comes trouble/Put your helmet on/We'll be heading for a fall," Adebimpe sings in "Trouble," and you feel TVOTR crossing some divide in

the lyrics, as sound effects fly through the mix like sleeping cosmonauts: "The devil's got my number/ It's long overdue/He'll come looking soon."

Seeds is an album so translucent it practically melts in your ears, its soothing synths, happy floppy-

dog beats, and occasionally raging guitars tempered by Adebimpe's introspective, warm vocals, the rich sweet spot amid TVOTR's funnel-swirling melodies and beats. Tunde recorded his vocals into a U47 and either a Shadow Hills Industries pre or Wunder Audio PEQ2 Module—but no console. Though Sitek

> employed a Malcolm Toft 980 at Stay Gold, that's another thing left in the past.

> "I've used a console my whole life," he explains, "but I found the sound I was getting most attracted to was the stuff I was doing direct. All my other work outside of TVOTR, (including Beady Eye, Oh Land, Yeah Yeah Yeahs), I do direct, and that's what excites me. A console is just a money pit. It would crowd the studio as it is now, and I've embraced the idea of not using a console. It's exciting. Limitations? Let me at 'em!"

> When we last featured TVOTR, in Brooklyn, they employed a pirate's booty of studio gear of every shape, purpose and size. Any day at

Stay Gold, you were likely to see a diverse cast taking advantage of Sitek's toys—anyone from Grizzly Bear, Blonde Redhead, Massive Attack, and The Knife, to Architecture in Helsinki and David Bowie. Sitek brought the memories and the gear to Federal Prism.

"I brought all my outboard gear out here," he exclaims, "and a f*cking truckload of synths and microphones and drum machines. I have it all but the console. I don't even use the hardware effects, most everything on the record is going through a pair of Neve 1073s (or the Wunder Audio Modules) or the Shadow Hills pre's with nothing else on them. We try to make the sound right before it gets to Pro Tools. Using those pres right before it gets to Pro Tools we try to use the least amount of color as possible.

"And while we love SoundToys, we don't really use a lot of plug-ins," Sitek adds. "Zeph is masterful with EQ and that's really a lot of what you're hearing. There's not a lot of other things going on. When Zeph compresses he does it subtly. We try to give it to him real crisp and clear before he works with it. Spike Stent makes fun of me cause I love that RCA sound, but almost everything goes through a Pioneer DJM 900 mixer. I love the EQs and the filter on that thing. All the guitars are played through that, which sounds bananas, but it's just really easy to dial in something so that has its own space with the 900."

Seeds' keyboards were recorded direct, taking maximum advantage of Sitek's Dave Smith Prophet 12, Elektron Analog Keys synth, among other synths—"mostly a Yamaha CS10 on everything; that's a lot of the bass, even it doesn't sound like bass, Sitek says. "Also, an Arp Solina. And we used the sh*t out of the M400D Digital Mellotron, too, as well as a Sequential Circuits Prophet 5 and 12. Oh lord!"

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"A lot of times when people think a sound is a synth, it's actually a guitar," Sitek says. "I use a lot of treated guitars in layers. It's funny because when you think 'synth,' it's often that absolutely terrible rave synth everyone uses all the time, and though that is an effective sound, it's been completely overused. If I lay down a synth line with the Prophet 12, I will try to mimic that with the guitar, and if I do that successfully, then I take out the Prophet. We do a lot of that. We run synthesizers through a ton of guitar pedals, too. The Eventide Space Reverb Pedal is the greatest pedal of the past 30 years. Everything goes through that at some point; it's just phenomenal."

While Sitek likes his toys as much as the next person, TVOTR remain a band of musicians, who kick it in the studio and play live as opposed to sequencing parts. They love their layered drum sounds and synths that turn into guitar scrawls and vice versa, but rather than program a tambourine, they play a tambourine. How unique is that?

QUICK TIP Engineer Zeph Sowers on layering electronic and acoustic drum sounds

"If the predominant drums are electronic, then you don't want your live kick drum to sound too fat on the bottom, so you may want to cut out some of those frequencies. Just so it's more felt rather than being the main thing heard. And you don't always need cymbals in an electronic drum set sound. TVOTR don't use cymbals. They take up too much space in the mix. As soon as you add cymbals they cloud and color everything and take a lot of space. You want to leave space in that frequency range for other things. Cymbals fight too much for us. If we do cymbals beyond the hi-hat, we might overdub a ride or add a slowed down crash cymbal sample. When blending electronic and acoustic drums, you have to make sure all the drums are hitting together, if not, you will get flamming and lose the impact of both sets.'

"We are keen on making the live drums sound like electronic drums and vice versa," Sitek says. "Most of the record is a hybrid. We use a lot of live kicks and live snares or just a live hi-hat. Usually we will lay down a beat on an MPC 2000 or a Roland TR-8 and make the deadest possible drum sound we can, then Jaleel or myself will play drums along with that. We'll gauge if there is too much activity from the live or programmed drums, then we start cutting. A cut is worth a thousand drums for us, so we might take out a fill or a cymbal or some other thing. Sometimes with a drum machine, we want to change the swing, but we don't want to change the beat if we like it so we'll just change the swing of the hi-hat. Sometimes that's easier to do with a live snare or a live hi-hat. We're idiots: We play it live over the track to get the human feel. To program that takes too much time."

"It seems like everything in life is turning out to be to a grid," Sitek says when asked about TVOTR's trademark electronic/acoustic drum blend. "Everyone wants to lay it out according to the grid. Sometimes with our electronic drum tracks, we tab the transient then line that up on the 1, then we'll realize that within that transient maybe there's a little bit of slip that makes it sound more like a spazz, so we will slide it even further to mix it up more. If you rush electronic drums it has this other, psychological effect. It's more than an audible effect. 'Let's cheat a little bit and slide the 808 so it starts a little before the one.' That gives it this weird skip or energy."

TVOTR's drum machine palette also includes Akai MPC-2500, the new Roland TR-8 Aira Rhythm Performer Drum Machine, Dave Smith Instruments Tempest, Elektron Analog Rytm, Korg Electribe, and Sequential Circuits DrumTraks.

Though Sitek doesn't care for plug-ins, engineer Zeph Sowers does; his favorite SSL plugs saw heavy usage on *Seeds*. "On the drums," Sowers says, "I use the SoundToys Decapitator to make it more crunchy and messed-up sounding. And SoundToys Devil Lock. That's a compressor and a distortion box; it makes things more crunchy and f*cked-up sounding."

Sowers uses Waves and SoundToys plug-ins, but he really loves "the SSL plug-ins, that is my goto cause I know it well and I like the way it sounds. It has the compressor, the EQ, the gate, whatever I need quickly, I can dial it in and keep things moving. Dave likes to work fast so I use things I know well. That keeps the energy moving and no one is waiting while I mess around with equipment."

Employing a Mac Tower with a Digidesign 192, Sowers also speaks to TVOTR's love of the Eventide Space Reverb Pedal and the ubiquitous Line 6 DL4 Delay Modeler Pedal. "Dave told me that when they started the band, the Line 6 Delay was their main piece," says Sowers. "And they run everything—drums, guitar, and even bass—through the Eventide. Tunde will sometimes do vocals through those pedals to create a loop."

Sowers' go-tos at Federal Prism include a Shadow Hills preamp and the Wunder Audio modules.

"They're like 1073s," he says. "Wunder is made in Austin. They sound similar to the Neves: They're punchy, the EQs are smooth, they open up and make things bigger and wider and punchier. The Wunders are between \$2,000 and \$2,500. They're not cheap, but they're not as much as an original pair of Neves. The Wunders are well-built and Dave likes them. There's always something to fix on the old Neves."

Vocalist Tunde Adebimpe would lay down a scratch then add or change lyrics as necessary as he tracked. He doesn't punch in much, Sowers explains, and Adebimpe will sometimes loop sections to get lost in the mood of a certain part (as in the gorgeously omninous "Trouble"). He might track section by section, or record an entire song multiple times then create a comp from the tracks.

Sowers recorded Jaleel Bunton's 1972 Fender Precision Bass direct, but '80s Fender Telecasters, Gibson SGs, and Epiphone electric hollow-bodies both live and direct, depending on Sitek's direction. Guitars received multiple treatments, from various pedals and the Wunder Audio PEQ2 Module to a 1966 Fender Deluxe close-miked, off-axis, two inches from the grille with a Shure SM 57.

Sitek layers drums like a meteorologist toying with storm clouds, but overall prefers a minimal miking approach. Six mics cover the drum set, including kick, snare, overhead, hi-hat and a single room microphone. A Heil PR40 goes in the bass drum, Shure SM 57s on snare drum top and bottom and the hi-hat, a Coles 4038 two-and-a-half feet above rack tom, and a U47 room mic eight feet away from the drum kit.

"That's to deal with layering the electronic drums," Sowers says. "Dave likes a tight, intense drum sound. So the fewer mics and the smaller the room, it's easier to get that tighter, dead sound. It's easier to make a tight dead sound sound blown up—if we wanted to run it through other effects or plug-ins to make it sound more bombastic and big—than track something that sounds bombastic and then try to make it tight."

Sitek and TVOTR mesh and morph and transmogrify sounds so as to become unrecognizable, reinventing their music in some instances, clinging to old paradigms in others. "You're talking to a guy who is still in Pro Tools 9.4," Sitek laughs. "We're more about stability than technology. Ableton is fantastic and it's changed a lot of things, but we don't touch it. We're really about the song more than the technology to record the song. It's very rare that we get excited about new technology. It's more about the inner world than the electronic world for us."

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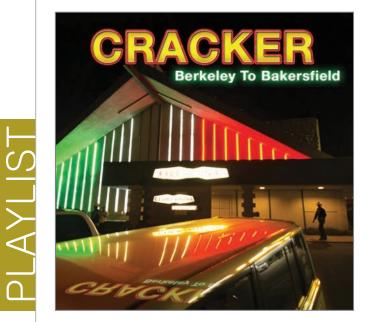
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CRACKER BERKELEY TO BAKERSFIELD 429 Records

Like frontman David Lowery's other band, Camper Van Beethoven, Cracker has turned to sounds and memories of California for inspiration. Not surprisingly, the artists' rights advocate sings Internet-era protest songs on this double album. The folk rock-influenced "Berkeley" disc includes "March of the Billionaires," which indicts technology companies ("take what you got, we'll sell it all back to you"), while "Bakersfield" offers Cracker's clever, joyous take on C&W. Despite his sharp criticism of the music business, or maybe because of it, Lowery and collaborator Johnny Hickman still make outstanding records. BARBARA SCHULTZ



ches smith and these arches INTERNATION-AL HOOHAH

Fortune Belching tenor and alto saxophones, guitar wails, wheezing accordion, and the elastic drumming of Ches Smith are showcased on this 2012 live recording. While at its core quite conventional, a zany abstractness transforms the seven songs of International Hoohah into madly imaginative set pieces, where you're as likely to hear brawling barroom beats ("International Hoohah") as Monk-inspired playthings ("Punks Vs. Jocks"). International Hoohah gazes intently into the bizarre. KEN MICALLEF



CUT COPY OCEANS APART Cutters

The vibrant city of Melbourne, Australia boasts a new, hot band every few years; Cut Copy is one of the few with international staying power. Here, the trio curates a seamless DJ mix of quality dance tracks generated by 19 artists in its hometown. The driving tracks are reminiscent of early- to mid-'90s house but with indigenous inflections such as didgeridoo. It's a true reflection of the city's lively underground scene-sounds like Melbourne is the place to party. LILY MOAYERI



GHOSTFACE KILLAH 36 SEASONS Salvation/

Tommy Boy The most long-form of the Wu-tang Clan, Ghostface Killah thrives in a boom-bap caper. For his most recent bugged-out narrative concept, the almighty GFK-a.k.a. Tony Starks, Ironman, Pretty Toney, and Ghostdini-returns as a vigilante Staten Island superhero, backed by Brooklyn's live band-production unit the Revelations and joined by AZ, Kool G Rap, Pharoahe Monch, Kandace Springs, Rell, and Tre Williams. The finished product-uncut dope, pure Blaxploitation swagger-snaps between slow-burning, soulful melody and gritty breakbeats. TONY WARE



various artists BOARDWALK EMPIRE VOLUME 3

Abkco Soundtrack Volume 3 from the brilliant Prohibition-era series features swingin' '20s jazz performed by big band Vince Giordano & The Nighthawks, and sung so beautifully by Elvis Costello, Regina Spektor, Marshall Crenshaw, Norah Jones, BE star Margot Bingham, and more. In keeping with the era and location of later episodes, this volume also features Cuban music and the sounds of early radio. All three soundtrack albums make delicious souvenirs of the series, and stand on their own as well. BARBARA SCHULTZ



REZ ABBASI ACOUSTIC QUARTET INTENTS AND PURPOSES ENJA

Jazz-rock was once considered a 1970s musical weakness when otherwise sane jazz musicians longed for the groupies, gold lamé, and loud electronics of prog bands like ELP and Rush. But casting the learned eve of re-appraisal, guitarist Rez Abbassi reinvents jazz-rock standards within an acoustic setting led by steel string guitar and vibraphone. Intents and Purposes pours new life and meaning into Weather Report's "Black Market," Herbie Hancock's "Butterfly," Pat Martino's "Joyous Lake" and others. KEN MICALLEF



SLEATER-KINNEY NO CITIES TO LOVE Sub Pod

Corin Tucker, Carrie Brownstein, and Janet Weiss return without losing one beat, still hitting wiry indie-rawk marks with math-rock precision and the ferocity of post-hardcore. No Cities percolates with kinks more akin to their pre-2002 spikier songs rather than the blown-out sonics of 2005's No Woods. However. the crisscrossing guitars and vocal parts dovetail just as effortlessly as they dart, forming angular but never gawky whorls showing the band as even more densely synchronized and harmonized. TONY WARE



Fig. 1. An updated GUI and analogmodeled filters are just a couple of the improvements found in Ozone 6 Advanced.



IZOTOPE

Ozone 6 A MAKEOVER AND MORE FOR A MASTERING MAINSTAY

BY MIKE LEVINE

Mike Levine is a musician, producer, and music journalist based in the New York City area. STRENGTHS Dynamic EQ. Standalone version with multi-song capability and third-party plug-in hosting. New GUI. Auto-Gain. Analogmodeled EQ. Insight Plugin (Advanced version) offers plentiful metering choices. Individual Module Gain Meters.

LIMITATIONS

Module Amount Control sliders and reverb removed. Genre- and instrument-specific presets no longer included. No way to create a CD image or DDP image from standalone version.

Ozone 6: \$249 (upgrade \$99) Ozone 6 Advanced: \$999

(Upgrade from Ozone 5 Advanced: \$299; from Ozone 1-6: \$750) izotope.com With the release of Ozone 6, iZotope has further refined its suite of mastering tools and made significant additions—and subtractions. The company has given the program a massive makeover, both in the GUI and under the hood, providing users with even more power and control over audio than in previous versions.

The program comes in two flavors: Ozone 6 Advanced (see Figure 1) and Ozone 6. As with other iZotope software, the Advanced version offers significant advantages but costs more, although both versions offer a great deal of flexibility. In this review, I'll refer to both versions as Ozone 6; when a feature is only available in Ozone 6 Advanced, I'll point it out.

THE OZONE CONCERT

Ozone 6 is a multiprocessor mastering plug-in that now also runs as a standalone application. (More on that shortly.) Designed to be an all-in-one mastering solution, it features two EQs (three in the Advanced version), a multiband dynamics processor, a multiband exciter, a multiband stereo imager, and a Maximizer (limiter) module, all of which can be used simultaneously. Ozone 6 provides a wide range of presets, both global and for individual processors, as well as a full-featured dither section.

Ozone 6's user interface has changed considerably since Version 5. In the comparison in Figure 2, you'll see Ozone 6 Advanced has more of an integrated look; many of the numerical displays are bigger and easier to read, and you'll find more icons in the GUI. It's definitely easier on the eyes.

Beyond the cosmetic changes, Ozone 6 functions differently than its predecessor in a number of ways. Gone are the module-specific sliders and activation buttons, replaced by a flexible workspace called the Processor Module Browser, which makes it easy to access up to six modules at a time. Once you have modules activated in the browser, you can click-anddrag them side-to-side to change their order in the signal chain. (In previous versions, the order was

fixed.) Each module has an on/off switch and solo button, which makes it easy to listen to how your mix sounds if you remove a processor.

Each module has its own gain meter that shows how much you're boosting or cutting, giving you an at-a-glance view of how the various components are affecting your signal. Because only one module-editing window can be open at a time, having the meters along the bottom is helpful for keeping the big picture in mind as you work.

A new Auditioning Section, located under the Master Input and Output faders, conveniently centralizes a number of controls that were previously spread around the GUI. These include the Bypass button and an ear icon that turns on the Auto-Match gain feature (previously called Automatically Match Effective Gain), which adjusts the bypassed signal to the same level as the processed one. This makes it easier to judge the impact of the processing you've applied, because you are comparing with the original at the same level, avoiding the louder-sounds-better effect. There are also buttons for putting your file into mono, for swapping channels, and to turn on and audition dither.

SOME SUBTRACTIONS

A few Ozone 5 elements were left out of version 6. The most notable casualty is the reverb module. According to iZotope, the decision to remove it was based in part



Fig. 2. At a glance, you can see the GUI changes between Ozone 5 (left) and Ozone 6 (right). Now you can access up to six modules at a time and re-order and solo them as needed.



Fig. 3. In Standalone mode, you can load and process multiple sound files individually.

on feedback from users, both professional and amateur, who said it was the least-used module. iZotope also wanted to de-clutter the interface and underlying code for Ozone 6.

Although reverb is used far less often in mastering than EQ and dynamics processing, I'm sure some users will lament its removal. In practicality, though, it's not a big loss; if you're using Ozone as a plug-in, you can insert a dedicated reverb plug-in before or after it. If you're using the standalone version of Ozone, you can bring in a reverb via the third-party plug-in feature.

You will also notice that the Dynamics module no longer includes gating functionality. Again, iZotope felt that part of the module was less important, so they removed it to decrease clutter and simplify operation.

Also gone from Ozone 6 are the Global Amount Control and Module Amount Control sliders. In previous versions, these allowed you to reduce or increase the amount of processing, either globally or for each individual module, which was a fast and easy way to experiment with processing levels. I found these controls to be very useful, so I'm disappointed that they didn't make the cut.

STANDING ON ITS OWN

Both versions of Ozone 6 now run as a standalone application as well as plug-ins. The standalone version (see Figure 3) offers all the processing of the plug-in, plus it lets you load multiple files and process them separately. Imported audio files show up as tabs near the top of the standalone GUI and can be clicked and dragged to change their order. Underneath the tabs is a waveform display that shows a single track for both stereo and mono files.

Transport controls are provided, including Play, Stop, Pause, Previous Track, and Next Track. You can also turn on looping and easily set a loop range by clicking and dragging in the waveform display. In addition, you can set start and end points for each track, as well as add fades.

A very useful addition to the standalone version is the ability to host third-party plug-ins. Although Ozone 6 is quite comprehensive, you have the option to integrate your favorite non-Ozone plug-ins into the signal chain. Ozone 6 has six module slots, which you can fill with any combination of Ozone and third-party processors.

Ozone 6 Standalone is not designed to be the final stop in the mastering workflow, though, because it doesn't let you adjust the time between tracks, nor listen to song-to-song transitions. You cannot export a CD image or DDP image from it, just individual song files or a global export of all the songs as separate files. As a result, you'll need a CD authoring program or 2-track editor to handle the sequencing and final export if you're working on an album.



Ozone 6's unlimited Undo History is a powerful feature. If you want to compare two or more different settings on a particular module (for example, the sound of analog-modeled vs. digital EQ filters), it's easy to do so. First change from one setting to the next in order to write them into Ozone's history memory. Then, click on the History button at the bottom of the Ozone interface, and a separate window will open showing all the changes you've made. As the song plays, click between the different settings for an easy comparison.



The Undo History is perfect for making comparisons.



Change the stereo width of your track using the Imager module.

Quick Tip: Widen Your Mix with the Imager

If you're working on a mix that feels a little too squashed to the center, you can use the Imager to widen it: Open it and raise each band slider to around 50. Next, turn on the Stereoize feature and slowly raise its slider until you hear your mix open up. Experiment with the levels of the various bands as well as the Stereoize slider until you're satisfied. Turn the Stereoize button off periodically for a reality check, and check your mix in mono. As a rule, make sure the correlation meter (the vertical meter that goes from -1 to +1) stays between 0 and +1.

EQ GOES DYNAMIC

Mastering processes are often aimed at specific parts of the frequency range in order to address an imbalance without causing too much damage to other frequencies. The new Dynamic EQ module in Ozone 6 Advanced does just that: It is a 4-band EQ that functions similarly to a multiband compressor, except that you can dial in narrow frequencies with each band, giving you much more precise control while leaving large swathes of the frequency range unaffected.

For example, there might be certain spots in a mix where the vocalist's voice gets a little harsh, and you could set the Dynamic EQ to cut at the harsh frequency only when it exceeded the threshold you set, therefore minimizing the amount of processing to the master.

The Dynamic EQ also has an Inverse Mode, which allows it to act more like an expander. Let's say that you wanted to bring out the kick drum more, but didn't want to use a standard EQ to do it. You could set the Dynamic EQ to Inverse Mode to boost in the kick's frequency range, and with the threshold properly set, it would only process when the kick hit.

Additionally, you can work in stereo or M/S mode, which gives you an even greater ability to target specific elements of a stereo mix. What's more, the Dynamic EQ can be opened as a dedicated plug-in (if you have Ozone 6 Advanced), so it can also be useful in mixing applications.

Since Dynamic EQ is a new type of hybrid processor, I wasn't surprised to find that it was harder to use than processors I'm used to. Be prepared to experiment in order to find what you can and cannot do with it.

The Dynamic EQ, Equalizer, and Post Equalizer all have additional analog-modeled options in Ozone 6. These include Baxandall filters in the low and high shelves, Proportional Q (APIstyle), and peak and bandshelf options in the Bell filters. When you select one of the filter types within a band, the icon above it changes to the appropriate shape, which is a helpful touch and a good example of the subtle GUI upgrades I referred to earlier.

As for the new filters themselves, they give you a lot more options, as you now have multiple choices for each EQ type. The analog-modeled filters sound very good, and I was especially impressed with the Baxandall low and high shelves.

PRESETS

Presets have been completely revamped. The preset browser is now a separate window, which is more convenient than in Ozone 5, where it opened up on top of the main screen.

The preset collection is very important in Ozone, because a significant portion of the people using the program are not experienced mastering engineers, but home recordists who are engaging in DIY mastering. For that group, having presets as starting points is very helpful.

As in previous versions, Global Presets are comprehensive settings that utilize multiple modules and individual processors. Within the Global category, things are quite different from previous versions. All the presets have descriptive names like Control Dynamics, Emphasize Bass, and Increase High End. They're organized into three categories: Balanced presets provide "standard" mastering levels; Heavy features aggressive processing; and Light provides less processing. The Global presets are very useful, but there are no genre- or instrument-specific presets, and the Broadcast, Special Effects, or Utility presets that were in Ozone 5 are gone. I miss those, as they helped me quickly zero in on appropriate settings. However, if you have Ozone 5, you can upload the presets into Ozone 6: iZotope made sure the Ozone 5 presets sounded as good or better than before when opened in version 6. Some will sound different, though, in situations where features were removed, such as gating and reverb.

OZONE OVERALL

Clearly, iZotope has put a lot of thought into this new version and took the somewhat risky path of removing pre-existing features, such as the reverb module. The new GUI is definitely easier to work with and will be much appreciated when working with the software for long hours. The new Auditioning section is a useful one-stop-shop for checking your mix in various ways.

The standalone version provides a whole new way to work in Ozone, and its multiple-song capability is particularly handy for album projects. The new analog modeled EQ filters add variety. And for Ozone 6 Advanced users, the Dynamic EQ is an exciting new processor with a lot of potential applications. Both Ozone 6 Advanced and Ozone 6 significantly improve on their predecessors, which were pretty darn good to begin with.

OZONE 6 VS. OZONE 6 ADVANCED

If you're wondering which version to choose, here's a rundown of the differences. From a module standpoint, the only difference between the two is the Dynamic EQ, which comes with the Advanced version. Otherwise, all modules are included in both versions. However, only Ozone 6 Advanced gives you component plug-in versions of all of the modules.

Ozone 6 Advanced also comes with a separate metering plug-in called Insight, which offers advanced metering options such as spectrogram, spectrum analyzer, loudness history, and peak and loudness levels. If you're using the standalone version of Ozone 6 Advanced, you can open up Insight as an AU plug-in using the third-party plug-in feature.

"Don't tell tabtilter anyone, these plug-ins re my se crat

vveupon.

S. Husky Höskulds-recording engineer/mixer



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Fig. 1. Advance Music Production Suite bundles 50 plug-ins from top developers in a portable 500GB hard drive.

AIR MUSIC TECHNOLOGY

Advance Music Production Suite ALL-IN-ONE BUNDLE SEEKS YOUR COMPLETE APPROVAL

BY MARKKUS ROVITO

STRENGTHS

Well-rounded collection of synthesizers and samplebased instruments. Diverse collection of processors, from the necessary to the indulgent. Huge value compared to the price of individual products.

LIMITATIONS

Can't install sounds straight to an external drive (Mac). Setup process is laborious. Not enough AAX or RTAS support for Pro Tools users.

\$399.99 MSRP advanceproductionsuite.com For quite some time, a single player provided the most comprehensive music software bundle available—Native Instruments with Komplete and Komplete Ultimate. However, AIR Music Technology's recent release, Advanced Music Production Suite (AMPS), has increased the competition in this arena. Of course, anyone who challenges the mighty Komplete has to really bring it on; for the most part, AIR Music Tech is up to the task.

Onto a 500GB USB hard drive AMPS packs more than 70 titles that would sell for more than \$5,000 if purchased separately (see Figure 1). Companies represented here include fabfilter, PSP, FXpansion, Waves, D16 Group, and iZotope, among many others. For example, Akai Pro chips in MPC Essentials, a self-contained beat production environment and plug-in host. While many of the products are several years old, they maintain their value and usefulness, as with the Way Out Ware Timewarp 2600 (a virtual ARP 2600) synthesizer and iZotope Stutter Edit.

INSTRUMENTS

The 33 virtual instruments, alone, justify the price of admission. AIR Music Tech's contribution covers most of the essentials: Structure, a full-featured multi-timbral sampler; Strike, an excellent virtual drummer; Tranfuser 2, a mini-workstation for beat and groove construction; Velvet, an electric piano; and three synths—the Hybrid 3 analog and wavetable synth, Vacuum Pro with vacuum tube modeling, and Loom, an innovative additive synth.

Camel Audio's Alchemy Player provides the same functionality as the full plug-in but with a reduced sample library and preset selection. The plug-in accepts non-proprietary SFZ-format samples, and you can find plenty of free content online to feed through Alchemy Player's matrix of morphing capabilities. Of course, you can also add Camel's own expansion packs.

Sonivox douses AMPS with a giant content library to go along with the 19 ROMpler-style instruments. These include guitar and bass instruments; Eighty Eight Ensemble, an authentic Steinway grand piano; and three

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Fig. 2. More than your average vocoder, Sonivox Vocalizer Pro processes any audio you throw at it with several filter modules and stores parameter snapshots in eight pad slots for you to tap through dynamically.

cinematically oriented Heavy Impacts collection is definitely cool, as are some of the other oneshot and FX collections, like Monster Bass Shots, Dubstep SFX, and the one-shots in the EDM Essentials collection. My personal favorite has to be Rasta Vocals 2, just for that accent.

REG TIME

My biggest issue with AMPS is not about its many high-class components, but how it feels as a suite. The AMPS bundle doesn't really gel together like a single product the way that the elephant in the room (Komplete) does. Obviously, many companies are represented here, but you don't get consistency in the registration and set-up of all the products, nor consistent plug-in format support. Your best bet is to go with a 64-bit VST host, because all of the AMPS products support that; For AU, AAX, and RTAS, the number of compatible products is generous but far from complete. Also, it took several hours to go through the process of installing and registering everything.

Obviously, many different companies are represented here, and they all have their own quirks to their registration process, but it's exhausting and a far cry from the one-product/ one-registration process of Komplete. Just the extra steps of having to install everything to your computer's hard drive first (on a Mac)—where space is likely at a premium—before transferring sound libraries to an external drive (rather than installing straight to an external drive) makes a big difference. Maybe AIR Music Tech can work on streamlining the process in the future.

BUNDLE OF JOY

AIR Music Tech bills AMPS as a "comprehensive collection... of software for creating, mixing and mastering your music," and I can't argue with that. It covers just about all the instrumental bases, from acoustic rock to orchestral/cinematic to almost any style of contemporary music, with synthetic drums for all genres.

Basic effects, creative effects, and mastering processors are all there. You don't even need a DAW; if you want to use MPC Essentials to create your music, it will host the other AMPS programs as VSTs. Not only does AMPS fill in all the pieces of the production puzzle, some of these plug-ins could very well become your all-time favorites.

comprehensive Orchestral Companion plugs— Brass, Strings, and Woodwinds. Sonivox also scores with the Big Bang Cinematic 2 drum and percussion instrument, as well as with its synths the Wobble 2 and Twist 2 spectral morphing synthesizers blend two channels together with heavy emphasis on filter/LFO syncing and parameter morphing.

And what bundle would be complete without a vocoder? Vocalizer Pro resynthesizes any audio going into it (see Figure 2). Besides standard vocoding, it is excellent for reharmonizing audio and is one of the most improvisation-oriented vocoders I've seen. It has pads for saving snapshots of the plug-in's huge array of processing and for saving keyboard chords. Playing into the plug-in while tapping through different pad settings is perfect for creating glitch-oriented music.

EFFECTS

The included signal processing plug-ins strike a balance between meat-and-potato effects and wildly creative types, with a few mastering plugs mixed in, such as the Wave Arts Finalplug mastering compressor/limiter. Waves Renaissance Channel is an old favorite that combines EQ, compression, limiting, and gating in one package essential for mixing as well as mastering.

PSP chips in two rack-modeled equalizers, McQ and RetroQ, while FXpansion adds the D.Cam Dynamics bundle. Three interesting D16 Group products—Syntorus analog chorus, Devastor multiband distortion, and Fazortan analog phaser—toe the line between essential and creative effects: All three sound authentically vintage. The all-purpose Wave Arts Masterverb can re-create almost any reverb type with impressive realism, and it scales well from subtle to huge.

Three creative delay units bring something new to the party. D16 Sigmund presents four independent delay lines, each with a multimode filter, overdrive, tremolo, two LFOs, and flexible routing. If that's too much for you, just dive into the great presets. FXpansion Bloom starts with a stereo delay line with tape, analog, and digital modes and then adds a diffusion reverb algorithm, feedback effects, deep modulation options, step sequencers, reverse and ping-pong options, and more. Some of the more bizarre presets don't even pass recognizable audio from your source but step straight into psycho freak-out territory.

Sonic Charge Permut8 stretches the limits of a delay plug-in, as well. It aims to decimate sound in the spirit of primitive processors. Starting with a 12-bit delay, a programmable step sequencer modulates the delay time, and various virtual analog components add saturation, limiting, and filtering.

SAMPLE PACKS

Besides the nearly 200GB of soundware that come with the AIR and Sonivox instruments, AMPS also kicks in 16 collections from Prime Loops, some of them in construction kit form. These collections pay a lot of attention to drums (acoustic, synthetic retro, and synthetic modern) and lean toward various EDM styles (tech-house, dubstep, trap, electro, and drum & bass). You also get some all-purpose stuff like electric piano, pop guitar, and ambient pads.

A couple of collections like Arabic Vibez and Cinematic Moods were good efforts, but many of the bits sounded obviously synthy where truly authentic pieces would be acoustic. However, the





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Fig. 1. Reason 8's revamped workflow and interface keep the original strategy intact, but let you access its powerful tools more quickly and easily.



PROPELLERHEAD

REVIEV

A PERENNIAL FAVORITE WORKSTATION GETS ITS HOUSE IN ORDER

BY MARKKUS ROVITO

STRENGTHS

Revamped interface and workflow include much-needed dragand-drop browser. Helpful new color-coding. New amps.

LIMITATIONS No VST/AU/AAX plugin hosting.

Reason 8: \$449 MSRP, \$349 street (\$129 upgrade) propellerheads.se The past couple of Reason updates have been all about making this singular workstation a formidable competitor to other DAWs while maintaining its all-inone rack status. With version 8, however, Propellerhead's main focus is on simplifying the workflow. The result makes the program's extensive feature-set much clearer and easier to use, returning the program to its original purpose of taking the intimidation out of music technology so you can get into the creative zone quickly.

and Instrument together enter patch-browse mode, where the Browser automatically opens the patch list for that Instrument; double-clicking a patch will swap it out. The Instrument's current patch becomes the Sequencer track name, which dynamically updates if you change the patch (unless you manually name the track). In Patch-browse mode, the Instrument's rack ears, its preset controls and the Browser's top

REFILED

Reason 8's modernized Browser, which lives in a column on the left side of the window, is the cornerstone of the update's workflow overhaul (see Figure 1). Just like the Mixer, Rack, and Sequencer, you can show and hide the Browser with a keyboard shortcut (F3) or by double-clicking its title bar.

The Browser holds all the Instruments (nine), Effects (25) and Utilities devices (10), as well as all the available Rack Extensions and factory and user sounds, samples and patches. You can create your own lists of favorite patches and sounds, and to find what you want, you can drill down by clicking in the Browser directory-style, or by using the search field.

Most importantly, everything within the Browser is drag-and-droppable into either the Rack or Sequencer. Just drag any Instrument into either an empty Rack space or an empty Sequencer space, and Reason 8 will add it to the Rack, create a Sequencer track with that instrument, and open a new Mixer channel. You can also drag any patch into the Rack or Sequencer, and Reason 8 will create a device instance with that patch loaded.

As soon as you create an Instrument, the Browser

border are orange for easy identification (see Figure 2).

Another important aspect to the Browser is, you can drag a patch for any Instrument onto an existing Sequencer Instrument track; Reason 8 instantly swaps in the new Instrument without destroying anything you've recorded. For example, if a bass line or solo was recorded with a basic ID8 instrument sound, but you'd rather change that part to something in, say, Thor or Malström, drag the new patch onto the ID8 Sequencer track (or onto the device in the rack) to quickly hear your recording played by the new Instrument.

The overall impact of Reason 8's drag-and-drop Browser is that it's noticeably faster and more convenient to get started on a track, while making it easier to find the specific sounds you want and simpler to interchange Reason's many available devices and sounds. Unless you stick rigidly to your templates, you'll use these new features every time you open Reason.

INTERFACE AND EDITING

Besides the Browser, Propellerhead has redesigned the look and feel of Reason's transport controls, the Sequencer function bar, and the Sequencer track headers. They look like they may have been inspired





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Fig. 2. The new orange-tinted patch-browsing mode automatically jumps to available Instrument patches so you can instantly swap between them.



Fig. 3. When you record device parameter changes into a track, Reason 8 highlights the automated parameters in green.

by the clean, two-dimensional angles of Apple's iOS 8 and OS X Yosemite graphics. These cosmetic changes don't really alter any functionality, but they do seem to make the controls a little more distinct and noticeable.

Not all the changes to the Sequencer are strictly aesthetic. New editing features let you double-click to add automation, clips and notes, and also doubleclick to delete those notes. There's a new Duplicate keyboard shortcut for notes and clips: Command-D (Mac) or Control-D (Win). And, you can now resize notes from either edge.

A couple of additional color-coding elements—Sequencer track header, Mixer Channel and Rack Mix Channel device—enhance Reason 8 visually. Also, when you record device parameter changes into a track, those parameters are highlighted with a green ring (see Figure 3).

AMPLE AMPING

Reason 8's two new devices come from respected Swedish amp modeler Softube. Amp and Bass Amp operate with the same simplicity as their names, yet crank out a large variety of smooth, creamy and crunchy tones. They both have their own presets, but it's easy enough to create your own sounds by choosing an Amp type and Cab type, and then using the dials to pick your poison between soft and warm or sharp and nasty.

These two amps go a long way in making synthesized or sampled guitars and basses sound much more like the real thing, but you can also find a use for them on virtually any track: Color some vocals, warm up a synth, or add grit to a drum kit (see "Quick Tip: Amp Everything" sidebar below).

BACK TO THE FUTURE

With this spit-and-polish update, Reason 8's refreshed workflow rejuvenates the program, allowing you to rediscover the satisfaction of realizing your musical ideas with minimal hassle. For longtime Reason users, it's hard to say whether this is a must-upgrade situation, and that probably comes down to individual preference. For them, the new Browser will be a huge improvement and the main attraction here.

Newcomers to Reason will find a professional workstation with nearly all the requisite bells and whistles (except plug-in hosting), as well as truly infinite creative possibilities wrapped up in an all-in-one environment that can be as basic or complex as you wish. With version 8, there has never been a better time to be a Reason user.

Quick Tip: Amp Everything

While the Softube Amp and Bass Amp effects excel in amp modeling for guitars and basses, for some truly insane distortion or subwoofer-busting low end, try putting an Amp or Bass Amp both before and after an Instrument in the rack (see Figure A). Then, use patch-browse mode to quickly find the right combination of two presets.

These amps have a convincing warmth and sheen that shouldn't be overlooked, and they'll work on virtually any track you want to highlight. Just as you would use re-amping to color tracks with physical amps, you can also use the mixer's Output Busses for a bit of virtual re-amping with as many tracks in your session as you wish.

In the Mixer, shift-select as many tracks as you want, right-click to bring up the contextual menu, and then select Route To > New Output Bus. That will create an Output Bus channel on the Mixer that you can rename. At any point you can route more channels to it from the contextual menu. The Output Bus will have a Mix Channel device in the Rack. Go to it and click the Rec Source button so that you can record an audio track from the Output Bus. Then create a new audio track in the Sequencer and choose your Output Bus as its input source. Now add the Amp or Bass Amp to



Fig. A. Softube's Amp and Bass Amp effects sound great on just about everything and are easy to use.

the Output Bus's Mix Channel as an effect and find a tasteful setting. Any track that routes to the Output Bus will now also run through the Amp, and you can bounce any or all of them at once to an audio track as a way of virtual re-amping.

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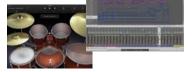




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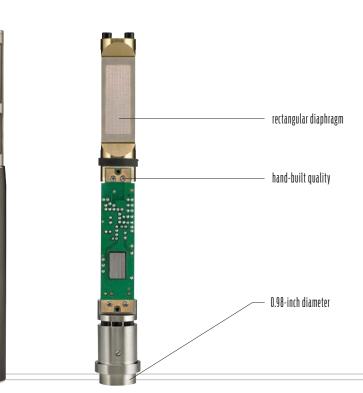
SIMMONS





REVIEW

Because of its rectangular capsule, the AT5045 offers large-diaphragm performance with the form factor of a smalldiaphragm mic.



AUDIO-TECHNICA

AI5045 LARGE-DIAPHRAGM INSTRUMENT MIC THAT'S EASY TO POSITION

BY MIKE LEVINE

STRENGTHS

Large-diaphragm, sideaddress instrument mic with form factor closer to a small-diaphragm model. Suitable for a wide range of instrumentmiking applications. Crisp, present, and ultrarealistic reproduction of acoustic instruments. Good transient response. High SPL handling and low self noise. AT8481 isolation clamp and hard-shell case included.

LIMITATIONS Expensive

AT5045: \$1,399 AT5045P matched pair: \$2,499 audio-technica.com The AT5045 is the second microphone in Audio-Technica's 50 Series, and like its larger sibling, the AT5040, it is a premium-quality condenser. But while the AT5040 is designed for use as a classic largediaphragm vocal mic (albeit, with a novel, 4-part rectangular element), the 5045 is a hybrid of sorts—a side-address, large-diaphragm mic designed for instrument recording. At almost 7 inches long, and with a maximum body diameter of 0.98 inches, the form factor is closer in shape and size to a pencil condenser.

To achieve this svelte profile, Audio-Technica created a unique rectangular capsule that it says provides more surface area than the single diaphragm of any other Audio-Technica mic. One major benefit of having a side-facing capsule in a slim body is that it gives you quite a bit of flexibility in terms of positioning.

The transformer-coupled, hand-built AT5045 has impressive specs including an 8dB SPL noise rating and a whopping 149dB SPL maximum input level, giving it a dynamic range of 141 dB (1 kHz at 1% THD). Its signal-to-noise ratio spec is a hefty 86 dB (1 kHz at 1 Pa). Bottom line, the AT5045 is adept at cleanly capturing both very loud and very quite sources.

The AT5045 comes in a hard-shell case with a foam windscreen and the AT8481 isolation clamp. The mic is also available in matched pairs (AT5045P, \$2,499).

CHECKING IT OUT

When tracking a Taylor 510e acoustic guitar, the AT5045 did a great job of reproducing the warm, yet bright sound of the instrument. On a Martin D-28, it realistically captured that guitar's tight-sounding bass and crisp highs. I also used it to record a wood-body resonator guitar, a mandolin, a

fiddle, and a banjo; the AT5045 accurately reproduced those instruments, with a precise and very present sound.

Between its fast transient response and high SPL rating, the AT5045 is especially suited for tracking percussion. Placing it in an x/y stereo configuration, I recorded a set of congas and then a number of hand percussion instruments, and was able to get

excellent results quickly.

Next, I used the stereo pair to record solo acoustic guitar music, again using the Taylor, for a video project I was working on. The result sounded warm and huge and required very little in the way of EQ.

To see how the mic responded to high SPLs, I stuck it in front of a Fender Twin Reverb amplifier for a track playing clean lines on a Stratocaster. The recording was solid and the bass frequencies from the lower strings sounded tight and contained.

The AT5045's frequency-response graph shows a boost between about 2 and 4 kHz, and a smaller one between 9 and 10 kHz. It is definitely a bright-sounding mic: If you have a trebly source, you might have to roll off some high-end when mixing.

EARNING ITS KEEP

You get what you pay for in the microphone world: Although the price of the AT5045 is on the upper end of the scale, it is a superb-sounding and very versatile mic—by far the best instrument microphone I've ever had the pleasure to record with. If you can find a way to fit it into your budget, you'll find it's worth every penny.





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Creating moody atmospheres is what Sample Logic Xosphere is all about. At left, oscillator 1 is being animated using a step sequencer.

SAMPLE LOGIC

Xosphere Atmospheric Instrument For Kontakt 5

BY MARTY CUTLER

Former *Electronic Musician* editor Marty Cutler manages to squeeze his expertise as a 5-string banjoist, electronic musician, writer, and teacher into one skull. He is gathering his notes together for a book on electronic and digital guitar applications. STRENGTHS Huge, attentiongrabbing atmospheres, scalable to smaller, animated pad-type sounds. Plenty of sound-design tools to create individualized sounds.

LIMITATIONS Nothing significant.

\$299.99 samplelogic.com Sample Logic is known for creating high-quality, cinematically themed sound-library instruments. Although Xosphere is no exception, the focus here is strictly on atmospheres—pad-like soundscapes that have a slow attack and provide tonal and non-tonal components designed to convey a particular mood.

Native Instruments Kontakt 5.3 (or Kontakt Player) is used to host the library. Partly because of its single theme, Xosphere departs from the typical Kontakt organizational protocol by putting only a single Xosphere instrument in the browser. Load it, and you are presented with a four-oscillator patch.

There are no multis—patches cover as much sonic territory as anything you could assemble in a multi. The single-instrument layout allows quick and easy customization. Patches are organized into banks by category: Bizarre, Dark N Scary, Electronic Effectual, Euphoric-Spiritual, Mixed Emotions, Mysterious, and World-Organic (see screen shot above).

REANIMATORS

An oscillator, here, is comprised of a pair of samples, each with its own signal path (an atmosphere, in Sample Logic's terminology). A Morph button crossfades between the pair, and presents you with various ways to animate the process; use the Record button to capture manual moves made with the Morph knob, draw a graph in a step-sequencer-style window, or simply audition and select a preset.

Tools to seed countless variations abound at many levels of the instrument. From each oscillator's menu, you can change its preset or alter any of its constituent atmospheres. Randomization works in a similar way. Clicking on small screws on the virtual rack gives you access to another set of sound-design tools for each atmosphere, including individual convolution engines, envelope generators, sample start, and high- and lowcut filters, each with a choice of an LFO or a step sequencer. Attaching the step sequencer to oscillator pitch creates micro-motifs within the patch.

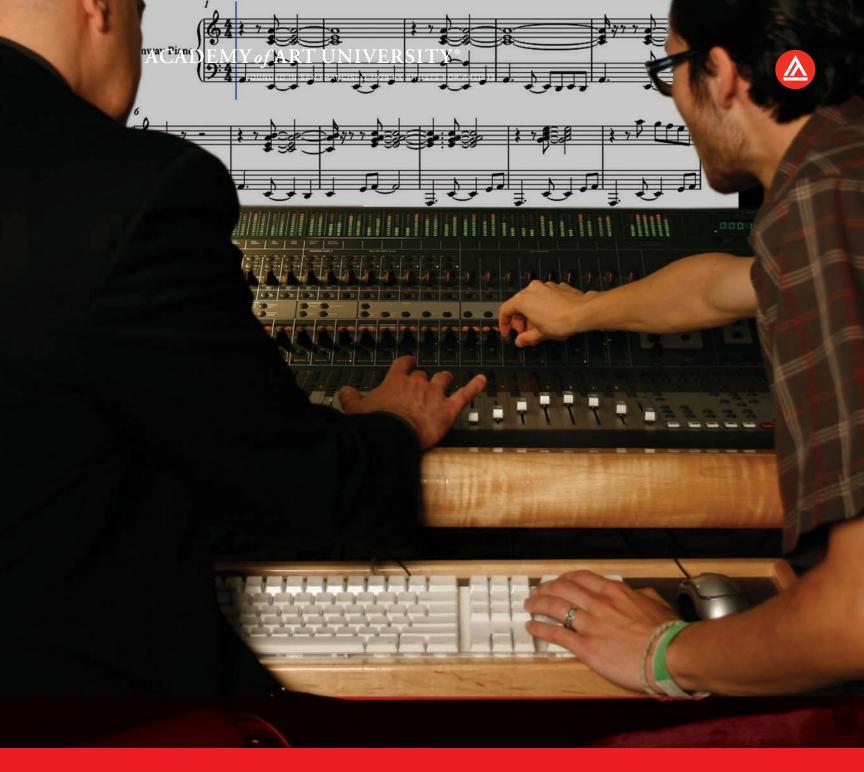
Everything feeds through a Master Effects section, which includes a knob to widen the stereo image; EQ with sweepable high, low, and midrange; distortion/ saturation; phaser; delay; and a convolution reverb with a handful of impulse responses, topped off with simple high- and lowcut filters. Step sequencers can pan the delay or modulate the output of the distortion, which is great for adding crunchy rhythmic patterns.

ALL THINGS, GREAT AND SMALL

The sounds here are complex, evolving, and powerful—so much so, that they often dominate the sound stage (as this type of element is generally meant to do). I suggest running through the patches and isolating each atmosphere; it's a great way to learn what makes Xosphere tick, and will give you a sense of how easily scalable the sounds are.

If you just need a simple pad, each oscillator has a button to switch it on or off (in addition to each oscillator's solo button). Even single atmospheres, which you can isolate by moving the morph knob hard right or left, were emotive and beautifully suited for a variety of electronic styles. Consequently, if your needs are on a more modest scale than the average film score, there's a tremendous amount to work with here, too.

Sample Logic has managed to pull off a versatile instrument that will serve film and game composers as well as electronic musicians of all stripes. Just about everyone will find inspiration in Xosphere!



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NOVATION

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N L L N L L N L

BY GINO ROBAIR

STRENGTHS Powered USB hub.

Four output channels. Balanced 1/4" (TRS) and unbalanced RCA outputs.

LIMITATIONS

A tiny amount of signal can be heard from the outputs even when the volume controls are fully counterclockwise.

\$199.99 street novationmusic.com With a footprint slightly bigger than a CD jewel case, the Novation Audiohub 2x4 simplifies your desktop setup by handling several chores from within in a single portable device. Moreover, it is designed to work with computers and iPads (with the help of an Apple Camera Connection Kit).

In addition to providing a 2-in/4-out USB interface with 24-bit, 96kHz Focusrite audio technology, Audiohub 2x4 acts as a powered USB hub for drives and controllers when the included AC supply is used. You can run Audiohub 2x4 from your computer's USB port, as well, but you lose the power going to the hub and the ability to use 88.2 and 96kHz sample rates—a small price to pay for the convenience that this diminutive device provides.

I like the ergonomics of the Audiohub 2x4: The I/O and switches are on the front and back panels, leaving just the volume controls on top—independent knobs for channels 1/2, 3/4, and headphone output. LEDs indicate signal level for each channel, as well as hub activity and audio connection.

The rear panel has three pairs of line outputs: RCA and balanced 1/4" for channels 1/2, and RCA for channels 3/4. Either pair of outputs can be routed to the 1/4" headphone jack.

Two RCA jacks on the front panel accept line-level input, with high- and low-gain settings and no-latency input monitoring. When you use Input Monitor, the input signal, computer output level, and output levels of channels 1/2 are automatically lowered to avoid overload issues. Outputs 3/4 are unattenuated.

The four RCA outputs allow you to send signals from, say, your DJ software to an analog mixer. The manual suggests additional setup scenarios, such as routing outputs 3 and 4 to an external effects device, then returning the signal to the audio inputs in order to create an effects send.

Because Audiohub 2x4 can be used as a powered hub, the three USB ports will work with buspowered keyboards and controllers. For example, you could connect a Launchpad S and Launch

Control, along with a standard keyboard controller while feeding a hardware synth to the audio input.

IN SITU

I tested Audiohub 2x4 on a MacBook Pro, where it was essentially plug-and-play. (Windows users need to install a driver.) I connected a keyboard controller to one of the USB ports, fired up Ableton Live 9, added an instrument to a MIDI track and was up and recording. Next, I imported sounds from drives attached to the other USB ports.

Novation warns that this product is loud, and it is—loud *and* clear. I auditioned the balanced outputs using a pair of Dynaudio BM12 mkIII monitors and the output sounded rich and full. The RCA jacks had a slightly lower output, but still strong and highquality. Unfortunately, you can't completely turn the sound off; the output is so hot, sound is audible even when the controls are fully counter-clockwise. If this is an issue for your work, simply mute the audio coming from your DAW.

ALL-IN-ONE

By combining a 2x4 audio interface and a powered USB hub in one package, Novation has created a handy and portable control center designed to handle a variety of complex setups. And if you've found the output of other USB interfaces to be anemic, you'll appreciate Audiohub 2x4's powerful, clean sound when you're ready to pump up the volume.

WEARE LECHNOTOGA

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WASAPHONE

MKII

Take your music back in time with this inexpensive low-fi mic

BY GINO ROBAIR



THE BEST way to impart an old-school sound on a voice or instrument is by using a low-fi mic at the source rather than with post-production EQ. The UK-made Wasaphone MKII (42.50 GBP; approx. \$67) is one such mic, specifically designed to give you the band-limited sound of pre-war recordings in the studio or onstage.

The Wasaphone MKII features a dynamic mic element sourced from vintage British telephone handsets that is sealed in a lightweight, metal salt shaker (3.75" long by 2.5" in diameter). An XLR jack is securely mounted into the bottom, and a heavy-duty brass ring is used to attach the mic to any stand. A cloth bag is provided for storage.

With a stated frequency range of 200 to 2k Hz, the mic has an attractively midrange-y timbre reminiscent of early radio or 78 RPM recordings. The position of the dynamic element inside determines the pickup response, and the holes in the top provide the only entrance for sound; there is no acoustic venting to alter the pattern. Consequently, the pickup characteristics lean more toward omnidirectional than the stated cardioid. But compared to a typical cardioid dynamic mic, the Wasaphone MKII gives you greater flexibility in determining the amount of room tone that is captured, depending how close you place the mic to the sound source. This is handy when tracking a voice or solo instrument by itself, and it's something to be aware of in an ensemble setting if you're worried about bleed from other instruments.

Overall, the Wasaphone MKII provides a unique color, whether it's used up front on voice and guitar or as a room mic for drums that you smash with a compressor and blend into the mix. If you're looking for an inexpensive transducer with serious personality and character, this is the mic for you.

HEAVYOCITY

Master Sessions

Percussion sound libraries for Kontakt 5

BY MARTY CUTLER

HEAVYOCITY *MASTER* Sessions focuses much of the real-time DSP that drives the company's earlier percussion engines, Damage and DM307, on two new titles, *Ensemble Drums* and *Ethnic Drum Ensembles* (\$149 each as a collection of kits and loops; \$89 for kits or loops on their own).

Ensemble Drums comprises a huge selection of low-end rhythm beds derived from field drums, rototoms, floor toms, large bass drums, and snares, among other sounds. The kits capture ensemble performances of five



cult with a collection of this size. The MIDI to Host

feature lets you drop the MIDI data into your DAW to change the feel, quantize, or otherwise alter data. All loops offer stems comprising various percussion groups, letting you wring tremendous variety out of an already deluxe assortment of grooves.

Master Sessions instruments feature Heavyocity's Twist and Punish knobs, the former comprising LFO-driven filter effects and the latter drawing on saturation

musicians, and the loops layer a number of stems to create full loop compositions. *Ethnic Drum Ensembles* provides loops and six kits culled from an instrument list that includes taikos, daikos, bongos, congas, frame drums, djembes, dumbeks, bodhrans, darbukas, batas, cajons, and surdos. I was surprised to find only a few ethnic grooves in this title.

Unlike previous Heavyocity titles, patches do not appear in the Kontakt browser. You must load them from the Kontakt 5 file menu, which makes random-access file auditioning a bit more diffiand distortion. These, in conjunction with four Master effects, go a long way toward obliterating the purely acoustic dimensions of the sounds. If that's not enough, you get five programmable Trigger effects, which have the added benefit of a step sequencer for each.

In general, these grooves are powerful and best suited to dramatic scoring. The two libraries work beautifully together, letting you create multis from both titles. The series is a worthy addition to Heavyocity's roster of sound libraries.



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Nine \$0 Music Marketing

Build Your Fan Base, and a Career that Will Go the Distance

BY RANDY CHERTKOW AND JASON FEEHAN

C rowing your fan base takes more than just making your music and getting it heard. You need to promote and market your music actively in order to turn one-time listeners into fans. Fortunately, marketing is not as complicated as many musicians think, and, more importantly, there are many strategies that are free and within your reach. When you have a new track to promote, consider the following nine \$0 marketing strategies to increase your followers before your next release.



Strategies

1. STAND OUT IN <u>A CROWD</u>

Most musicians think "I have to get my music reviewed by a big music site or publication." Don't start there! Publications and media that focus solely on music are probably the hardest places to get reviewed. For instance, National Public Radio's "All Songs Considered" receives 200 to 300 song submissions each week. Out of those, the program can only feature eight. And those are sandwiched in between other songs, and played just once. The same is true for music reviews. Reviews give you useful quotes for your press kit, but unless you make it into a major publication such as *Rolling Stone*, a review probably won't get you many new fans, because your review would be one of many.

Instead, think in terms of where your audience hangs out and then target those sites—especially if the sites don't normally feature music. For example, one of the biggest sellers in the early days of CDBaby was an album about sailing. Instead of sending the album to music magazines to get reviewed, the artist instead sent the album to a popular sailing magazine.

The editors of the sailing magazine, which didn't usually receive music, ended up featuring

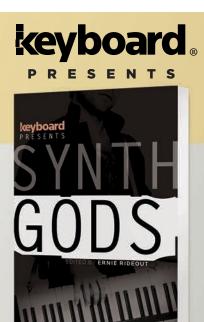
Yesterday's world was organized in terms of geography: You communicated with people who were physically close to you. Today's Internet world is organized by interests.

and reviewing the album. Why? The album spoke directly to their readers. By submitting the album for review to a magazine that didn't normally receive or review music, the artist didn't have to compete against tons of other music submissions. The release got noticed in a big way. Because the magazine had a large distribution, and the album got a great review, and the review included information on exactly how readers could get the album, sales shot through the roof.

2. USE THE PIGGYBACKING STRATEGY

One of the quickest ways to get noticed is to piggyback on something that's already popular. There are two easy ways to do this. First, list other popular artists that you "sound like" on your website; drawing a comparison to music that listeners already know they like can help give them a clue that you're worth checking out. Second, cover a well-known song. For many musicians, a cover song becomes their biggest seller. But covering a song can also create a gateway for listeners. If they like your cover, they will check out your other material and might buy the entire album that includes the cover.

You can also piggyback on popular culture. For example, our own band, Beatnik Turtle, wrote a song called "Star Wars (A Film Like No Other)" which summarized the original *Star Wars* trilogy in one song. Around the same time, StarWars. com released a video mashup tool, so we decided to use that tool to make a video including actual movie clips. The video ended up becoming one of



edited by Ernie Rideout

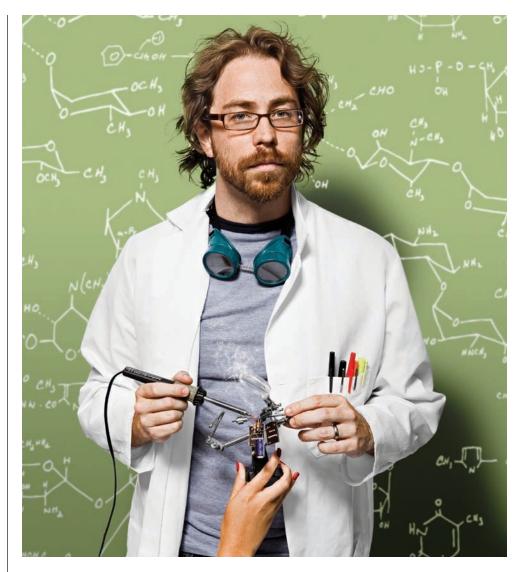
This book spotlights artists who did much more than just play synthesizers: they changed the course of music history and inspired generations. Featuring in-depth profiles of Jan Hammer, Wendy Carlos, Rick Wakeman, Brian Eno and others, this book delves into how these new, untested boxes of circuitry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

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Jonathan Coulton conquered the geek-Internet niche with songs like "Code Monkey."

the most popular on the site, getting played more than 15,000 times thanks to the active community. That popularity led to it getting picked up by Atom.com as a featured video, which in turn led to it being licensed to air on SpikeTV to celebrate the *Star Wars* 32nd anniversary.



The authors' anti-Christmas album, *Santa Doesn't Like You*, sells well every December, thanks to keyword searches.

Current events also provide piggybacking opportunities. When a topic is hot, lots of people will be searching the web for information about it. With a little thought, you can be part of the trend, whether through the title of your blog or YouTube video, or a hashtag on a well-timed tweet.

Charities offer another opportunity for piggybacking. Many artists team up with a charity, not only to raise money for a good cause, but also to help introduce themselves to new audiences. Special live performances or albums where some of the proceeds go to the charity can benefit the artist and a worthy cause. Besides teaming up with a charity, services like Reverbnation's Music for Good allow artists to sell songs and split revenue between a charity and the artist.

Finally, one of the most effective piggybacking strategies is to use the popularity of holidays. For example, our band's irreverent un-Christmas album called *Santa Doesn't Like You*, with songs such as "Co-ed Naked Drunk Christmas Shopping" and "Smokin' the Mistletoe," sells well every December, despite being more than a decade old—and we don't spend a cent on marketing it. The songs naturally come up when people search for keywords like "Santa" or "Christmas" at digital stores like iTunes and Google Play, or streaming services like Spotify or Rdio, around the holidays.

3. CONQUER A NICHE

Yesterday's world was organized in terms of geography: You communicated with people who were physically close to you. Today's Internet world is organized by interests. Each niche spawns websites, forums, and social media that serve its community, and in turn, these focused Internet destinations engender dedicated groups of people seeking information, media, and music that's aimed directly at them.

Just because a particular niche is focused doesn't mean that it's small. Soccer fans make up one niche in the world of sports, yet there's a huge community of soccer fans in the world. But the more focused the niche, the more dedicated the fan base. Because the Internet allows people to organize this way, it becomes much easier for musicians to reach specific niches in order to introduce music to them. And if your music matches members' interests, you can use niche communities to build new fan bases.

The Internet makes it easy for musicians to reach specific niches in order to introduce new music to them. And if your music matches their interests, you can use niche communities to build new fan bases.

For example, artist Jonathan Coulton did this in his early days by (naturally) writing the kind of music that the geek community around the website Slashdot enjoyed. With songs about mathematical concepts like "The Mandelbrot Set" or music about computer programming like "Code Monkey," his music was often posted to websites related to these concepts. And as he conquered the geek-Internet niche, he was able to build still larger audiences that transcended his original listeners—partly with help from fans within the niche who were employed at video game companies or NPR, wrote for music review sites, and more. Opportuni-



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ties sprung from this, and his music was later used in video games, licensed to TV shows, and played on the radio. From there, he started to tour worldwide and sold out venues—all from focusing on a niche.

4. START A STREET TEAM

Today's artists are more connected to their fans than ever. And in these days of social media, every fan you have can reach hundreds if not thousands of people via a single tweet or Facebook post. Sometimes, all you have to do is ask in order to get their help to spread the word.

The key to a successful street team is to be specific when you ask them to do something, and make it easy to share your work. Videos on YouTube are the most shareable media. Second best are songs that are posted to music platforms like SoundCloud, which allows for easy sharing. Give your fans clear direction: Ask them to post your work to their social networks—directly, in the descriptions of the songs, and as a call-out at the tail-end of videos.

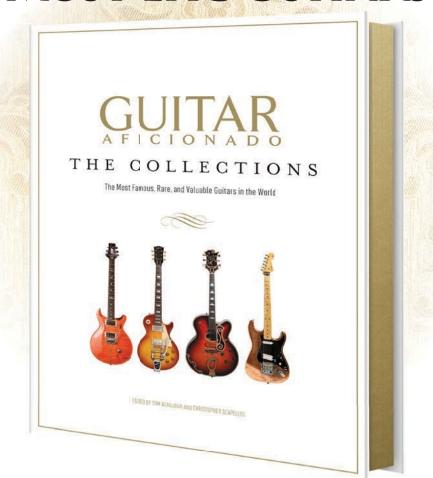
Every fan you have can reach hundreds if not thousands of people via a single tweet or Facebook post. Sometimes, all you have to do is ask in order to get their help to spread the word.

You never know what opportunities your fans may be able to create for you. Jonathan Coulton's fans began hooking him up with opportunities in radio, TV, and video games after he asked for help to make connections for his music. Make sure that you ask your fans to find opportunities for your music.

5. GET AN AGENT

Most independent artists represent themselves; they get their own gigs, make their own deals, and negotiate for themselves. But one trick that's helped us and many other scrappy artists is to get someone to represent, sell, or negotiate for you—even if you're just starting out. Why? It's human nature to think more of someone when there's a third party acting on his or her behalf.

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GUITAR A FICIONADO Give your fans clear direction: Ask them to post your work to their social networks—directly, in the descriptions of the songs, and as a call-out at the tailend of videos. Plus, having an agent is very useful during negotiations, because they can be as tough as they need to be without tarnishing your image. If you negotiate for yourself and you give the other side a difficult time, the individuals you're dealing with may not be able to separate the business from the artist.

Normally an agent only makes a cut if they make you money. But keep in mind, for this strategy to work, you don't need to hire a professional. It's enough to just have a friend or family member act on your behalf when dealing with journalists, bookers, licensors, or other businesses.



6. BORROW CREDIBILITY

When your name isn't well known yet, you can have a hard time getting people to check out your music. To boost your chances, it helps to have your music associated with someone or something that already has credibility.

One way to do this when you're starting out is to get reviewed. This shows potential fans that someone else thought your music was worthwhile. Other ways include citing awards that you've won, wellknown places you performed or your music was played, or media where your music was featured.

For live music, you will want to talk about other venues you headlined, major bands you've opened for, or festivals you've played. In terms of music licensing, you'll want to talk about any other commercials, movies, or shows that have used your music.

7. CROSS-PROMOTE YOURSELF

Once you have an audience, you can start exploring cross-promotion possibilities with other artists, creative people, and businesses—after all, everyone is looking to reach new audiences. To do this, offer to promote the other individual or business's name and work to your fans in exchange for exposure of your music to their audience.

This cross-promotion can be done via links to each other's work, but becomes even more effective when you collaborate on something creative. For example, this happens in nearly every release of the Epic Rap Battles of History, where all of the musicians, comedians, or actors who participate in creating the song and episode get a credit at the end of each video, including links to their YouTube channels.

But cross-promotion doesn't just have to be online. Our band became the musical accompaniment for a sketch comedy group called The Dolphins of Damnation, at Chicago's Second City. Besides playing behind musical sketches and in between scenes, we played a song or two in the middle of the show, similar to what artists do on *Saturday Night Live*. One of the reasons why the comedy group won the time slot was because the band came with an established fan base. In return, we got to play in front of their fans as well as for the people who attend comedy shows at Second City, exposing our music to a brand-new audience. Plus, we got to add Second City to our live show bio (as in strategy number 6 above).

8. CROSS-SELL YOUR MERCH

All the musicians we've interviewed over the years have something in common: They don't just rely on playing live, selling albums, and selling merchandise; they do plenty of projects apart from their own music creation and sales. They have podcasts, record videos, write blogs, perform in other bands, create apps and games, write books, create comics, and more.

As a creative person, it's likely that you too are



working on other projects in other media. No matter what they are, find ways to tie them together with your music. This is especially helpful if you are working with other creative people on projects. Once you have done some work to develop

an audience in any venue or project, find ways to cross-sell your music to fans of that project. Once listeners are familiar with some of your work, it's likely they will want to check out other things that vou've done.

Cross-promotion becomes even more effective when your links are part of a creative collaboration, such as Epic Battles of Rap History.

9. STICK WITH IT FOR THE LONG HAUL

Many musicians emulate the major labels and try to create something that will get them noticed in a short timeframe. But while major labels have sometimes profited from a one-hit-wonder business model, most other businesses use a much longer-term strategy: They build a reputation over time and eventually grow consistent income.

A long-term strategy also applies to building your fan base. With each release, album, video, or promotion, you can grow your audience a little bit more.

Try as many of these techniques as you can, and see what works. This is about being smart with the amount of time and resources you have, and can put into each project and marketing effort. In the past, major labels had enough money to flood a market with their marketing, to create buzz and make an artist seem successful fast. But if you can't do that, use our strategies and try placing little bets on smaller releases and marketing efforts. This way, you can build your fanbase and your income with little help, and almost no money.

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Dirty Little Secrets

Crazy-and conventional-tips for pumping up your tracks with distortion

BY MICHAEL COOPER

Michael Cooper is a recording, mix, mastering, and post-production engineer and a contributing editor for *Mix* magazine. You can hear some of his mixes at www.soundcloud.com/ michael-cooper-recording. D istortion sounds great on more than just electric guitar tracks. It's also your key to huge-sounding trap drums, burpy bass, and rich lead vocals. Best of all, you don't necessarily need to use a distortion plug-in to add awesome grit, girth, volume, and luster to your tracks.



I SEE RED LIGHTS FLASHING

We all know to keep levels from clipping when recording. But when mixing, it's sometimes a different story. For crisper and bigger-sounding kick and snare tracks, set their clipping LEDs ablaze! Boost each track's fader until its level is a couple dB or so over full-scale. When you do this, two things happen. First, the shape of the kick and snare's waveform peaks approaches that of a square wave-adding transient high frequencies. Second, the tracks' average levels are boosted in your mix without increasing their relative peaks, giving you louder drums while preserving your mix's headroom. Win-win. Just be aware that this technique works best on drum tracks that have very prominent transient peaks to begin with. Soft or very bass-heavy drums that have high average levels will likely suffer sustained, disagreeable distortion when clipped.

BASH THE BASS

Clipping the electric bass guitar track also creates a huge sound, but getting musical results requires more work than clipping drums. I'll use Digital Performer to illustrate the proper setup (see Figure 1).

First, duplicate the bass track; we're going to maul that duplicate while leaving the original track unprocessed. Instantiate MOTU's proprietary Trim plug-in—a simple gain and phase adjuster—on a prefader insert on the duplicate bass track, and boost the plug-in's gain control so that the signal is virtually always clipping. The resulting distortion will make the track sound like it's playing through a broken tinfoil speaker, but we're going to fix that: Instantiate an equalizer plug-in—I like FabFilter Pro-Q for its analog-like sound—immediately following Trim, and dial in a steep lowpass filter (LPF) with a 1 to 2kHz corner frequency. The final step is to route both the original (unprocessed) and duplicate (clipped and filtered) bass tracks to the same output (or to an aux track to EQ the composite sound) and adjust their faders for the best-sounding blend. You essentially use the two faders the same way you would adjust the dry and wet controls in a distortion plug-in. You'll probably want to set the duplicate bass track's fader a lot lower than that for the unprocessed track. The final result should sound badass!

CATCH A QUICK WAVE

Savvy engineers also love using the Waves L1 Ultramaximizer plug-in to distort the bass track (see Figure 2). There's no need to copy the bass track in this application; L1 is instantiated on a pre-fader insert on the original track. Set the plug-in's ceiling control to whatever level you'll ultimately want the bass to be at in your mix. Then slowly lower L1's threshold control until you hit the sweet spot: the point at which the bass guitar sounds growly but not too squashed. The bass guitar won't just have a more aggressive tone, it will also sit better in your mix.

CONTROL YOUR EXCITEMENT

Technically speaking, harmonic exciters are also distortion generators. To get the most out of these types of plug-ins, it's important to realize that exciters add harmonics at least an octave higher than the input signal. Understanding this point is key to effective use of multiband exciters in particular.

If, for example, your ears are telling you a vocal track could use some added sparkle in the uppermidrange band, don't boost the exciter's wet signal in that band. All you'll accomplish is adding sheen to the highs (an octave or so higher). Instead, boost the exciter's input in the lower-midrange band.

BE SELECTIVE

Unless you're mixing very aggressive music, such as industrial or metal, add distortion to only a few tracks. Remember, the best mixes provide contrast; shoveling dirt onto everything will make your mix lose definition, depth, and punch. Single out a few tracks for abuse, and then fire away!

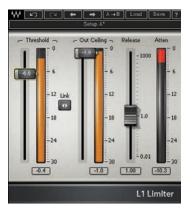
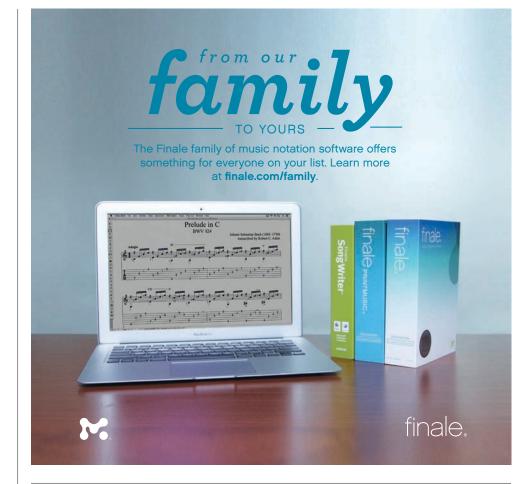


Fig. 2. The Waves L1 Ultramaximizer plug-in can be used to add euphonic distortion to a bass guitar track while simultaneously reining in fluctuating levels.





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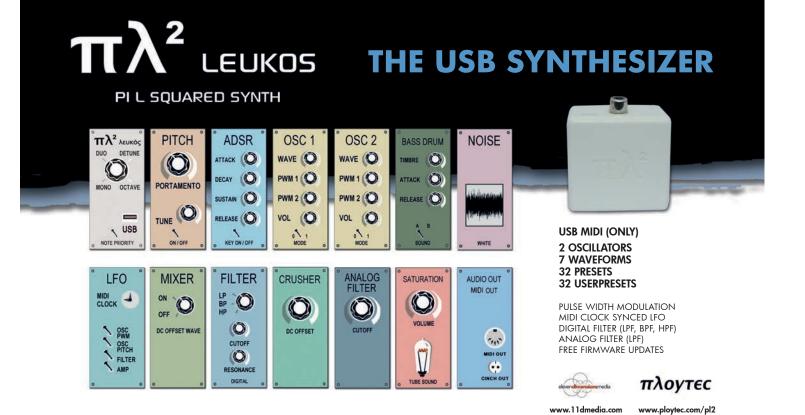
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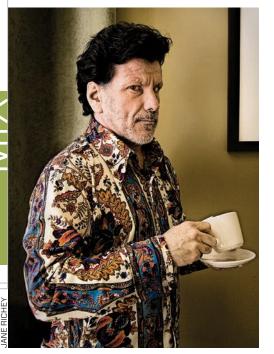
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ROUGH



Fine Tuning

Avoid impulse buying by focusing on the essentials

BY GINO ROBAIR

Mether or not you attend the NAMM show this month, you cannot escape its effects on the industry: Your favorite music stores—online or brick-and-mortar—will be closely following the announcements during the show and, in some cases, will have stock ready for purchase immediately after a product is unveiled. Of course, the hype is intended to get you back into the swing of things—making your list, checking it twice, and then getting out the credit card that has barely cooled off after the holiday season.

Like everyone else, I, too, will be making a list of my favorite things from the show. However, I also carry a list of the items that I absolutely need, which serves as a reality check against impulse buying. The list is full of those seemingly boring essentials—cables, mic and keyboard stands, a speaker switcher, and other accessories without which is it is impossible to work. Simply adding another exciting new piece of gear to my studio doesn't guarantee greater efficiency or better sound unless it is fully integrated into the whole. Instead, it can become a distraction, which is the last thing I want.

With the influx of new releases in mind, let's focus this month on prioritizing overall improvements to your studio rather than merely emptying your wallet on all those glamor items.

ONE PIECE AT A TIME

Let's start by taking stock of the various aspects of your rig—studio, live, or whatever hybrid you have—and do a little planning. But instead of simply listing everything you own, let's look at how well the items are integrated and whether there are things you can do to improve sound quality or remove barriers to creativity.

I'm constantly surprised that so few people– even professional musicians—do this kind of studio critique. When hired to evaluate someone's personal studio, I often find a lot of excellent, high-end gear but it's usally chosen with little thought or investment into how components are interconnected. Unfortunately, top-quality products do not operate in a vacuum: They'll only provide peak performance when they are surrounded by an equally matched system.

Let's break this down for the studio environment. In the most basic setup, the recording chain looks like this:

Sound source >> transducer >> preamp >> A/D converter >> storage device.

For playback, you're looking at the reverse:

Storage device >> DAC >> amplifier >> transducer >> acoustic sound.

In order to evaluate each path, follow the signal flow—visually or in your mind—from the first link to the last, keeping an eye open for any weak spots.

Start with your sound source. If you're an electric guitarist, consider your guitar and amp: Do they reflect your current interests? Do any components need repair or replacement? Do you want to upgrade your sound (e.g., invest in a tube-based amp)? Are there any problems with your cables? How about the ones in your pedalboard? If you play a synth, acoustic guitar, percussion, or winds, look at every aspect of your setup to see how it stands up to scrutiny.

Next is the input transducer—the microphone: Does it match the kinds of instruments you plan to record? (Are you still using that old stage dynamic to record *everything*?) And before you move on to the preamp, think about your mic cables: Are they in good shape? Do they match the quality of the mic you're using?

You get the picture. By taking mental stock of each step in the signal path, you'll have the opportunity to find areas that are problematic or where you can raise the bar.

Another useful way to evaluate your setup is to look for balance. For example, compare each side of the signal path: Do your input and output transducers—mics and monitors—match each other in terms of sound and build quality?

Another balancing point is between the quality of your transducers and your interface (ADC and DAC): If you are using a low-cost USB interface between your boutique mic and expensive playback system, an interface upgrade would be a worthwhile investment.

Focusing on specific tasks is also an excellent way to examine your rig. Perhaps your playback setup is more important because mixing is your main gig. In that case, look closely at each piece in your monitoring system to see if there is a balance in quality throughout.

Remember that your playback system is more than just the speakers themselves. Topics to consider include the DAC (Is it time for a high-quality standalone unit?); passive vs. active monitors; balanced vs. unbalanced cabling; monitor placement (Should you move them off the desktop and onto stands? Are they positioned properly in the room? Are they decoupled from the stand or desk?); and room treatment (Is the sound of the room altering what you hear from the monitors?). Chances are good that you'll have plenty to consider after such an evaluation.

NO RATIONALIZATION ALLOWED

Whatever you do, avoid using these questions to justify the purchase of unnecessary gear, at least until you've brought your system up to a level that reflects your current needs. Plan upgrades to match your budget constraints, and before you know it, your system will be up to its full potential, giving you a much more efficient, and hopefully creative space in which to work.

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DiGiGrid IOS High-Definition I/O with SoundGrid DSP Server

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	DiGiGrid DLS Pro Tools™ I/O wit	n SoundGrid DSP Server
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DiGiGrid DLI Audio Interface for Pro Tools™ System:



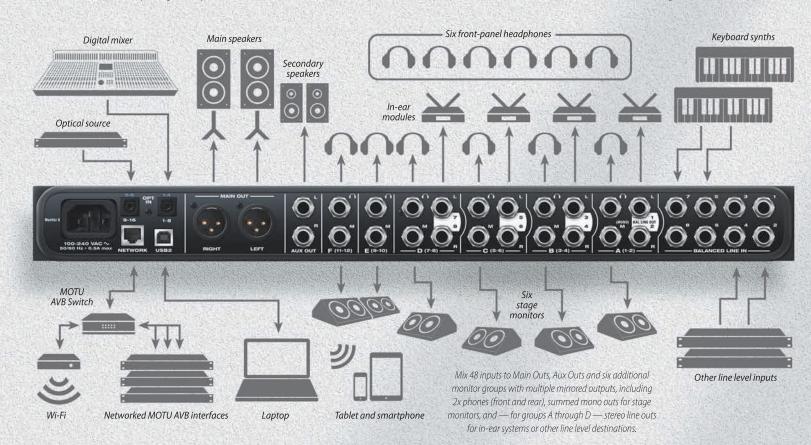


Find out what DiGiGrid DLS, DLI & IOS interfaces can do for your system at digigrid.net For U.S. sales: www.waves.com

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Monitor mixer, 6-channel headphone amp and USB/AVB audio interface with 48-channel mixing and AVB audio networking

With exceptional analog audio quality, Monitor 8 can serve as your primary audio interface or as the ultimate monitor mixer, on stage and in the studio. Mix 24 inputs, computer audio and 32 AVB audio network channels to eight stereo output groups. Connect primary and secondary PA speakers or studio monitors to Main and Aux Outs. Then use six additional, independent monitor groups (A through F) to connect up to 12 headphones, 6 stage monitors, and 4 stereo in-ear modules or other line level destinations. Powerful DSP delivers large console style mixing with 48 channels, 12 stereo busses and effects. Control everything from your iPad™, iPhone™, tablet, smartphone and laptop. Network with MOTU's other award-winning AVB interfaces.



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