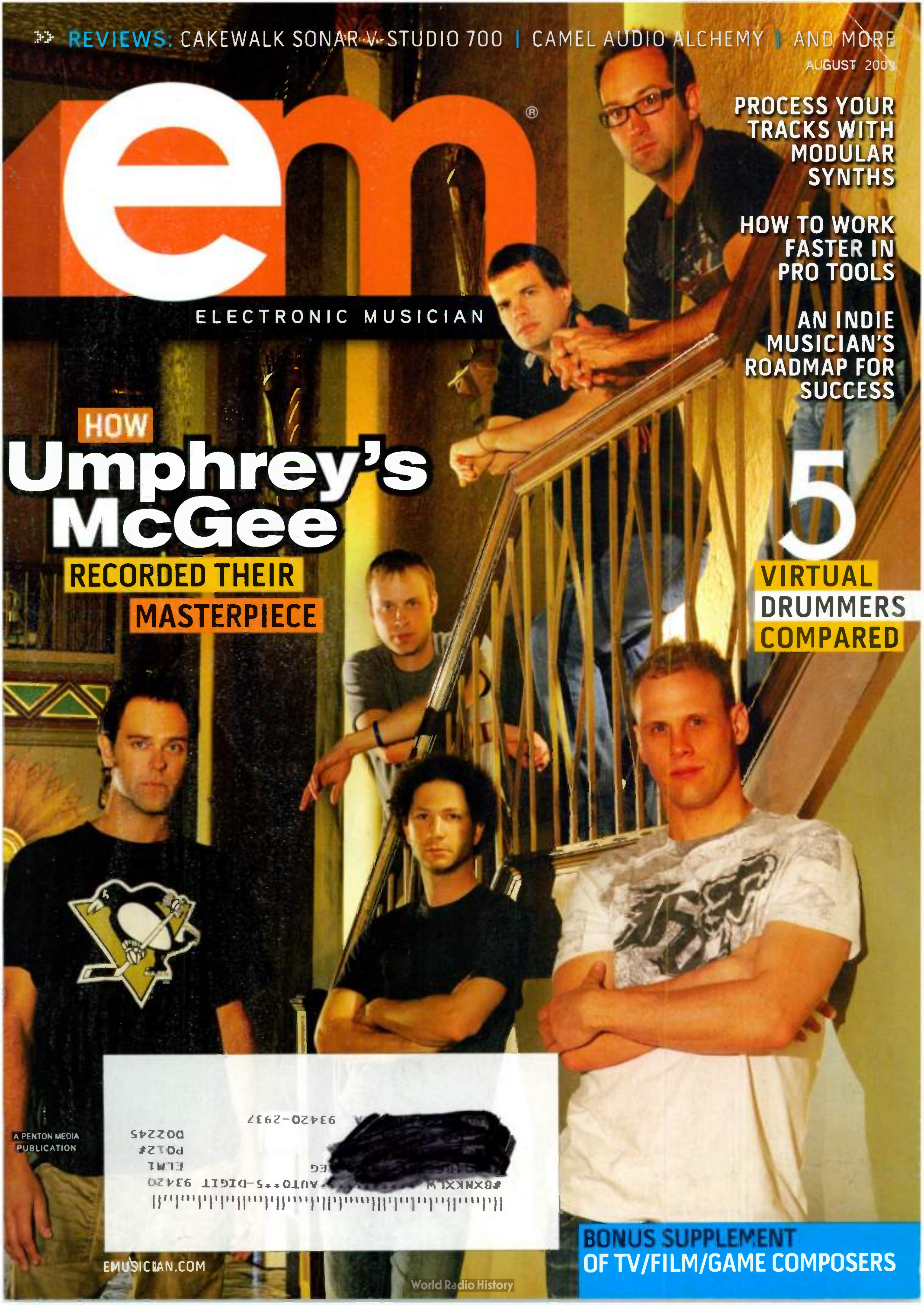

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ELECTRONIC MUSICIAN
AUGUST 2009 VOL. 25, NO. 8

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BY MARTY CUTLER

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EM (ISSN 0884-4720) is published monthly by Penton Media, Inc., 9800 Metcalf Ave., Overland Park, KS 66212 (www.penton.com). This is Volume 25, Issue 7, July 2009. One-year (12 issues) subscription is $24. Canada is $30. All other international is $50. Prices subject to change. Periodicals postage paid at Shawnee Mission, KS, and additional mailing offices. Canadian GST #129597951. Canadian Post International Publications Mail Product (Canadian Distribution) Sales Agreement No. 40612608. Canadian return address: Bleuchip International, P.O. Box 25542, London, ON N6C 6B2. POSTMASTER: Send address changes to EM, P.O. Box 15605, North Hollywood, CA 91615.

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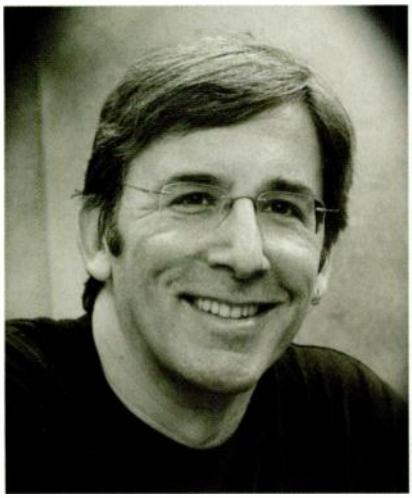
World Radio History

On the Square

There's no shortage of new stuff to tell you about this month, both at *EM* and emusician.com. First, I want to let you know about a special online section, "Square One Tutorials," that we recently debuted. If you're a regular *EM* reader, you'll know that our "Square One" column has been the repository of numerous articles explaining the basics of a huge range of topics related to recording, audio, synthesis and sound design, computing and more. Pretty much every topic area we cover in the magazine has been broken down in a "Square One" column at one time or another.

Over the years, we've built up a large collection of these stories, and we've now put them all into a single, easy-to-use section at emusician.com. If you're looking for solid info on tech basics, go to the "Square One" tab of the Tutorials section on the emusician home page, and you'll find what you're looking for.

Also new online this month is the premiere of a video blog from New York producer/composer Aaron "Ming" Albano. Ming has worked with Diddy, the Cheetah Girls and many others, and has written music for TV shows like *CSI: Miami* and *Weeds*. One of his main focuses these days is producing emerging rock, hip-hop and pop artists, and from those experiences will come the material he'll be presenting in the videos. Titled "In the Studio With Ming," this series will give you a "fly on the wall" perspective of what goes on in his studio, including interviews with the artists and a look at his production techniques. Keep your eye on emusician.com for this exciting new feature.


MARLA COHEN

In this issue of *EM*, we are also debuting the "Composer's Resource Report" supplement, which spotlights composers of film, TV and game music, and is presented with our sister site Reel-Exchange.com. A lot of *EM* readers are composers, and we'd love to be able to spotlight you in future editions of the report. Send an e-mail to support@reel-exchange.com to receive more information on how to qualify. Make sure to use the promo code REX005 so that they know you're an *EM* reader. (There's no charge to sign up.) In addition to composers, Reel-Exchange.com members include directors, film editors and other professionals who use music for their projects, so getting your name and profile into that database could be beneficial to you.

This month's cover story on Umphrey's McGee was a real blast to write. I got a chance to hang out with a number of the guys in the band, as well as their engineer/producer, and talk at length about their new prog-rock CD, *Mantis*, which is by far their most ambitious recording to date. When writing the story, the "angle" that struck me as the most interesting was that a band best known for its incredible abilities for live jamming was able to turn on a dime and record an album that was precisely arranged with virtually no improvisation (save for some fixed-length solos).

I was also impressed by the incredible detail that went into the production of *Mantis*. For example, the band recorded multiple versions of each song to a click in a variety of different-sounding rooms at two Chicago studios (Steve Albini's Electrical Audio and Manny Sanchez's I.V. Lab Studios) to provide a range of drum sound choices during mixdown. In some cases, they even edited sections from various takes together so that the drum sound changed in different parts of the song. To supplement the article, I've posted a two-part video interview with the bandmembers at emusician.com/videos.

I'm very pleased to be able to welcome Gino Robair back into the *EM* fold with his article this month called "Make Mine Modular," in which he explores using modular synths as processors for your recorded tracks. Gino is a modular synth aficionado, and he has lots of cool tips and advice to offer in this story.

Mike Levine
Executive Editor

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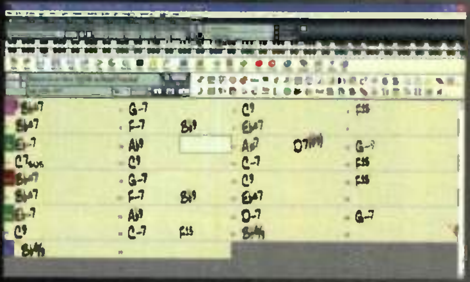

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PLUS... look at these amazing features in Band-in-a-Box 2009 for Windows & Macintosh!

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- ✔ **SuperPAK Band-in-a-Box... $369**
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  Includes RealTracks Sets 1–12; RealDrums Sets 1–20; Styles Sets 0–77; Soloist Sets 1–11 & 16–20 and Melodist Sets 1–8.
- ✔ **UltraPAK Band-in-a-Box... $449**
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  Includes RealTracks Sets 1–39; RealDrums Sets 1–20; Styles Sets 0–77; Soloist Sets 1–11 & 16–20; Melodist Sets 1–8 and The Band-in-a-Box Video Tutorial PAK.
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FRONTPANEL

Download of the Month

Togeo Studios Audio Libraries (Mac/Win)

By Len Sasso

DREAMSCAPES III
TOGEO STUDIOS

ONLINE BONUS MATERIAL

Togeo Studios (togeostudios.com) and sister site Togeo Music (togeomusic.com) are labors of love from German/American father-and-son team George and Tobias Peterson. Togeo Studios hosts collections of samples, loops and presets for various synths, but its primary offerings are Live Packs for Ableton Live. You'll also find budding forum, blog, links and tutorial pages on the Website. Togeo Music provides artists both an outlet for their music and access to the music of others. All downloads are free, and all music is royalty-free for you to use in your own projects. Donations to help sustain the site are encouraged, and PayPal and major credit cards are accepted.

The downloads for Live come in the form of packed Live projects rather than the more usual Live Packs that automatically integrate into Live's library. Never the less, they're easy to install: Simply unpack the project (.alp file) in Live's browser and then use the Live Project Manager's Export function to move the files into Live's library.

The current 13 Live libraries offer a cross-section of material ranging from ambient soundscapes to sampled drum kits to synthesized and sampled acoustic instruments. Among my favorites are the Dreamscapes Series, which comes in three installments: the mammoth 107MB Soundscapes Texture Generator Version 2, and the Mixed Bag assortment of synth leads, basses and pads. The two-part Electro Excursions loop collection brings you 146 edgy rhythm loops laced with electronic percussion. Buhya Bass, which sounds as good as it tastes, comprises both loops and Live Instrument Racks with matching MIDI clips (see **Web Clip 1**).

In addition to grabbing free source material for your next project, be sure to visit and possibly contribute to the Togeo forum. And check out the music of the Petersons and others at the Togeo Music site.

OPTION-CLICK

By David Battino

Mix It Like MacGyver

Discover unexpected features in popular hardware and software

Got a synth with multiple audio inputs? It can often work as a utility mixer. For example, I wanted to listen to an Electro-Harmonix Voice Box (see the review on page 50) on headphones, but it has a mono output. So I connected it to a line input on my Yamaha MU128 sound module, panned the sound to center and even applied some stereo reverb to it.

In a recent jam, I wanted to play both my Korg Kaossilator and Novation BassStation. I always route the BassStation through a Korg Pandora effects box, but I had never used the Pandora's stereo aux input, which is designed to let you jam along with a CD. Plugging in the Kaossilator instead created an instant performance setup. The hat trick was patching my buddy's and my stereo signals directly to my 5.1 home theater system. He played through the front speakers while I played through the surrounds.

—David Battino, Batmosphere.com

The Yamaha MU128's four audio inputs let me mix the output of two computers to stereo and capture it to a portable digital recorder.

This Month on Emusician.com

SPINAL TAP VIDEOS

Mr. Bonzai interviews David St. Hubbins (Michael McKean), Nigel Tufnel (Christopher Guest), Derek Smalls (Harry Shearer) and producer/keyboardist C.J. Vanston on the band's new recording project.

MR. BONZAI

ONLINE EXCLUSIVE: BÉLA FLECK

The vaunted banjo player on the field-recording of the music for his recent CD and video project, *Throw Down your Heart*.

BÉLA FLECK

THIS MONTH'S SOUNDTRACK

These releases encompass a range of musical styles and production methods.

By Mike Levine

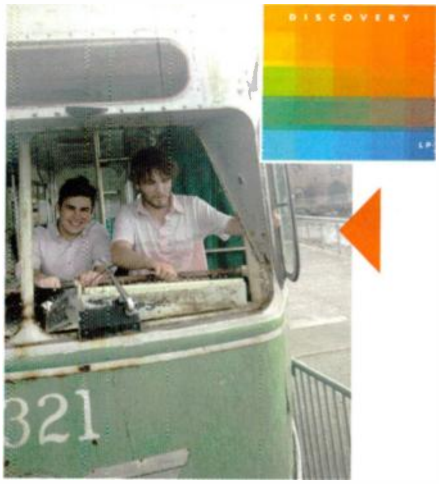
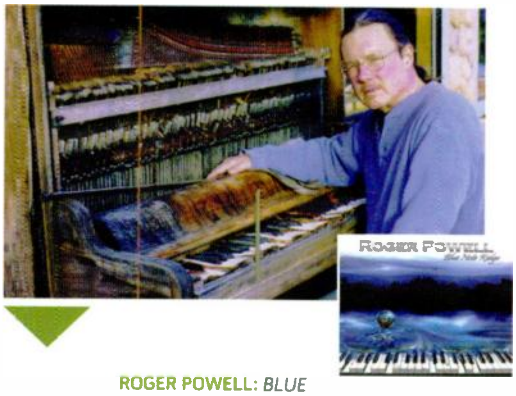


PHOTO CREDIT: ALEX JOHN BECK

DISCOVERY: *LP* **(XL RECORDINGS)**
A collaboration between Rostam Batmanglij from Vampire Weekend and Wes Miles from Ra Ra Riot, this 10-song release is filled with melodic hooks, lush harmonies, electronic drum sounds—including sampled hand claps in place of snares and lots of 16th-note hi-hats—and analog-style synths.



ROGER POWELL: *BLUE NOTE RIDGE* **(FOSSIL POET)**
Powell, best known as the keyboardist in Todd Rundgren's Utopia, has released his second solo CD since 2006. This one comprises gorgeously recorded solo piano improvisations that are alternatively pensive and pretty, and feature both jazz and classical influences.

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PEACEBLASTER

PHOTO CREDIT: C. TAYLOR CROTHERS

SOUND TRIBE SECTOR 9: *PEACEBLASTER: THE NEW ORLEANS MAKE IT RIGHT REMIXES* **(1320 RECORDS)**
A remix album of STS9s recent *Peaceblaster* CD features an array of remixers including Richard Devine, the Glitch Mob, Captain Crunk and many more. All profits will go to the Make It Right Foundation, which is dedicated to helping rebuild New Orleans' Katrina-devastated 9th Ward.

PHOTO CREDIT: FERNANDO ARCE

WEATHER PENDING: *AND HOW!* **(RIPE FRUIT)**
Catchy, ethereal songs; grooving bass and drums; unique, often Rhodes-like rhythm guitar playing; and the distinctive and sultry vocals of Janie Oliver mark the debut release of this San Francisco group (see **Web Clip 1**).

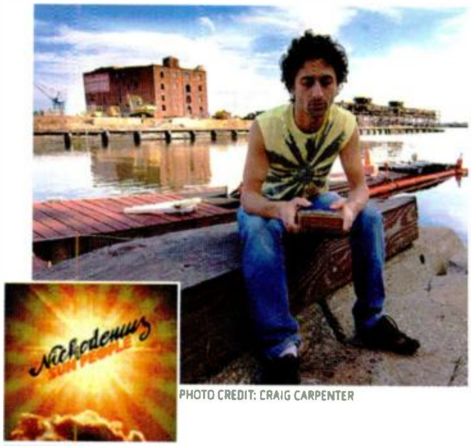


PHOTO CREDIT: CRAIG CARPENTER

NICKODEMUS: *SUN PEOPLE* **(WUNDERWHEEL RECORDINGS)**
New York DJ Nickodemus' second solo CD offers 12 cuts of effusive and eclectic world-beat dance music. Guest vocalists from Brazil, Guinea, Colombia, India, Turkey and more provide added spice.

EM CAST: BRUCE SWEDIEN

The Grammy-winning engineer talks about recordingthe late Michael Jackson, changes in studio technology since the days of mono and much more.

VIDEO BLOG: IN THE STUDIO WITH MING

New York–based producer/composer Aaron "Ming" Albano (Ming + FS, Diddy, the Cheetah Girls, EA Sports, *CSI: Miami*, *Weeds*) takes you inside his productions with emerging artists.

WHAT'S NEW

By Len Sasso

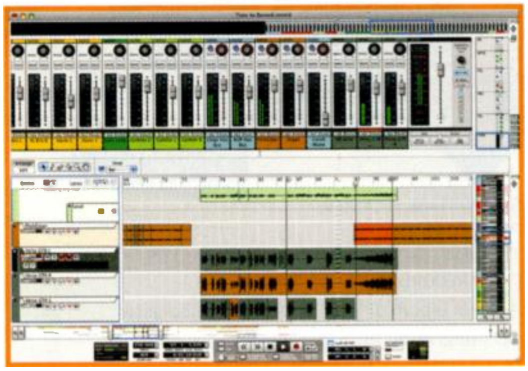
FOCUSRITE LIQUID SAFFIRE 56

LIQUIDITY RULES

Focusrite's (focusrite.com) new flagship FireWire audio interface, Liquid Saffire 56 (Mac/Win, $999), offers 24-bit, 192kHz processing with a 28-by-28 I/O count. You get six Focusrite preamps and two additional Liquid preamps marrying an analog front end with convolution DSP. The two Liquid preamps feature emulations of 10 classic mic pre's such as the API 3124+, Neve 1073 and Telefunken V72. Its two headphone buses have independent level controls and customized monitor mixes. Front panel LED metering lets you monitor the levels of the analog, ADAT-1, ADAT-2 and S/PDIF inputs. The unit comes bundled with Saffire Mix Control zero-latency DSP mixer and router software, as well as the Focusrite suite of Audio Units and VST compression, reverb, gating and EQ plug-ins.

PROPELLERHEAD SOFTWARE RECORD

REASON TO CHEER



After years of speculation, Propellerhead Software (propellerheads.se) has stepped up with stand-alone software that adapts Reason's rack-and-track paradigm to audio recording. Record (Mac/Win, $249; $149 for Reason users; $499 bundled with Reason) fully integrates into Reason without using ReWire and will function as a ReWire slave to other DAWs. Standout features include unparalleled time-stretching capability, unlimited track count, faithful emulation of the SSL 9000 K analog mixing desk, and a bounteous array of effects including guitar and bass POD units from Line 6. Record's sequencer offers quick-and-easy comp editing, automation of everything and MIDI sequencing for its built-in ID8 virtual instrument, as well as all Reason modules. Release is slated for September 9, 2009.

LINE 6
JM4 Looper
RECORD
UNDO

LINE 6 JM4 LOOPER

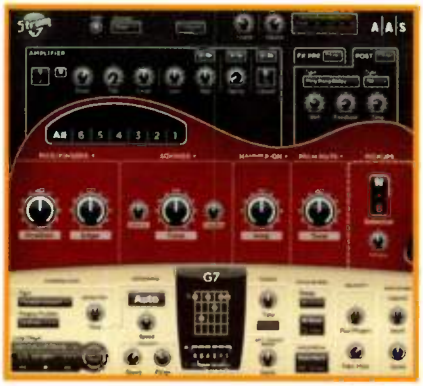
IN THE LOOP

Start with more than 100 Endless Jam tracks performed by notable session players in many styles, add more than 30 minutes of sound-on-sound looping and storage for 100 recorded jams, and you have the Line 6 JM4 Looper ($329.99). Slap a 2GB card into the SD card slot for additional storage and for transferring WAV files between the JM4 and your computer. The unit will transpose and time-stretch both imported and internal song and drum content. Dedicated footswitches for record/overdub, play/stop, half-speed and undo make it perfect for loop-over practicing, songwriting and creating backing tracks on the fly. You can even dub vocals using its balanced XLR mic input. Check out details and the manual at the Line 6 Website, line6.com.

BAND ON A STAND

ROLAND VP-770 VOCAL & ENSEMBLE KEYBOARD

Roland (rolandus.com) has positioned the new VP-770 Vocal & Ensemble Keyboard ($2,199 [MSRP]) for pop, hip-hop, dance and worship. It incorporates new vocal-designer effects and a bevy of ensemble sounds powered by SuperNATURAL technology. Roland calls it ideal for solo performers and small bands, as well as for film and TV production with limited time and budget. The unit comes with a high-quality mic/headset combo and accompanying mic preamp, and its built-in vocoder modeling lets you realize signature vocal effects without the hassle of an outboard vocoder. Churches in need of a choir or choir enhancer may also find the VP-770 to be the perfect solution.



APPLIED ACOUSTICS SYSTEMS STRUM ELECTRIC GS-1

Applied Acoustics Systems (applied-acoustics.com) brings its guitar virtual-instrument technology to the electric world with the introduction of Strum Electric GS-1 ($229; $149 upgrade for Strum Acoustic GS-1 users; $379 bundle). Strum Electric starts with a physical model of all elements of the electric guitar sound, from the guitar itself through the effects to the amp and cabinet. Combine that with authentic chord voicing and the emulation of a variety of playing techniques—such as down- and up-strokes, slides and bends, hammer-ons and pull-offs, palm muting and muffled strings—and you have a virtual guitarist at your fingertips. You'll find demos and trial versions at the AAS Website.

A DIFFERENT STRUMMER

Sound Advice

Native Instruments' *North India*

Native Instruments (native-instruments.com) inaugurates its new Discovery Series of Kore SoundPacks with a journey to *North India* (Mac/Win, $79) for its Kore 2 and free Kore Player software. This 3GB sampled library includes the mainstay Hindustani instruments, Sitar and Tabla, along with a palette of other important North Indian instruments such as the Tanpura, Bansuri, Harmonium and Shehnai. Kontakt engine scripting is used to deliver playable instruments with a variety of programmed glissandi and other ornaments. All melodic instruments offer modal, microtonal and chromatic tunings. Kore's built-in Reaktor and Guitar Rig engines take you beyond North India with synthetic drones and alternative melodic sounds.

KORE
NORTH INDIA

Clavia's *Nord Wave Super Sounds*

If you're a Nord Wave owner, Clavia has a gift for you. They've brought together an international group of 12 sound designers and turned each of them loose to create a bank of their favorite Nord Wave sounds. In *Nord Wave Super Sounds* (free), you'll find banks from the U.S., Canada and Western European countries of UK, Germany, Italy, France, The Netherlands and Sweden. The sounds reflect their authors' tastes and cultures, and range from modern and aggressive to laid-back and ethereal. Read individual designer bios, listen to audio demos and download the banks from Clavia's Website, nordkeyboards.com.

Big Fish Audio's *Electron Smasher*

According to Big Fish Audio (bigfishaudio.com), if your beat is broken, *Electron Smasher* ($99.95) will crush it to pieces. Suitable for twisty down-tempo, breakbeat and West Coast breaks, this 4.67GB library contains 717 loops ranging in tempo from 67 to 180 bpm. Its 84 drum-loop construction kits are complemented by 47 ambient loop construction kits and 20 additional soundscapes. The material is designed to mix and match both within the collection and without. em

ELECTRON SMASHER

Sticking With Software

Five virtual drummers that put the groove in your tracks.

By Marty Cutler

Over the years, software drum machines have evolved into extremely sophisticated instruments. The art of software drumming has brought about new ways to deal with sample data, including slicing entire rhythm performances to help adapt them to changes in tempo, feel and even meter.

There are plenty of software drum machines, libraries and groove-creation programs available. But this time, we'll focus on five: FXpansion Guru 1.6, Linplug RMV 5.0.4, MOTU BPM 1.02, Spectrasonics Stylus RMX 1.8 and Submersible Music DrumCore 3.

ONLINE BONUS MATERIAL

The selected instruments provide good operational contrast, so it's more fruitful to give an overview of their distinctive qualities rather than full reviews or shoot-outs. We'll look at our lineup from the perspective of user interface, workflow, sounds and any special features.

FXpansion Guru 1.6

FXpansion's (www.fxpansion.com) Guru resembles an Akai MPC–type rhythm programmer: You click on the drum machine–style pads while recording to enter data. You can also sequence parts from the QWERTY keyboard or by clicking in the pattern grid or—most fun of all—by playing from a controller. However, Guru has features that only a software instrument can offer, lurking only a click or two away.

Running from left to right are buttons for the pattern-editing section, a Graph section hosting various DSP functions, a sample editor and a mixer—all framed by a generous, visually elegant central display. The Graph windows provide unique plots of the data for editing. For example, the Shift window shows each event's deviation above and below a horizontal line representing a spot-on note placement. Pull upward and you're rushing; drag down and you're lagging (see **Fig. 1**). Users can easily induce humanizing and minor variations, and a similar graph handles velocity. Repeat graphs allow painting anything from stutters to granular, buzzing tones (see Web Clip 1). All editing—including DSP—happens in real time; it's always a plus to make major timbral and temporal adjustments in an active, musical context.

The familiar, drum machine–like aspect of Guru's basic workflow invites immediacy and ease of use. However, creating a rhythm track in Guru is a multidimensional process. Each of the 16 pads can hold up to eight layers, which can include sequenced drum patterns or sliced audio loops. (Guru has eight individual Engines with 16 pads in each.) You can drop files directly from the Finder onto the pads or use the browser on the instrument's left-hand side to load patterns, full kits, loops or individual samples.

Guru's playback of time-sliced grooves is vastly improved, now providing a significantly expanded library of loops, kits and hits, with many from well-known programmers. In addition to standard acoustic and drum machine fare, loops and kits include a generous assortment of unique ethnic, glitchy and circuit-bent sounds.

There's plenty of room for personalizing with Guru. In addition to importing your own samples, Guru offers a hefty array of effects, including bit crushers, distortion, delays, filters and more.

Linplug RMV 5.0.4

In contrast to Guru, Linplug's (www.linplug.com) RMV favors a multiple-page interface—a sensible choice for an instrument that provides several unique drum synthesizer modules; a huge supply of sampled kits, patterns and loops; 48 pads (each with a generous modulation matrix); six loop players; and a library of MIDI file patterns. Due to RMV's complexity, navigation can be counterintuitive at times. For example, arranging MIDI files in tracks requires you to first load the pattern, then click and drag a button (marked "D" for drag) to the track. The few extra steps proved tedious and slowed down the process of assembling a track. On the other hand, the Loop window is a model of smooth workflow, with a generous waveform display and an editable overview of loop slices just below.

RMV is strictly a plug-in with no built-in sequencing. Still, it is considerably more than a passive sound source. You arrange grooves by dragging them to your host's MIDI tracks. And to keep its enormous library of kits, hits, loops and patterns orderly, the RMV Browser hosts a sophisticated search engine. For instance, it's easy to set searches for loops by the number of bars, bit depth and original tempo; patterns by style; or drum kits by sampled or synthesized engines.

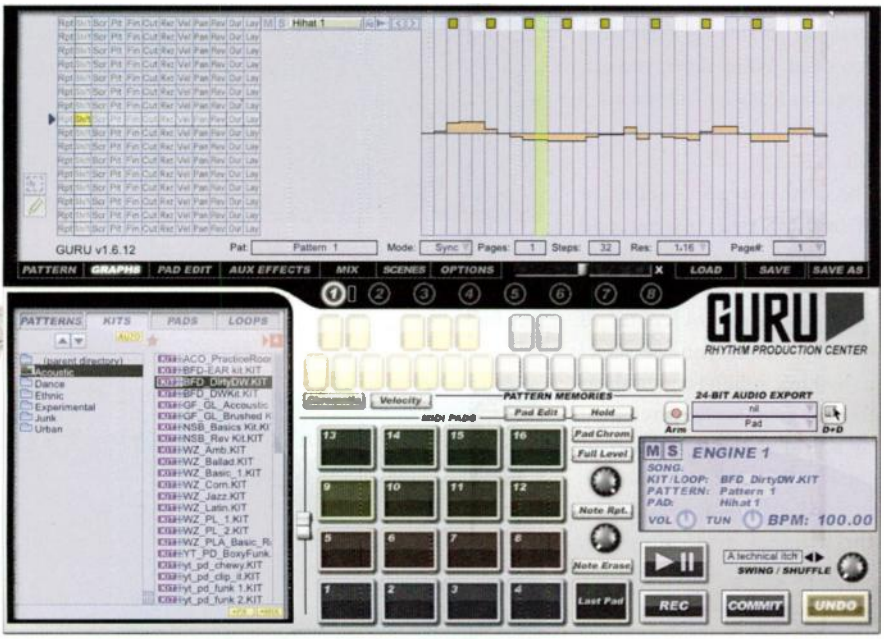


FIG. 1: One of FXpansion Guru's several Graph windows. For illustrative purposes, I've drawn a slightly exaggerated line above and below the perfectly quantized placement of hi-hat notes in the Shift graph. Pull up to rush, down to lag.

More or Less Cowbell

If you prefer synthesized drums, RMV has lots to offer. Twelve distinct, independent synth engines (called Modules) focus on specific percussive sounds. The modules are easy to program and their simple interfaces invite experimentation. The Clap module is a piece of work, with controls for dialing in the flamming and number of claps (see Fig. 2). Another module, Plop, features a Drive control that produced plenty of metallic partials for convincing cowbells and agogos. None of the modules will convince you that you are listening to an acoustic kit unless you hail from another planet, but overall they sound great and are a welcome alternative to the usual TR-808 or 909 fare (see Web Clip 2a).

Each of RMV's pads has a Varizer that adds controllable amounts of randomness to the kit piece's dynamics and frequency content. The Exactness knob is less specific, introducing random changes to different voicing parameters on playback. Both work on synthesized and sampled sounds subtly enough to animate them naturally, while providing a nice balance between consistency and randomized overkill (see Web Clip 2b).

The RMV user interface may seem busier and a little more daunting than the others; however, I was drawn in by its powerful real-time control and imaginative sound design capabilities.

MOTU BPM 1.03

With an easy-on-the-eye emulation of a hardware drum machine, BPM from MOTU (www.motu.com) sports a clean and intuitive user interface that belies its depth. Most of the editing and information appears at the top-center window; a click of a single button and you can edit patterns, edit a pad's waveform or synth engine, or set up the pad's effects, work the built-in mixer, set up Scenes and arrange the song form. You load patterns, kits and loops from the browser at the instrument's right, record with a MIDI controller or simply click in the pattern grid.

Those familiar with MOTU Digital Performer's concept of Chunks will appreciate BPM's Song window, where you can drag, drop and align blocks called Scenes (basically, an aggregation of loops, patterns and sequences) in a timeline to arrange the song from beginning to end (see Fig. 3).

As a true sampling instrument, BPM lets you sample external sound sources directly onto pads and resample BPM's output or any audio track issuing from the host program. Similarly, dragging and dropping of audio files onto pads from the computer is as easy as it sounds.

Celebrate Diversity

BPM kits range from spiky, harsh and metallic to acoustic, warm and mellow, and the instrument supports unlimited layering of samples per pad. Pads can simultaneously deploy round-robin programming, velocity switching/crossfading and simple stacking. You can include synth-derived sounds with samples in the layers. A set of Racks plays loops and holds a useful library of instruments—such as bass, piano and synth—and their associated piano-roll editors.

BPM's 15GB sample library of classic drum machines, loops and hits clearly tilts it in the direction of R&B, hip-hop, house and their subsets. However, support for most audio formats including REX files, as well as proprietary files from any MOTU and UVI-compatible sound sets, breaks BPM wide open in its range of sonic options (see Web Clip 3).

It offers an analog-modeling drum synthesizer rather than RMV's dedicated synths for specific kit pieces. There are separate OSC and Noise sections, and with the effects rack for each pad there are plenty of tools for sound mangling. In addition to convolution reverb, effects include a wide variety of delays, dynamic processors, distortion, modulation and filter effects, ring modulation, sample freeze, etc. Each Bank and Rack has

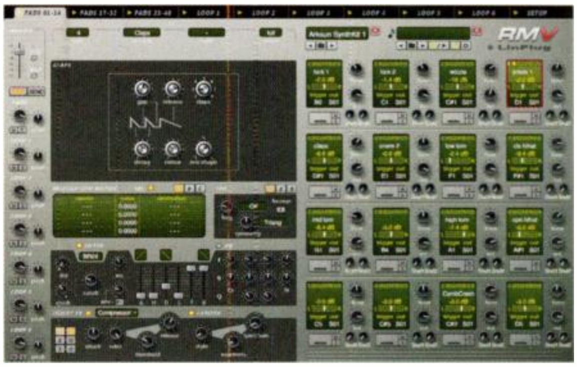


FIG. 2: On the left side of Linplug's RMV, I'm editing a snare drum pad using the Clap drum synthesizer. The top three knobs control the space between each clap, the release time and the number of claps. At the bottom-right of the left panel is the Varizer, which helps humanize the sound's playback.

an SP Mode button that mimics the gritty sonic characteristics of E-mu's classic SP-12/SP-1200 drum machines. The effect is subtle, but adds a modicum of warmth.

More than 200 construction kits of preset rhythms are part of the 15GB library—all organized by name within each library category and ready for easy use or tweaking. There's also much more, with four banks of pads (64 pads total), a Graph Sequencer, the Loop Editor and Recycle-style beat slice editing, live performance scene triggering, support for pad controllers including the Akai MPD32 and Korg PadKontrol, and export features such as drag/dropping an entire scene to the host/desktop as a stereo WAV file.

Spectrasonics Stylus RMX 1.8

With the release of Version 1.7 and up, Spectrasonics (www.spectrasonics.net) has reinvented Stylus RMX with a vengeance. Best of all, upgrades have been free since the instrument was released.

Stylus RMX offers an ingeniously malleable, multitimbral loop-slice playback engine, plus drum kits made up of sounds in the loop library. You jump to any of several editing pages with a click of a button while playback and patch-selection controls remain in place. Editing pages include access to synthesis parameters, effects, the Chaos Designer, the mixer and Time Designer. Undoubtedly its most significant new feature, Time Designer provides plenty of tools to sculpt and adapt rhythms in just a few clicks. For starters, the top-left pull-down menu offers preset examples; you can use these to get the hang of editing ideas or just tweak Time Designer parameters to get what you need. When done, you can save edits from the same menu.

Mr. Natural

The most impressive action in Stylus RMX takes place around its Groove Lock and Pattern Modify features. From a pull-down menu in the center of the instrument, you can select a rhythmic subdivision of slices that are graphically represented by a grid at the top-center of the window. The selected subdivided events appear below the original grid. Similarly, changes made that affect the timing of the selected events alter the placement of the bottom grid events to the left or right. For example, selecting a laid-back groove shifts the grid to the right of the original position; rushed events will shift to the left. The degree to which the timing is altered can be done using a horizontal Strength slider. I loved the Natural button, which leaves slices other than selected values untouched. For instance, rolls, grace notes and busier embellishments falling outside of a 16th-note groove remain untouched.

Choices for Groove Lock are well-thought-out: Grooves to any other part in a multi can be locked, which is very handy for making disparate grooves fall in step. A generous library of presets culled from drum machines, sequencers and "live" feels is provided. One knob can adjust swing to an existing feel, and a Simplify knob thins out events should you prefer a sparser performance.

The Pattern Modify section offers 14 possible meters, with the groove instantly conforming to your choice. Grab the resulting MIDI data from the title bar above and drop it into a MIDI track, and you can create an arrangement with multiple meters. The track adds the meter to the MIDI file name so it's easy to identify changes in the track. And you are not restricted to existing grooves: You can drag MIDI files from the desktop into the Grid window and instantly conform Stylus to

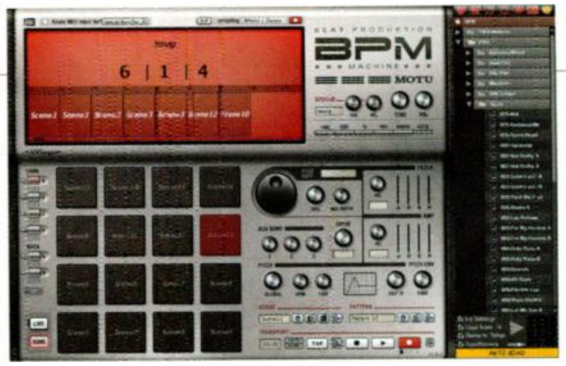


FIG. 3: The Song page in MOTU BPM allows arranging and rearranging sections of the song (called Scenes) with tremendous ease. You just drop the scene from the drum pad into the Song window.

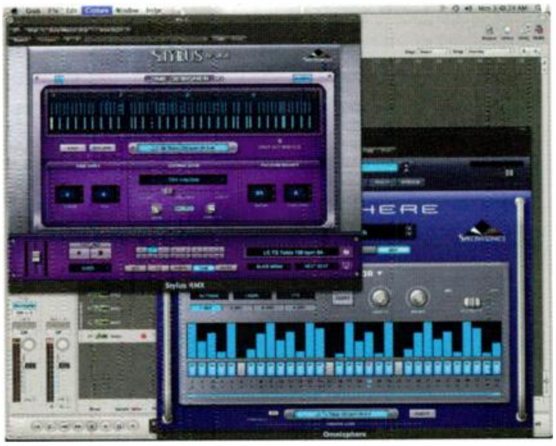


FIG. 4: In Spectrasonics Stylus RMX, I took a 4/4 Multi I created, changed its time signature to 5/4, added a touch of swing, simplified it, loosened the feel slightly and dragged the resulting MIDI file groove into Omnisphere, whose arpeggiator will take on the same rhythmic characteristics.

Software Drummers, At a Glance

Product	Price	Stand-Alone, ReWire and Plug-In Formats	Audio Format Imports	Built-In Sequencer	Sample Editor
FXpansion Guru 1.6	$249	SA, ReWire, Audio Units, VST, DXI, RTAS	WAV, AIFF, REX	Yes	Yes
Linplug RMV 5.0.4	$179	Audio Units, VST	WAV, AIFF, REX	No	Yes
MOTU BPM 1.02	$295	SA, MAS, Audio Units, VST, RTAS	WAV, AIFF, SDII, REX, Apple Loops	Yes	Yes
Spectrasonics Stylus RMX 1.8	$399	Audio Units, VST, DXI, RTAS	REX	No	No
Submersible DrumCore 3	$250	SA, Audio Units, VST, RTAS	WAV, AIFF, REX	No	No

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the new feel. It would be incredibly tedious to change parameters on an entire multi to match a single groove. The good news is the new Global button, by which all parts will fall in step rhythmically and metrically (see Web Clip 4).

Omnivorous

Users of Stylus and Spectrasonics Omnisphere have a particularly cool feature in store: Both instruments accept MIDI files to shape grooves. Simply drag and drop a MIDI file from Stylus into Omnisphere's Groove Lock window in the arpeggiator section, and the arpeggiator assumes the same feel and meter (see Fig. 4). After exporting a track to Omnisphere, you can adjust either instrument's strength slider if a slightly looser feel is desired.

I had great fun trying out my library of converted Rex-format files in Stylus and then importing them into Omnisphere. Stylus includes a mini-application that converts Rex files into the Stylus RMX format. Propellerhead ReCycle users can convert any audio into Rex files, and from there import them into the Stylus RMX library. It's important to emphasize that Stylus accomplishes its tasks while retaining a high degree of musicality. I don't think I've had more fun making serious music with a software program.

Submersible Music DrumCore 3

It's probably a safe bet that few *EM* readers are poised to be the next Steve Gadd, Alan White or Sly Dunbar. It would be great to have high-ticket studio pros with equally estimable drum kits and studio space ready for your next musical endeavor. DrumCore from Submersible Music (www.submersiblemusic.com) might be the answer, with recorded grooves played by the finest drummers, plus sampled versions of their drum kits.

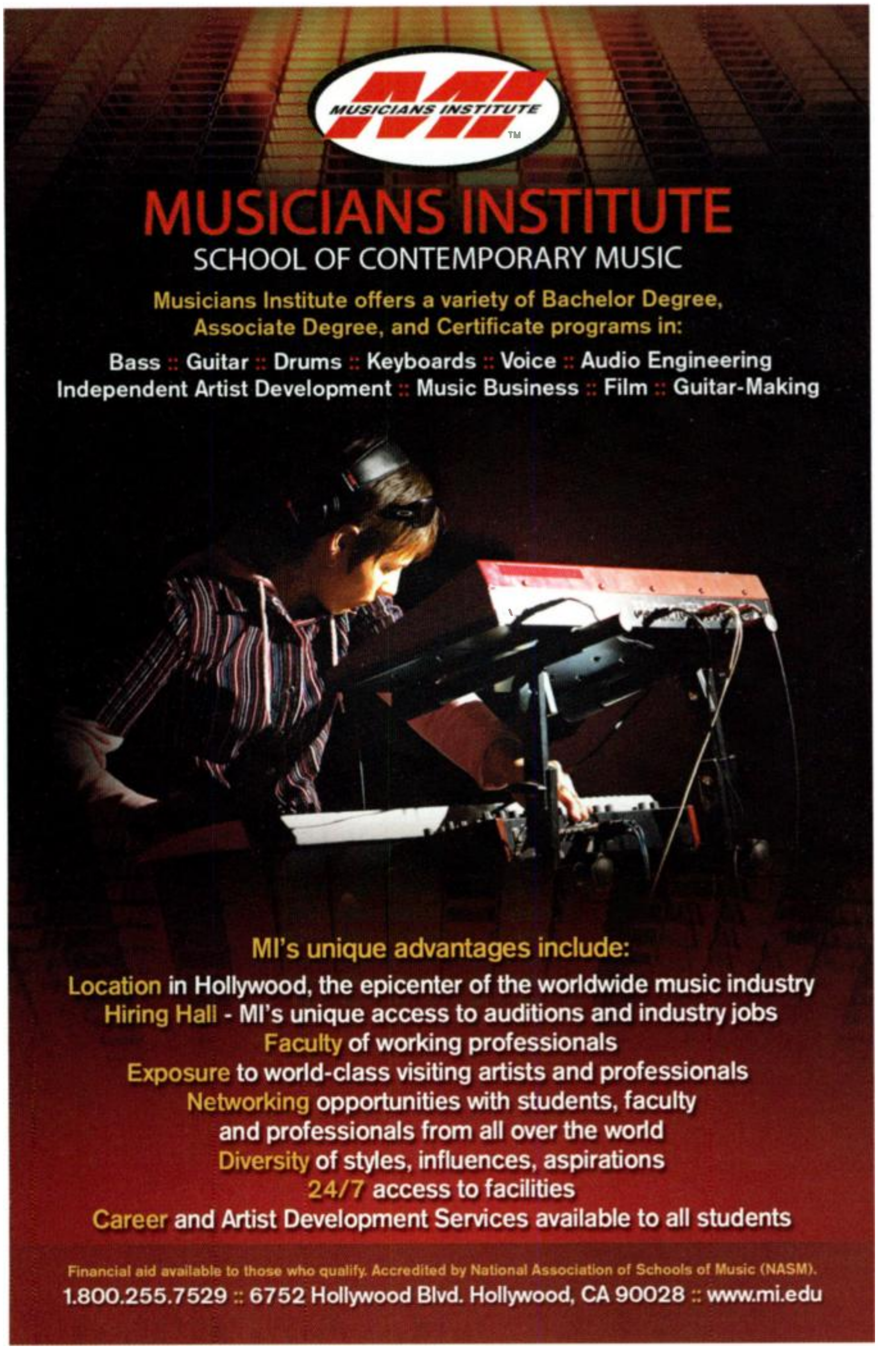
You can trigger the kits with MIDI file captures of the artist's performances or create your own grooves. All of this is coupled with one of the most intuitive user interfaces I've had the pleasure to breeze through.

DrumCore now comprises a plug-in and DrumCore Toolkit, a small app that lets you audition and manage the program's content. DrumCore's generous display makes building your own drum kit very easy: Import your own MIDI or audio data, or drop kit samples directly into the Pad Editor.

DrumCore 3 includes support for SD2, WAV, AIFF, REX-2, Sony Acid files and other formats. Kits can support up to 32 layers, which you can switch or crossfade.

DrumCore's audio leans heavily toward acoustic instruments. From the toolkit, you can add from Submersible's ever-growing roster of artist grooves, kits and MIDI files. In addition to the aforementioned artists, Submersible supplies grooves and kits from Jonathan Moffett, Matt Cameron, Matt Sorum, Michael Shrieve and Terry Bozzio, and you can add more kits from these and other artists. There are several electronic kits, as well as some very fine percussion sets from Luis Conte.

The plug-in favors a multiple-page approach, but it is simple to navigate and operate. The upper portion of the Groove page starts with a drop-down menu, where you choose a kit arranged by artist. If you want to associate a kit with a song or some other criteria, you can rename it. Just below that is a context-sensitive list of loops and



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patterns. Just atop the list are buttons that let you view the files sorted by artist or style, and to its right the files are grouped together stylistically (see Fig. 5). You can filter your search for audio or MIDI data, and refine the search for loops, individual kit piece hits and fills.

Separate pages for drums and percussion each feature a matrix of 24 pads, and these are highlighted when triggered. Option-Click on a pad, and you can select a kit piece from another instrument.

DrumCore has a Play button but no built-in sequencer; it works exclusively by dragging and dropping files to the host program's audio or MIDI tracks. You can drag files directly from the browser or from a window on the right that illustrates the waveform or the MIDI data. When auditioning tracks, you can choose to queue selections, which facilitates mating grooves together.

Just Add Gadd

Audio and MIDI file–driven loops are incredibly fluid and adapt well over a wide tempo range. Some of the Bozzio stuff is amazing, although they may not be something you would use every day. The Sonic Reality Steve Gadd add-on files are especially dynamic and groovy (see **Web Clip 5**). The MIDI file versions are terrific in that kits and even kit pieces are uniformly mapped (to the GM standard) so there's no need to remap; you can even trigger GM-compatible kits outside of DrumCore. The sounds sit nicely in tracks without added processing, but you can route kit pieces to any of eight individual outputs for extra sonic polish.

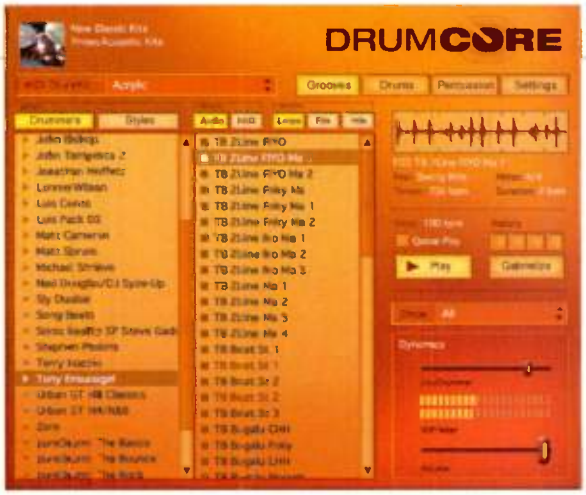

FIG. 5: Submersible Music's DrumCore 3 lets you view drum grooves arranged by artist or style. Simply drag and drop the Waveform display or the title of the file in the browser to your tracks to arrange song form.

Each of these software drummers represents vast improvements over drum machines in workflow, scope and musicality, and I have barely scratched the surface. There are plenty of other programs to help you get your groove on, and no doubt there will be plenty more on the way. em

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Marty Cutler tries to think like a drummer when he plays banjo, although he doesn't hit it with sticks.

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BAND ON A MISSION

How Umphrey's McGee recorded *Mantis*, their tightly arranged, prog-rock opus.

By Mike Levine

The multicolored lights swirl on the stage at the Nokia Theater in Manhattan as prog-rock jammers Umphrey's McGee glide through riff after riff, solo after solo, song after song—seemingly without effort. Fluid guitar and keyboard phrases roll off their fingers; drum and percussion fills punctuate; lyrics and harmonies layer on top: The 6-piece ensemble is in its element—playing live and improvising heavily.

But flash-back to Chicago a few months earlier, and you would have found the guys hard at work at I.V. Lab Studios, which is owned by a friend of the band, Manny Sanchez. There, they were carefully crafting their latest CD, *Mantis* (SCI Fidelity, 2009), a tightly structured, prog-rock-meets-pop album for which the precise arrangements were, in some ways, the antithesis of the band's heavily improvised live show (see Web Clip 1).

ONLINE BONUS MATERIAL

Mantis is also a *tour de force* of the band's musicianship and songwriting, and, considering the source, has relatively few solos. Musically, it runs the gamut from melodic vocal passages (Beatles-influenced at times) to thrashing industrial riffs to tightly crafted compositions with multiple sections, clever segues, terse yet intense lead breaks and impeccable sound. After previous studio recordings that were sometimes, by necessity, hurried through, the band decided to really take their time with this one. In fact, the production of the CD took almost two years, albeit interrupted by many tour dates.

Master Plan

"We really wanted to walk in and know that we had time in the studio to create and that it wasn't like a rushed thing," says lead guitarist Jake Cinninger. "And it wasn't songs that were played live previously. It was like, 'Let's make up this whole entity of songs that sound like they should be on one disc together and almost kind of tell a story and feel kind of like one of those great prog-rock albums that we love.'"

"We didn't want there to be any filler," adds Kevin Browning, the band's studio and live engineer, as well as the producer, along with the band, for *Mantis*. (Manny Sanchez is the co-producer.) Browning has been an integral part of the band since their founding at Notre Dame University in 1997. "We wanted it to be very well-thought-out from start to finish," Browning says, "so we were very meticulous with the writing process and the editing."

Cinninger adds that the idea for *Mantis* was for the band to take the next step as recording musicians—to leverage their experience. "We have more studio prowess than we had before, and studio confidence as a whole. All the way down to producing our vocals and getting more of a vocal performance rather than just, 'Let's go in and lay the vocals down for the song.' No, let's see if we can go past the bar a bit and get an actual performance, using more of a producer-type mentality to get better results. It's more about being older and researching more and understanding the tools of the studio. When you twist that knob, what is it doing? You know and apply."

Of course, having to sandwich their production schedule around 115 to 120 live shows a year was part of what made the recording of *Mantis* such a drawn-out affair. Still, the amount of hours actually spent in the studio was prodigious, especially when compared to some of the band's earlier recording experiences. "For our first real studio thing, we were in a barn for two weeks and slept there in sleeping bags under the console," recalls keyboardist Joel Cummins. "We had two weeks to get the whole thing recorded, and then it was like, 'Okay, now we mix it.' To be able to take that process out over the course of a couple of years, and say, 'I really like the tone of how the kick drum sounds in this room, so why don't we go record some drum tracks over here?' 'What kind of piano sound do you want for this?' A bunch of different options. So being

PHOTO: RICH MARKESE

From left: Brendan Bayliss, Ryan Stasik, Joel Cummins, Andy Farag, Jake Cinninger and Kris Myers able to really cater to exactly the vibe of a song or a section of music really helps develop those ideas."

Adds Cinninger, "That's what we had time to do on *Mantis*—to really make sure every second counted and that there was no stone left unturned."

Write on Target

Writing the songs for the CD was a fairly involved process. It was also unconventional in that the music was written and the tracks recorded for many of the songs before lead vocalist/guitarist Brendan Bayliss wrote any lyrics, much less put down his vocals. But the main impression I got from talking to a number of the bandmembers—including Cinninger, Cummins, Browning, percussionist Andy Farag and drummer Kris Myers—was that this project was one in which time was not a factor. The band was committed to taking as long as they needed to realize their artistic vision.

"It kind of starts with that brainstorming book idea," says Cinninger of their songwriting process on *Mantis*, "and you've got rough draft 1, rough draft 2 and rough draft 3. And you know, over a year or two years of making just the musical bed—even before the lyrics are done—we went through like five or six different phases. It's kind of like taking away or trimming the fat to get at the core idea of the song. What's really popping out of this 10-minute segment. Let's whittle it down to what really counts. And that's what we had time to do on *Mantis*."

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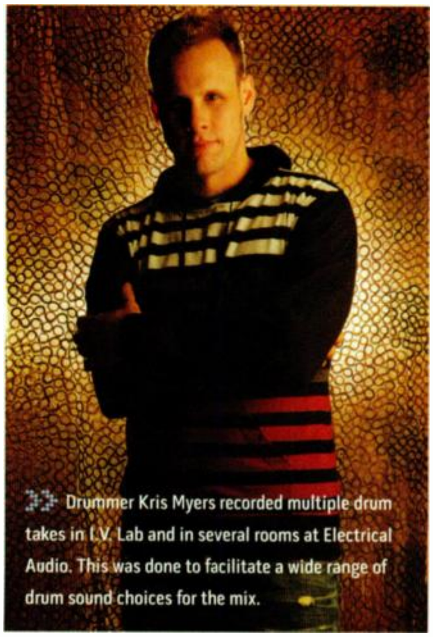
From the *Mantis* sessions, bassist Ryan Stasik (L) and keyboardist Joel Cummins in front of the dry-erase board that was used for organizing the assembling of songs.


Drummer Kris Myers recorded multiple drum takes in I.V. Lab and in several rooms at Electrical Audio. This was done to facilitate a wide range of drum sound choices for the mix.

RICH MARKESE

The band also felt that, given the lack of deadlines, it was incumbent upon them to produce a really memorable result. "We felt like we had something that was going to be really important for our catalog, for our own history, for our own songwriting together," Cummins says of the title track, which features a complex song construction and close to 100 tracks of audio. "We didn't want to make that mistake, where it was like, 'Ah, I wish we would have done that.'"

Getting Ready

Preproduction for the album took months, and much of it consisted of the guys fleshing out ideas in their own home studio setups. "Mine is really basic and kind of funny at this point," says Cummins. "I still have a Tascam 4-track [PortaStudio]. I've got an upright piano that I put most of my ideas down with at home. I put that through a little tube preamp, and it actually sounds pretty good."

Cinninger, meanwhile, has a very different home rig. "I harvested the old P.A. console that Umphrey's used to tour with from way back in the day," he says, "because I like to do a lot of live mixing. I'm not into the digital world of recording as much. Amid all the outboard effects and preamps, I've got the new Alesis HD24 [hard disk recorder]. I run everything through this old Mackie VLS board, which I just leave on for years and years, and it seems to sound better the longer it's left on. I've also got a full studio rig and a bunch of vintage amps."

Playing With Legos

Eventually, the bandmembers brought in their ideas to I.V. Lab Studios and embarked on three solid weeks of arranging and composing to get the songs for the album into shape to record.

"We had discs of ideas, we had discs of previous improvs that we listened to, trying to piece together some things," Farag recalls. "We had a dry-erase board, just trying to figure out the structure of everything, and we went in and tried to piece it all together."

"We call them legos," Browning says, referring to the discs of material. "Jake would bring a disc of 25 tracks. Some of them were just A sections, some of them were As and Bs. You might have two great sections that he butted up together: Maybe the B section of this worked better with a chorus that somebody else has. So everybody sort of brings differ-

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ent melodies, different ideas; this could be a verse, this could be a chorus. It's really building blocks. You put one next to the other and try. If it works, you work on further developing that idea. If it doesn't, you try something else and just keep repeating."

At the end of three weeks, they had arrangements together and rough demos recorded, and it was time to start tracking for keeps.

Analog and Digital

They began recording in earnest at I.V. Lab, cutting basics on the studio's Ampex MM1200 2-inch/16-track machine. Their first priority was to get complete drum takes of all the material (recorded to a click), and if they got good tracks of the other instruments, great, but those could always be overdubbed later. "Everyone was playing live to every song in both studios while we were tracking drums," says Browning.

After a couple of weeks of tracking at I.V. Lab, their quest for drum sound options took them to Steve Albini's legendary studio, Electrical Audio, also in Chicago (see the *EM* story on Albini's studio in the October 2008 issue, available at emusician.com). There, they recorded (also to 2-inch, 16-track) several additional versions of each song in different rooms in Albini's complex, taking advantage of

Mantis is the successful outcome of the band's desire to make a meticulously recorded and crafted studio album.

Tracking *Mantis*

Umphrey's McGee producer/engineer Kevin Browning talks about the recording techniques and gear used on *Mantis*.

Did you have a standard drum miking setup that you used in the various rooms or did it vary room to room?

There were no hard-and-fast rules that we did on everything, but as a general setup, we used an AKG D-112 inside the kick in the hole. And we used an old Gefell UMC-800 on the outside.

How far was it placed from the head?

It varied, but typically really close.

What did each mic give you?

A little more of the attack from the D-112 and a little more of the body from the Gefell. We had both of those going through TG Channels, which are the Chandler Limited/EMI sort of Abbey Road reissue EQs. And then we bused both of those together. We did the same thing with snare top and bottom. We bused those. Although we typically used a 57, we used an Audix i5 on some tracks. Sometimes we actually used both and bused the two together.

When you used the 57, was it usually on top of the snare?

We used 57s on top and bottom. There were instances where we put an i5 both on top, right next to each other. We used Josephsons on the rack toms, the e22s. And we used Sennheiser 421s on the floor toms. The biggest thing that we did, drum sound-wise, to leave ourselves options after the fact was the various selections of room mics that we used. We used Coles ribbon mics for overheads, as well as Schoeps NK4s. So we had two sets of overheads as choices, but we used quite a smattering of room mics. And we used some more Coles ribbons for the room there. We had a Neumann binaural head that we sometimes used. Albini's got a pretty deep mic locker at his place, and we used some old Altec stuff.

What was the typical setup for recording Ryan Stasik's bass?

Typically, we were running the bass direct into the Chandler Germanium [preamp]—that was our direct signal—and then we had it amped through an Ampeg B-15 live in a closet.

Did you compress it a lot?

Not a ton. A lot of [Empirical Labs] Distressors made their way on the record. We did use a Distressor/1176 combo.

How about the guitars. Jake said he used a lot of ribbon and 57 close together, that kind of configuration.

We used a Royer 121 on his cabinet quite a bit. That and a 57. We used a fair amount of cabinets. We used his Fuchs head a decent amount. At the studio (I.V. Lab), Manny's got a handful of classic amps like AC30s, various Fender Twins, Bassmans, Tweeds. We tried out a lot of different stuff, and often we'd use one amp for clean stuff and then we'd use a Marshall for dirtier tones.

Did Jake have a particular guitar that he used a lot in the studio or was he using tons of them?

He used a fair amount. His G&L Strat is probably his main axe.

What about the vocals?

We used a lot of ribbon mics on the last record, and I kind of avoided that.

Why was that?

Ribbons can tend to darken. They've got a warm characteristic, but they're not always big. So we tended to go more the condenser route this time.

What were some of the mics at I.V. Lab that you used on the vocals?

We used a [Neumann] U87. We used a Korby Audio [Kat] U67.

Was there a go-to mic pre that you used for the vocals or did that vary a lot, too?

I can't give you all my secrets, bro.

How about Joel's synths?

A lot of the synth stuff was the Moog Voyager. We did different things with it, depending on the sound. That was one where we did a lot of in-the-box effects.

What plug-ins did you use on the album?

We did a lot with [SoundToys] EchoBoy. We also used some Line 6 Echo Farm. We used actually some of the Moog plug-ins, some of the pedal plug-ins there. But with the synths we were fairly comfortable using a lot of inside-the-box processing.

Kevin Browning is the band's live and studio engineer, and co-produced *Mantis*.

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"Certain rooms have specific wood inlays," says drummer Myers, "and specific floors; there's adobe brick in another room. And a room that's super-tight for more of that older, classic-rock drum sound. Then you have a plated concrete stairwell room that's ridiculous. And you can get overdubs and crazy edited drums in there."

"For the most part, we started with bass and drums, and we just kept the drum tracks to start," says percussionist Farag.

"It was very meticulously done from take to take with the drum set parts," Myers says. "I had to use literally 10 to 12 different snare drums. I did over 10 to 15 different takes per song—swapping out cymbals."

After they were satisfied with the drum tracks, they eventually recut most of the other instruments. Still, they considered those early tracking sessions to be a success. "The live feel was key for capturing the energy of the drum kit," explains Browning. The band also recorded a couple of entirely live songs while at Albini's studio. One of the two, "Made to Measure," ended up on the CD.

Time to Transfer

As the band went along in the tracking process, they began transferring the analog tracks into Pro Tools. They got the sonic flavor they wanted from the 2-inch machine, but they were definitely going to need the track counts and editing capabilities of digital for the next phase of the project.

Because they recorded so many versions of each song and always used a click, they were able to mix and match tracks to put together what were essentially giant comps that comprised the final versions of the material. "That left us with options and the ability to edit or cut and paste quickly if we liked one section from one take and one section from another," Browning says.

For the most part, they listened to the various drum takes and chose which sound fit a particular song. However, there were some occasions, like in the title cut and in the song "Spires," where, if you listen closely, the drum sounds actually change during the song. They also often layered the drum tracks, manually adding samples that they made during the drum-tracking sessions on top of the originals in Pro Tools.

On several songs, electronic samples were also added, some from Native Instruments' Battery, which Myers triggered from a Roland SPD-S drum pad. "On '1348,' in more of those industrial sections," says Browning, "there are sections that have eight different snare drums combined into one. One of them has five acoustic snares and three electronic snares, all layered into one gigantic snare drum sound."

BRETT SAUL

The band's heavy touring schedule slowed the production of *Mantis*, but the enforced breaks from the project enhanced their perspective on the material.

Stringing It Out

Of all the songs on the CD, "Mantis" was the most involved to produce. Nearly 12 minutes long ("It was about two or three minutes longer at one point," Cummins says), the song is a prog-rock excursion that comprised countless different musical sections, several guitar solos and 40 tracks of strings. "It's our little masterpiece," says Cinninger. "It's kind of what we feel is our crème de la crème of what we're doing right now."

Although there were enough string parts on "Mantis" to have been played by a small orchestra, the band opted to have one string player, Nathan Swanson, layer all the parts individually. When it came time to mix, making them sound like an organic section fell to Browning and Sanchez. "We experimented a lot with imaging and stereo placement," Browning says. "[Swanson] was really good because by actually doubling, tripling and quadrupling everything, there's a humanizing element. We weren't manually delaying them 10 to 20 ms to get them to sound [distinct]. We had a natural chorus effect just by him doing it. So we didn't tend to overly add effects to it. We tried variations of spreading things out to see—some of those tracks are so dense—what really works."

In a typical album project, the mixing phase begins after the tracking ends, but on *Mantis* it wasn't quite so linear. "There was never really a set date that we stopped tracking and started mixing," Browning says. "If we were mixing and heard something that wasn't there, we'd pick up the phone, call a guy, and say, 'Get in here, we've got an idea.'"

But those incidental overdubs aside, the last group of tracks to be recorded were the vocals. Interestingly, because the lyrics were written so late in the process, Bayliss was making changes even at the final vocal sessions.

There was tons of work to do beyond tracking before the mixing could be completed. The biggest hurdle was the editing. With all of those different instrument takes from the tracking session, there was a lot of culling, copying and pasting to do. "I had to spend

RICH MARKESE

We wanted it to be very well thought out from start to finish.

maybe just as much or maybe more time [than spent tracking] editing the tracks at home and deciding which fill in which section fit the best, or what groove and what pattern," Myers recalls.

Mixing and Matching

With so many tracks and so much going on, mixing was a big task. "The greatest challenge was simultaneously trying to realize everybody's individual vision, yet make it cohesive," says Browning. "Everything having its space, everything fitting together well. Sometimes when you do layer after layer after layer, it starts to muddle it; you can overdo it easily. Doing all those channels of strings on 'Mantis,' it was like, 'Okay, how do we make sure everybody's got their hole?'"

When the editing and mixing was finally finished, the band shipped the mixes to Bob Ludwig for mastering. Having Ludwig master it was "really a dream come true for me being an audiophile," says Cinninger. "And to actually pop on our vinyl version and listen to it and hear those characteristics of some of the great mastering jobs that he's put out, it was really cool to hear on our material."

A Lot of Hot Air

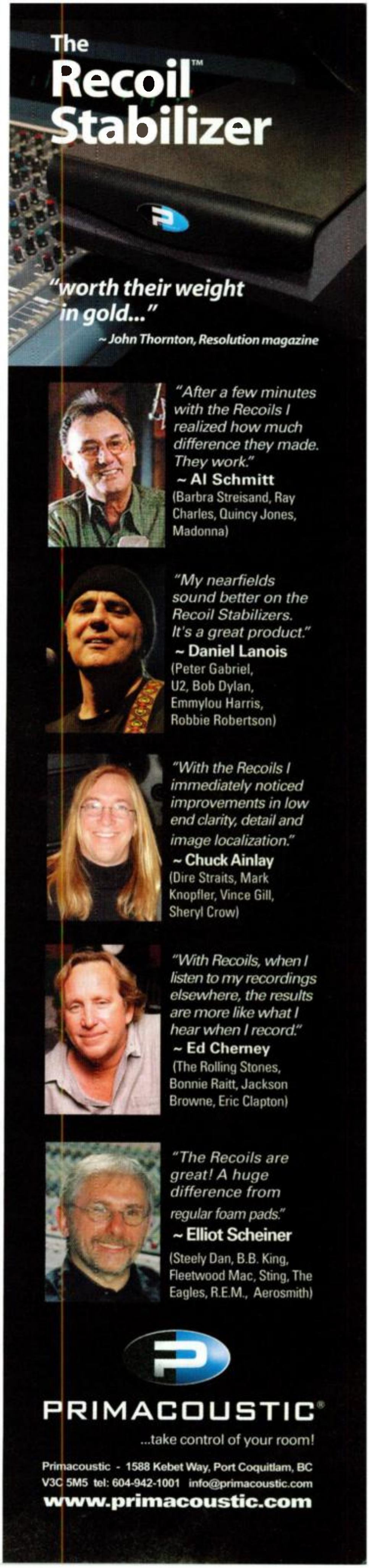
So now that the enormously complex and time-consuming *Mantis* project has been completed, what kind of album is next for Umphrey's McGee? "We talked about each individually having our own hot-air balloon," Cummins says, tongue firmly in cheek. "Everybody's wireless, like my guitar rig is in the basket," pipes in Cinninger. "I know we're not in the age of major-label advances," Cummins deadpans, "but that's a big one. We need someone to help us out with this one."

On a slightly more serious note, Cinninger says, "I think that we want to do something that is the opposite of *Mantis* because we want to extend our palette for recording techniques. It's like, okay, we did this really elaborate, layered, progressive-rock thing, now it's almost, 'Let's go to a deserted island with no songs and start writing some really simple, feel-good fun.'"

What about a home studio–recorded project? "Recording at the I.V. Labs for us was like recording in our basement," explains Browning. "It's a very low-key relaxed place, and it's owned by a great friend. It's never been the $150-an-hour pressure. We've always insisted on avoiding that kind of environment because we don't believe that it's conducive to being creative. Somebody has an idea, and maybe it needs a few hours to grow, to fester. It deserves it. If at the end of the day you don't use it, you don't want to feel like, 'Oh, we just blew $1,000.' That's not how the creative process should work from our perspective."

(Eds. note: Check out video interviews with Umphreys' McGee at emusician.com/videos.)

Mike Levine is EM's executive editor and senior media producer.



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Make Mine Modular

A guide to using analog synths for audio processing.

By Gino Robair

ONLINE BONUS MATERIAL

Relegated to the technological tar pits when inexpensive digital synths hit the scene in the '80s, analog synths are now being used by savvy sound artists for more than just creating phat bass lines and screaming leads. Modular synthesizers add color and attitude to your DAW tracks that can be difficult to get with plug-ins, while offering a wider array of effects and parameter control than stompboxes.

For example, one of Brian Eno's sonic secret weapons has always been the unique filtering capabilities of his EMS Synthi. Many of today's top artists—Nine Inch Nails, Radiohead and Tortoise, to name just three—are using analog modules to process audio in unusual and complex ways. Unlike a preconfigured mono synth, a modular instrument allows you to assemble a highly personalized system that fits your needs.

Although a hardware system requires a greater investment than its software counterpart, you certainly don't have to take out a second mortgage on the house to build one. A number of companies produce modules, and in most cases they are very affordable.

In this article, I'll explain what it takes to set up a system for the personal studio. But I'll start with the basic approach of running your DAW tracks through a stompbox so you can see the limitations.

Brute-Force Effects

Processing recorded tracks with guitar effects is fairly common in the studio. However, the level of real-time control you have over most pedals is limited to a couple of parameters. Other drawbacks to using guitar stompboxes to process your tracks include poor signal-to-noise performance and a limited number of available effects types.

Some pedals, such as the Moogerfooger line from Moog Music, include CV inputs that let you use one or more expression pedals to control parameters. But, again, you are limited to only a few simultaneous real-time controls—two feet and two hands. (The Moogerfooger MP-201 and CP-251 nudge Moog Music's pedal line closer to a modular synth system by providing additional control options, such as LFOs and sample and hold, among other features.)

Although manufacturers such as DigiTech and Line 6 make digital guitar processors that let you stack and reorganize effects without the hassle of a huge pedalboard, the algorithms used in those processors are still fairly limited and are based on models of traditional pedal configurations. In addition, you usually get only a foot pedal or two for immediate parameter control.

The easiest way to process a DAW track through a stompbox is to simply plug into the effect's input and see what comes out the other end. However, patching a prerecorded track from your digital interface at line-level into a guitar pedal doesn't guarantee a clean signal at the pedal's output. Many guitar pedals expect to receive high-impedance, instrument-level signals

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Y FREQUENCY
EXT CLOCK
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LIVEWIRE
A-147 VCLFO
Voltage Controlled LFO
Reset
CV
A132
DUAL VCA
CV1
CV2

PHOTOGRAPHY: GEARY YELTON

from a passive electric guitar or bass pickup, and a line-level signal can prove overwhelming to many stompboxes.

EM contributor Eli Crews, who runs New, Improved Recording, handles the job with the John Cuniberti–designed Reamp. It accepts a balanced XLR and ¼-inch, +4dB input, and supplies an unbalanced output that is closer to what a stompbox wants to see. Simply plug the Reamp's output into the stompbox, and then connect the stompbox's output to a direct box to get a balanced signal that matches the level your DAW's interface expects. Of course, you can also feed the stompbox's output into a guitar or bass amp and, with a mic plugged into your DAW interface, add some amp and room tone to your processed signal. (Visit reamp.com/applications.html for more interesting ways to process signals.)

Crews notes that some modern effects pedals are designed to accept line-level signals. But if your vintage phaser is distorting (in an unpleasant way) when you run your prerecorded string tracks through it, the above setup will help you get cleaner results.

But what if you also want to synchronize your effects processing to the beat while occasionally adding another effect using a random pattern? That's where synth modules come in handy. Let's look at what is involved in selecting a starter system for processing audio.

Size Matters

To the uninitiated, the options available in analog synth modules can seem vast and confusing. Although there are different form factors, you greatly narrow down your module choices once you decide on the general size of the rack enclosure. The most popular form factors are the 3U Eurorack and Frac Rack formats, and the 5U Moog-style format. Each format is supported by several manufacturers, and some companies support more than one. Other modular synth companies—such as Buchla and Associates, Serge and Modcan—have proprietary formats. (See the articles "Analog Renaissance" and "Something Old, Something New" at emusician.com for more information on the nuances and capabilities of these modular form factors, as well as lists of modules.)

Module size not only determines how much you can fit into a rack, but it also has an ergonomic impact. For example, the 5U Moog-style modules use ¼-inch cables and have larger knobs than the 3U formats, which support 3.5mm cables. Consequently, if you have big fingers and need lots of room around your hand when dialing in a patch, the larger formats are worth exploring. If portability is a major concern, investigate the smaller formats.

Another way to decide on a format is to begin making a list of the kinds of processing you want and start comparing prices and features between manufacturers. At some point, you'll triangulate on a set of modules, and the resulting format will probably suggest itself. If not, don't worry; it's common for people to use more than one format in their studios, and, ultimately, the modules in one format will work well with modules in the others (see Fig. 1). In some cases, it might take a bit of effort to get control signals of one system to a level where they will work precisely in another system, but that's more the exception than the rule.

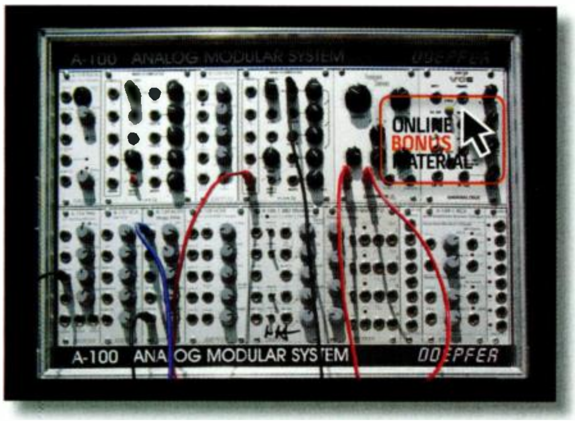
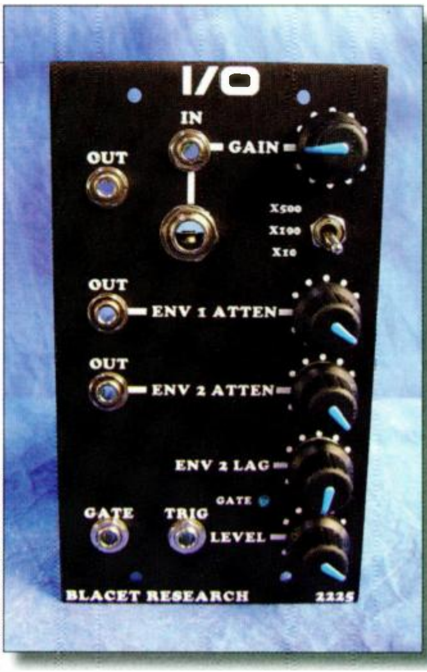


FIG. 1: In my studio, Eurorack modules from various manufacturers play well together (see **Web Clip 1**).

Square One

Before you invest in any format, consider the kinds of things you want to do with an analog hardware processor. For starters, anything you can do with a stompbox can be replicated with a modular synth, so you can begin with those types of effects: filtering, distortion, phase shifting and ring modulation. What a modular system will add is the ability to control various parameters of the sound by hand (using knobs, a joystick or a ribbon) or by using control voltages (CVs) for automation. Often, a synth module will have a knob and a CV input to control a parameter. (If you're familiar with plug-in automation, then you already have an idea of how you could control hardware synths using voltages, gates and triggers.)



COURTESY BLACET RESEARCH

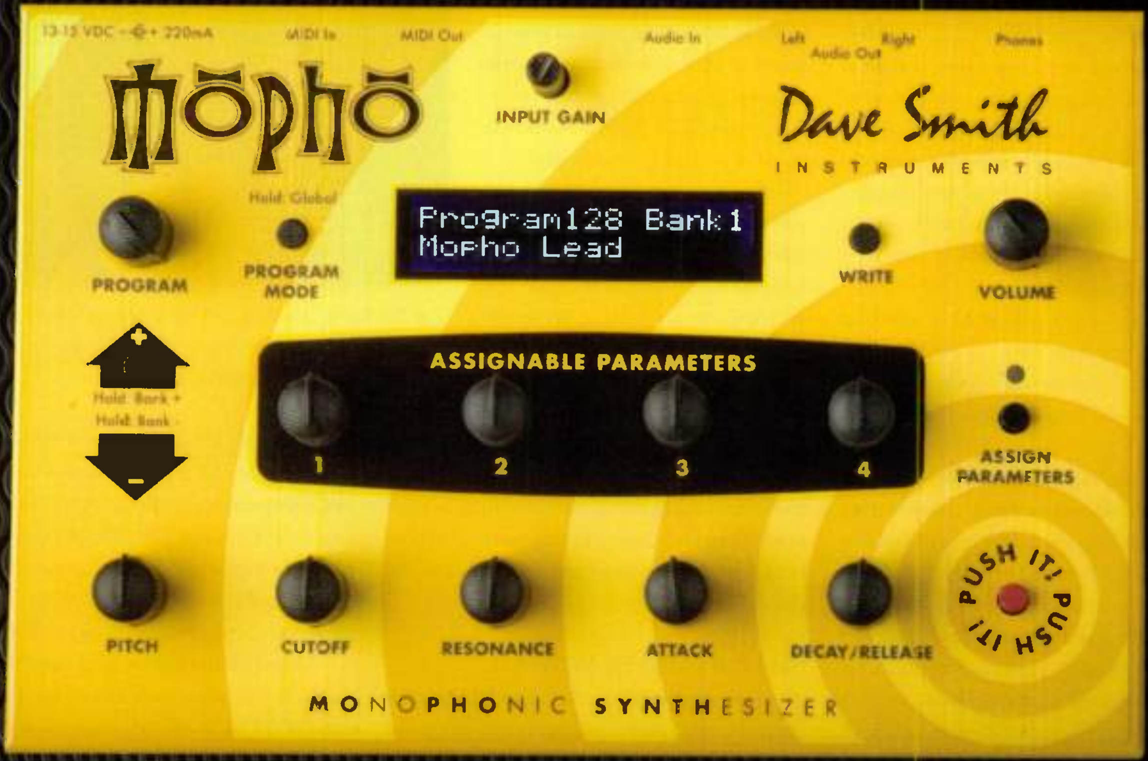
FIG. 2: The handy Blacet I/O 2225 accepts an input signal (on ⅛- and ¼-inch jacks) and provides a switchable amplifier. The outputs include a pair of envelope follower (CV) outputs, a gate output and a trigger output.

Analog modules offer many ways to create and use CVs. One easy way is to use a low-frequency oscillator (LFO) as a voltage source. As the LFO's signal rises and falls, it can raise and lower an oscillator's pitch or a filter's cut-off frequency. Then you can take the oscillator's output, for example, and use it as a CV to control another parameter of another module (or one of its own parameters), and so on. Right away, you can see that a modular synth allows you to explore complex methods of processing, such as CV feedback paths. If you don't fully understand what you're doing with a patch, that's okay: With a modular synth, you learn by patching.

For people who are new to modular synths, I recommend starting with a system that does one thing well. You can expand your palette once you figure out the next level of processing that you need. Beware of the *empty-cabinet syndrome.* That's the feeling caused by having a rack that's not quite filled with modules, and the sudden urge to splurge to fill the gaps. Save your money until you know exactly what you need.

As an example of a self-contained starter setup, let's assemble a system for creating

One voice, endless possibilities.



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Prophet '08 tabletop/rack module

Prophet '08 keyboard

The Prophet '08 keyboard has been honored with multiple awards, including:

Dave Smith
INSTRUMENTS
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complex filtering effects, one that would eventually provide a range from automatic wah-wah sounds to step-sequenced timbre changes. I would begin by looking for filter modules, of which there are many available. One common design is based on the vintage, Moog-style, 24dB lowpass filter. Quite a few companies make them, but each model sounds slightly different. If you simply want to approximate that old-school vibe, you'll probably be happy with just about any filter module you choose.

I would also get a second filter, one that has highpass and bandpass capabilities. The more CV inputs your modules have, the better, because you want as many control options as possible.

At this point, all you need is a power supply for the two modules and a cabinet to mount them in (either purchasing the proper rack or building one out of wood). Now you're ready to add serious attitude to your tracks—albeit, by hand. Just take an audio output from your DAW interface and plug it into the audio input jack of one of the filters. Then send the filter's audio output back to your DAW interface, tweaking the module's knobs to suit your tastes.

But what about all those CV inputs? Let's add a simple set of control sources to spice things up a bit.

I would add a module that offers one or more LFOs, and perhaps an envelope generator (EG) so I could shape my CVs a bit more. I would also consider getting an I/O module that would allow me to get the most from my DAW tracks. For example, Blacet (blacet.com) and Doepfer (doepfer.de) offer input modules that not only let you amplify or attenuate an input signal, but they also give you a gate and trigger output based on the input. That output will be useful for module control and synchronization purposes (see Fig. 2).

The result would be a five-module system that could take a monophonic, line-level input signal and filter it in sophisticated ways. Pricewise, expect to pay $75 to $250 per module, depending on the brand and the complexity of the circuitry, and a C-note or more for the power supply and rack. It seems expensive at first, but remember that this investment will outlive any computer or plug-in you are using today—you will have an effects processor for life if you care for it properly.

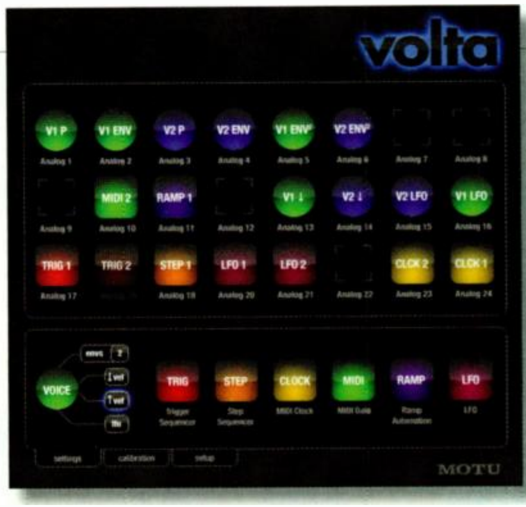

FIG. 3: MOTU Volta is a virtual instrument plug-in that provides a high-resolution way to control your analog synths using your DAW's automation capabilities.

Crush! Kill! Destroy!

Filtering is but only one thing you can do with a modular system. One of the most popular ways to process sound is with distortion and waveshaping. So why not just run everything through an Electro-Harmonix Big Muff pedal and call it a day?

Again, a modular system lets you shape the distortion effects in subtle ways that a stompbox doesn't. Imagine being able to increase and decrease the amount of distortion to the beat of your song? Or perhaps change the quality of the distortion randomly or on every other beat? These types of processing are well suited to a small modular setup. In addition, bit reducers and other digital effects have been put behind modular synth panels, allowing you to use these kinds of processors conveniently within a patchable system.

May the Pulse Be With You

A common processing trick is to take a track from your mix that is providing a steady pulse (such as a click track, a bass drum or a hi-hat) and use it as your synth's clock source. One way to do this is to feed the track into a sequencer's trigger input. Other modules can divide the pulse into smaller musical units so you can subvert your four-on-the-floor beat.

When Alessandro Cortini was touring as the keyboardist for Nine Inch Nails, he would use the click track for each song (which was played from a Pro Tools session and used for synchronizing both music and lights) to trigger his portable synth rig. Consequently, no matter how he patched his synth, the results were locked in perfect time with the music, allowing him the freedom to concentrate on timbral nuance within the craziness of a live show.

Of course, you can also synchronize your processing via MIDI using a MIDI-to-CV converter. The output is usually a couple of CV signals and a gate signal. These devices are inexpensive and quite robust, and I highly recommend the investment once you get your feet wet with a system.

Re: Volta

The most exciting innovation for analog synth users in recent years has been MOTU's Volta (Mac/Win, VST/Audio Units), a virtual instrument plug-in that lets you harness your digital audio sequencer's high-resolution automation data for CV control using the DC-coupled outputs on a digital audio interface (see Fig. 3). By setting up the proper feedback path, Volta can also keep your analog oscillators calibrated.

"Ramp automation and anything created using drawing tools can be used as a CV," notes MOTU's Matthew Davidson, who developed Volta. "This means you can easily create complex, timeline-based modulation. You can also sync [as many as] 24 LFOs with a variety of shapes, alter the symmetry of the shapes or sum multiple synched LFOs to create interesting periodic elements." Combine the automatable power of Volta with a joystick or ribbon controller that you can work with in real time, and you get an unprecedented level of control over analog outboard processing.

To Infinity and Beyond

To learn more about the world of modular synths, check out the various forums for each manufacturer; you'll find Yahoo groups (groups.yahoo.com) for many of them. In addition, the archives to online discussion groups such as Analogue Heaven (http://machines.hyperreal.org/Analogue-Heaven) and Muffwiggler (muffwiggler.com) are rich resources on modules and their uses.

But be forewarned: Processing audio through a modular synth is highly addictive. Once you hear how good it sounds, there is no going back. em

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Gino Robair is the former editor of EM.

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NATIVE INSTRUMENTS

THE FUTURE OF SOUND

Speed It Up

Make your Pro Tools workflow as efficient as possible. | By Brian Smithers

Three keys to being an efficient editor in any DAW are views, tools and navigation. Although the following suggestions are specific to Pro Tools 7.4, a musician desiring to be proficient in any DAW can find comparable shortcuts and efficiency features just by digging into the manual. I'll be citing Mac keystrokes; Windows users can substitute WIN for CTRL, CTRL for CMD and ALT for OPT. (For more great tips, see *Pro Tips for Pro Tools LE* from the April 2005 issue of EM, available online at emusician.com.)

The View From Here

Most Pro Tools users are familiar with its memory locations, but few take advantage of the more recent addition of window configurations. Window configurations let you recall with three keystrokes which windows are open and what components of each window are displayed. Like memory locations, window configurations are session-specific, but you can import them from an existing (or template) session using Import Session Data.

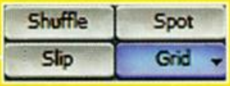
Maximize the Edit window and then hide the Tracks list, Regions list, all track parameter columns (I/O, inserts, etc.) and all rulers except Bars:Beats (or Time Code for video work). From the Window Configurations submenu, create a new configuration called Big Edit. Choose Edit Window Display Settings from the drop-down list (see Fig. 1). Configure an alternative view that shows the Tracks list and I/O column, and name it Automation Edit. Recall them by respectively typing ".1*" and ".2*" on the numeric keypad.

By assigning window configurations to memory locations, you can also recall zoom settings and which tracks are shown. Another underutilized way to show specific sets of tracks is to group the tracks and then CTRL-click to the left of the group name in the Groups list. To fit selected tracks to the height of the Edit window, press CMD-CTRL-down (or up) arrow. To fit all shown tracks to the height of the Edit window, press CMD-CTRL-OPT-down (or up) arrow.

With the Automation Edit configuration you created, you can show the volume, mute or pan automation playlist by CMD-CTRL-clicking on the corresponding control. This also works for open plug-in windows. Return to the waveform view by CMD-CTRL-clicking on the track name. Change the playlist for all tracks by adding OPT, or for all selected tracks by adding SHIFT-OPT. These two modifiers invoke *apply to all* and *apply to selected* for virtually all functions in Pro Tools.

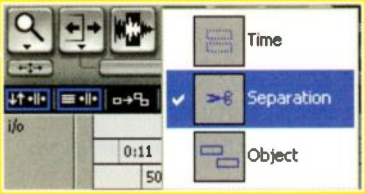
STEP-BY-STEP INSTRUCTIONS

1



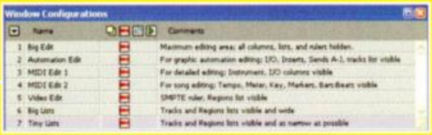
STEP 1: Make Grid your default edit mode and CMD-drag to suspend the grid rather than changing to Slip.

2



STEP 2: Make Separation Grabber the default Grabber because it behaves like the Time Grabber when there is no selection to be separated.

3



Window Configurations

	Name	Comments
1	Big Edit	Maximum editing area; all columns, lists, and rulers hidden.
2	Automation Edit	For graphic automation editing: I/O, Inserts, Sends A-J, tracks list visible
3	MIDI Edit 1	For detailed editing: Instrument, I/O columns visible
4	MIDI Edit 2	For song editing: Tempo, Meter, Key, Markers, Bars:Beats visible
5	Video Edit	SMPTE ruler, Regions list visible
6	Big Lists	Tracks and Regions lists visible and wide
7	Tiny Lists	Tracks and Regions lists visible and as narrow as possible

STEP 3: Create window configurations to recall any view settings you change frequently and incorporate them into memory locations.

That's Smart!

Pro Tools' Smart tool combines the Trim, Selector and Grabber tools depending on its position within a region or automation playlist. Hold the CTRL key when the Smart tool is the selector to enable the Scrub tool. Hold the CMD key in an automation playlist to force the Grabber (to create new breakpoints). In a MIDI track, hold the CTRL key to enable the current Pencil tool for drawing notes or controllers.

Efficient editing depends on mastering Pro Tools' four edit modes, but for tempo-based workflows it often makes sense to remain in Grid mode almost exclusively. This is possible because adding the CMD key to most Trim, Selector and Grabber gestures suspends the grid, putting you temporarily in Slip mode. In either Grid or Slip mode, snap the start of a region to the playback cursor by CTRL-clicking with the Grabber. Snap the end of a region by CTRL-CMD-clicking, and snap the region's sync point by CTRL-SHIFT-clicking. Snap to Next and Snap to Previous behaviors are available from the region right-click menu. Speaking of right-clicking, you can spot a region from the right-click menu instead of switching to Spot mode. Taken as a whole, these behaviors leave you changing edit modes a lot less.

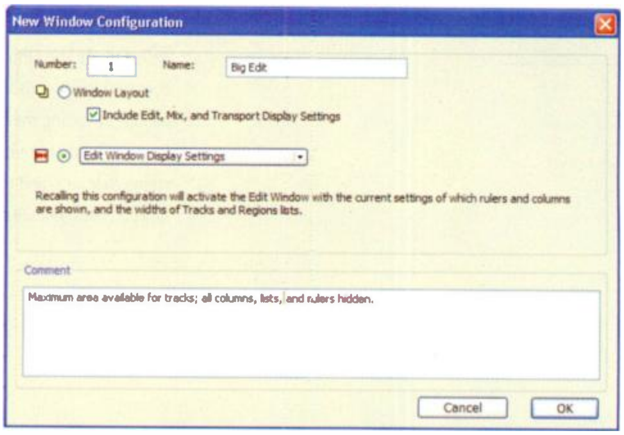
Expert Navigation

Don't waste time scrolling around with the mouse. Scroll the window up and down one screen at a time by pressing PgUp and PgDn; scroll left and right one screen at a time by pressing OPT-PgUp and -PgDn. Home and End will scroll all the way up and down, and OPT-Home and -End will scroll all the way left and right. The left- and right-arrow keys will center the start or end of a selection, which is useful when you are zoomed way in. When Timeline Insertion/Play Start Marker Follows Playback is enabled and Timeline and Edit Selections are linked, either the down or the up arrow will center the playback cursor, which is helpful when you've disabled automatic scrolling.

Move the cursor to any position by pressing the asterisk (*) key to highlight the Main Counter, typing the location and pressing Enter. Press the slash (/) key to highlight first the selection Start field in the Event Edit Area, then the selection End and then the selection Length. You can thus create and modify selections very precisely. In the Main Counter and Event Edit area, move between columns by pressing the right- and left-arrow keys.

Remember these tips: get there quickly, get a good look at what you're working on and have the right tool in hand. Embrace any shortcut that gets you to the creative decision more quickly (see "Step-by-Step Instructions" below).

Brian Smithers is author of Mixing in Pro Tools: Skill Pack *from Cengage Learning and chair of the workstations department at Full Sail University.*



New Window Configuration

Number: 1 Name: Big Edit

○ Window Layout

☑ Include Edit, Mix, and Transport Display Settings

● Edit Window Display Settings

Recalling this configuration will activate the Edit Window with the current settings of which rulers and columns are shown, and the widths of Tracks and Regions lists.

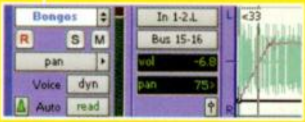
Comment

Maximum area available for tracks; all columns, lists, and rulers hidden.

FIG. 1: Save any combination of Pro Tools windows and their view settings for quick recall.

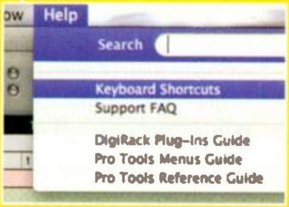
4

STEP 4: Change automation playlists by clicking on the corresponding track-control widget.



5

STEP 5: Memorize and use every available keyboard shortcut for navigating, scrolling and selecting.



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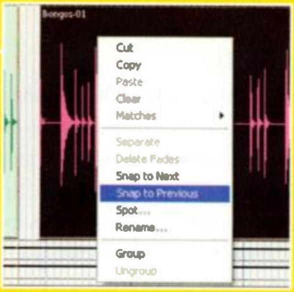

STEP 6: Right-click a region for additional *snap-to* behaviors, along with quick access to the Spot dialog.

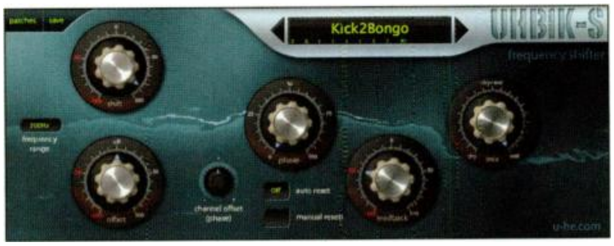

FIG. 1: The Uhbik-S frequency shifter's unusual options include offsetting the shift frequency and phase between stereo channels, and tempo-synched shift amounts.

A Subtle Shift

A smooth alternative to flange, phase and chorus effects. | By Len Sasso

Frequency shifting and its first cousins, ring and amplitude modulation, are usually associated with clangorous sci-fi sound effects. But with the right settings, you can use frequency shifting to modify drum and percussion sounds, create a subtle alternative to flanging and phase shifting, and mimic the fattening effect of multiple detuned oscillators without the inherent speedup in beat frequency with rising pitch.

ONLINE BONUS MATERIAL

One of my favorites of the recent batch of frequency shifters is Uhbik-S in the Uhbik collection of effects plug-ins from U-he software (u-he.com, see Fig. 1). I'll use that in my examples, but you can accomplish the same thing with any frequency shifter, and many DAWs, such as Ableton Live 8 and Apple Logic Pro 8, include them.

Drum Shift

Frequency shifting (aka, single-sideband modulation—a combination of ring modulation and filtering) leaves only one of the sidebands produced in ring modulation (you choose which). It produces clangorous sounds because all harmonic relationships are offset by the same amount. For example, when you frequency shift the sine wave components of a 100Hz sawtooth (100, 200, 300, etc.) by 50 Hz, the resulting components (150, 250, 350, etc.) are no longer multiples of the lowest; frequency shift a flute and you no longer have a flute. But because drums do not have harmonically related frequency spectra, frequency shifting a drum simply produces a drum of a different color.

You can create an unusual percussion part from a simple kick drum loop with a few feedback-delay effects followed by frequency shifters (see **Web Clip 1**). Use a couple of effects buses, each with a multitap delay followed by a frequency shifter. Set the frequency shifters to a full-wet mix and experiment with shifts in the 200Hz range. Starting with a kick drum sound, an up-shift will give you a bongo-like sound, whereas a down-shift sounds like a brush slap on a high tom. Use the delay taps to create bongo and brush patterns between the kick drum hits. Variations in the kick drum pattern will, of course, alter the other parts. With Uhbik-S, try feedback settings between 50 and -50 to adjust the bongo's timbre.

Frequency shifting is a handy tool for modifying one or more pieces in a drum kit. If you're using loops, you'll need separate loops for each kit piece you want to modify. If you're using a multi-output drum machine, send the target kit pieces to their own outputs.

A shift of a few Hertz with a 75-percent-wet setting and slight modulation of some kind (use the Offset knob in Uhbik-S) will add variation to a kick drum part. Shift a snare drum 500 to 700 Hz with a 50-percent-wet mix to add a rim-like sound. Shifts between 500 and -500 Hz with small Offset settings work well with hi-hats; adjust the wet/dry mix to taste. With Uhbik-S, you can add a tempo-consistent swish to a ride cymbal by using the 1/16 frequency range with a Shift setting around 25 and a mostly dry mix. Use the Phase knob to set the phase of the swish relative to the stick hit (see **Web Clip 2**).

A Different Flange

Flanging, chorusing and phase shifting all produce the familiar sweeping sound of a moving comb filter. Frequency shifting produces a similar sound, which to my ear is smoother and more subtle (see **Web Clip 3**). The dry/wet mix and amount of feedback determine how pronounced the effect is. Unlike flanging or phasing, the sweep is always in one direction. That's determined by the parity of the shift: Negative shifts sweep down and positive shifts sweep up. Uhbik-S' Offset and Feedback knobs accentuate the sweeping, making it sound more like standard phasing and flanging.

Slightly detuning the oscillators is an old trick for fattening a multi-oscillator synth patch. You can accomplish the same thing without the pitch-related speedup in beat frequency by passing a single-oscillator patch through a couple of frequency shifters in parallel. Use up- and down-shifts of a few Hertz (see **Web Clip 4**). Use similar settings to emulate the ubiquitous Rhodes tremolo. Uhbik-S' Offset and Shift both affect the rate, while Offset also produces different right-side and left-side rates.

Len Sasso is an associate editor of EM. *For an earful, visit his Website, swiftkick.com.*

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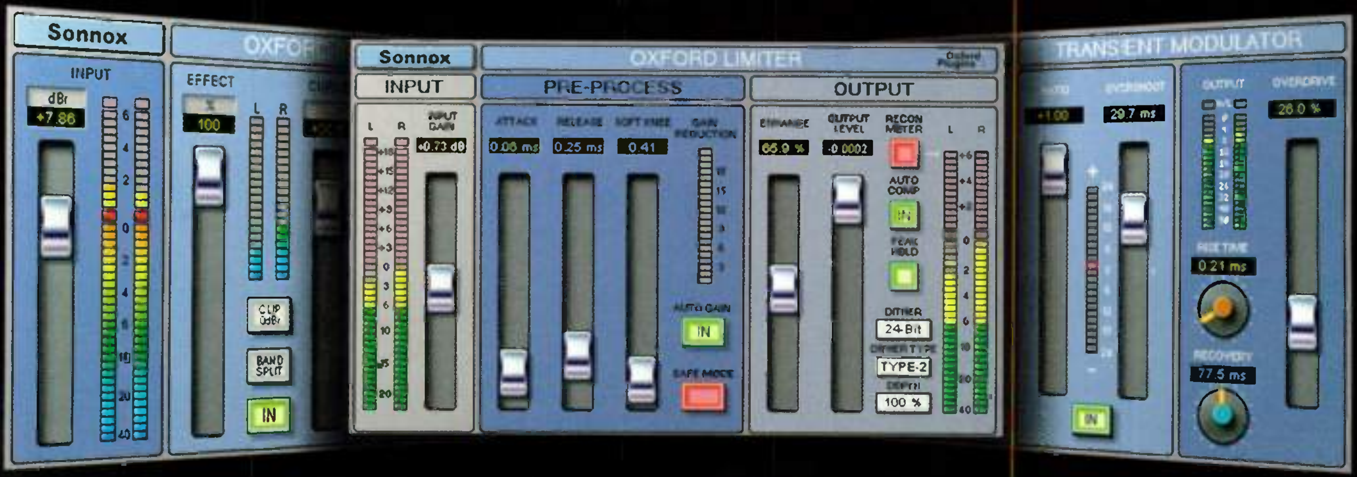
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EFFECT
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SOFT KNEE
GAIN REDUCTION
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0.25 ms
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OUTPUT LEVEL
RECON METER
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PEAK HOLD
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24 Bit
TYPE-2
100 %
TRANSIENT MODULATOR
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26.0 %
0.21 ms
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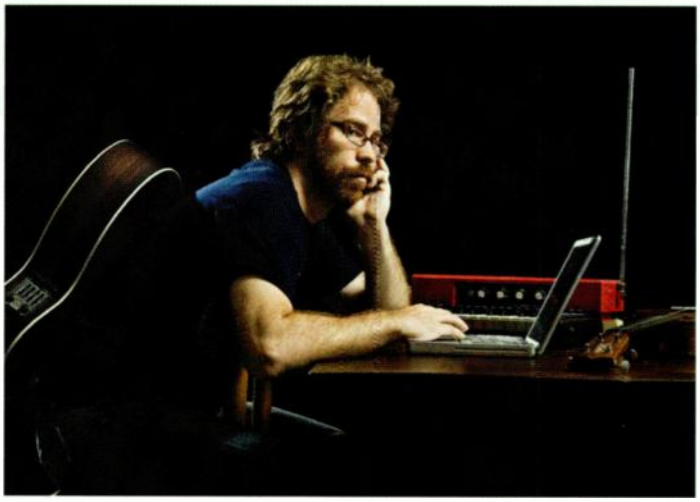

DALE MAY

Jonathan Coulton has used a Web-savvy approach to build his music career from part-time to full-time.

Q&A: Jonathan Coulton

An indie musician's advice for going it alone.

Today, every musician has the ability to reach a global audience. New fans can be won at the speed of the Internet no matter where they live. But with so much music out there, how do you stand out? New York musician Jonathan Coulton has cracked the code, and as a result quit his day job as a programmer to work on his music career full-time. He now makes his entire living off of his music thanks in part to his talent, his work ethic, allowing his music to be downloaded freely and his large and enthusiastic fan base.

From releasing a song a week for an entire year back in 2005 to his recently released live show DVD/CD *Best. Concert. Ever.*, Coulton's success has always focused on connecting with his fans. In this interview, he shares advice, tools and techniques that he uses to do this, all of which are within the reach of any musician.

By Jason Feehan and Randy Chertkow

What advice would you give to musical artists who are looking to build a fan base using the Internet?
Start a blog. Places like Blogger.com, LiveJournal.com, and Wordpress.com make it easy. Also, make your music free, but create a store and give your fans a way to easily buy it, too. Put yourself in various places on the Internet where you think your fans might be. This means getting your music in networks like last.fm, Facebook, MySpace, ReverbNation or any one of the million different places where people come to discover new music.

What do you say to the musician who's just started blogging?
The only way to start a blog is to pretend the audience is there, even if you think it's zero. The truth is, your friends will come and read it. And then it'll be your friends and some guy who lives in Cleveland who you never met. Just keep talking and putting stuff out there. My thing has always been to talk about what I'm doing as a musician and why I'm doing it. "Hey, I quit my day job, wonder if this will work," and, "Hey, I posted a new song and nobody liked it. Oh, well." All this stuff is interesting to the people who care about you, whether they're your friends or your rapidly growing fan base. If you're consistent, word of mouth will grow your audience.

One of your projects was forcing yourself to release a song a week through your Website (jonathancoulton.com) as a free download. How long did it take before that took off?
Very early. I had a small audience for my blog when I started, but I ended up getting a lot of attention early on thanks to my cover of "Baby Got Back" that I released in week 5, which gave me massive amounts of exposure overnight. I was getting calls from radio

stations and getting some really big blog links. My Website kept going down [due to the increase in traffic]. It was really exciting. Had I done that song in week 30, I think it would have been a much more difficult first six months.

And you were able to make money in this process?
The money increased as the traffic increased. When "Baby Got Back" hit, I didn't have a store set up on my site and I was kicking myself for that. I Immediately set one up and became obsessed about my stats. The percentage of people who would listen for free versus buying was very low, and at first it was disheartening. But as my song catalog grew, there was more music that people could buy. And the more exposure I got, the more people came to the site. About six months into my "Thing a Week" [blog], I was able to contribute to my family—pay the mortgage, the babysitter—just as I had done with my software job. Although my music is free for people to download and listen to, it's still copyrighted. I just use a Creative Commons license. I know it's completely counterintuitive to say that when people get your music for free it helps you, but I honestly believe it. To paraphrase Tim O'Reilly, piracy is not your enemy, obscurity is.

The only way to start a blog is to pretend the audience is there, even if you think it's zero.

But why do you think people buy your music when they can get it for free?
I think it comes down to convenience and peace of mind. Maybe they prefer iTunes so that it automatically flows to their iPods. Maybe they got some songs for free from a friend but want the whole album now. Maybe they just want to support the artist—something that works for me because it's clear that money spent at my Website goes to me and not a record label. The truth is, artists are already competing with free—your music can be obtained for free, I guarantee it. So it's important to realize every music purchase represents a *choice* to spend money. I've always been clear that while I'm happy to let you download for free, I'd rather you actually gave me money. And a lot of people make that choice.

Can you describe your typical day and what you did outside of making music to grow your audience?
At the height of it, I would spend five hours a day on the non-music stuff. I would head to the coffee shop, sit at the laptop, answer e-mails, read and post blog comments, and work on my site. It was intense and not glamorous. But I treated it as my job. But I was also so thrilled to be receiving comments on my music. So I would spend my day responding.

When you tour, you head out to the UK or the West Coast rather than New York and the surrounding areas. Why is that?
When I play out, I go where my fans are. And that's because of a site called Eventful.com that created a system where anyone can sign up and demand you to play their city. As a musician, Eventful tells you where your fans are and how many will be at the show before you even decide to play there. They also allow you to send messages directly to your fans. It's one of those ideas that makes you wonder how we did it the other way for so long. It's the only way I have been able to tour—by finding the places where I actually could make money.

How does your income-stream break down? Can you give us percentages—what you get from selling your music versus touring?
The largest single chunk, about 40 percent of my income, is from digital downloads. This is through my online store at my Website and CDBaby; digital distribution through iTunes, Rhapsody, Amazon, eMusic, et cetera. Another 20 percent comes from touring and ticket sales. Another 20 percent is merchandise, which is CDs and T-shirts. The rest is ancillary stuff such as playing private parties, BMI royalties from TV placements, donations and licensing.

Your song "Code Monkey" ended up becoming the theme song to a TV series on G4. How did that come about?
They found the song on the Internet and felt it was the right theme, so they contacted me. I ended up licensing it to them and we worked out a deal to give them the source tracks so they could cut up and remix the song in ways that they were asking for where I didn't have to do any work.

You've also had some success with breaking into the videogame world. Can you tell us how you ended up writing a song for Valve Software's game, *Portal*?
I was playing a show in Seattle and a fan from Valve Software came up to me after the show and asked if I was interested in writing music for videogames. I met with one of the writers for the game and together we hit on the idea of having me write a song for the closing credits based on a character in the game. I wrote it as a work-for-hire since it was a commission. The song became such a big part of what people liked about that game that the *Rock Band* people decided to put the song in their game. All this wouldn't have been possible if it weren't for my fans. They've helped me in many ways.

And that's one of the reasons why you included them in your new DVD/CD?
Yes, absolutely. I asked fans to help me record the concert. It's a live show I did in San Francisco and is the culmination of what I've been doing the last couple of years. I hired a professional company for the main footage—5-camera, HD—and it's a very different experience from the cheap-and-easy Internet approach. We cut all the footage the fans shot and put it in there. Yes, it's an idea totally stolen from the Beastie Boys, but I loved the idea and my fans responded with excellent footage.

Randy Chertkow and Jason Feehan are authors of The Indie Band Survival Guide: The Complete Manual for the Do-It-Yourself Musician, The D.I.Y. Music Manual, *and founders of the open and free musician resource, IndieGuide.com (www.IndieGuide.com).*

Cakewalk

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By Brian Smithers

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VS-700R (available separately), $1,995
VS-700C (available separately), $2,495

PROS: Tightly integrated, feature-laden system. Plenty of I/O. Eight high-quality mic preamps. Solid, well-designed control surface. Includes SONAR 8.3 Producer. Hardware Fantom synth onboard. Supports ARX expansion.

CONS: Single stereo Fantom output. Must restart SONAR to change hardware sample rate. No headphone output on interface.

FEATURES	1	2	3	**4**	5
EASE OF USE	1	2	3	**4**	5
AUDIO QUALITY	1	2	3	**4**	5
VALUE	1	2	3	**4**	5

www.cakewalk.com

» In our reviews, prices are MAP or street unless otherwise noted.

ONLINE BONUS MATERIAL

GUIDE TO EM METERS

5	Amazing; as good as it gets with current technology
4	Clearly above average; very desirable
3	Good; meets expectations
2	Somewhat disappointing but usable
1	Unacceptably flawed

Since Roland acquired "a major share" of Cakewalk in early 2008, many of us have been wondering what new products might grow out of this synergy. The SONAR V-Studio 700 is a pretty compelling answer to that question. It comes close to being a complete studio in a box. Add your own computer, monitors, a keyboard and a microphone (or eight), and you are well equipped for the lion's share of tasks that a personal, project or mid-level studio would be expected to perform.

The V-Studio 700 comprises five major components: the VS-700R audio interface, the Roland Fantom VS hardware synth tucked away therein, the VS-700C control surface, soft synth Rapture and SONAR 8 Producer software. The whole system is tightly integrated, allowing you to control both hardware and software largely from the control surface.

I tested the V-Studio 700—running on my Windows XP-based Toshiba Tecra notebook—in my home studio and on a couple of remote orchestral recordings. Although my PC's Centrino processor is a bit behind the curve these days, it is well within Cakewalk's stated system requirements and ran the system perfectly. The SONAR V-Studio Website (sonarvstudio.com) delineates the V-Studio 700's features quite thoroughly, so I'll focus on the practical and creative implications of the system's design and implementation. SONAR 8 Professional has been reviewed favorably in these pages, so I'll simply say that this world-class DAW is a worthy centerpiece for this well-designed system.

Ready Mix

My first task for the V-Studio 700 was mixing a concert, and I was immediately reminded how much more useful automation is when you have a good control surface (see Fig. 1). Without bothering to look at the manual, I set the board up to record track automation, and I was off and running. Setting up the board was actually a bit easier than setting up a track for automation in the software, and actually writing the automation felt like playing by ear (to borrow a musician's phrase). Navigating the session was a snap with the dedicated transport controls, although I'm a bit disappointed that the shuttle wheel doesn't play as it moves, making it effectively a fast-forward/rewind wheel instead.

The well-thought-out control surface features adjustable touch sensitivity and the ability to lock a track to a specific fader as other tracks bank around it. During critical playback, you can also prevent the motorized faders from playing back automation to keep them quiet. All of its controls felt solid and operated smoothly. Although I might have preferred non-detented rotary controls, holding Shift allows finer adjustments, and you can also press the knobs to switch controls or to return a parameter to its nominal value.

The LCD allocates seven characters to each channel strip—too few for some param-

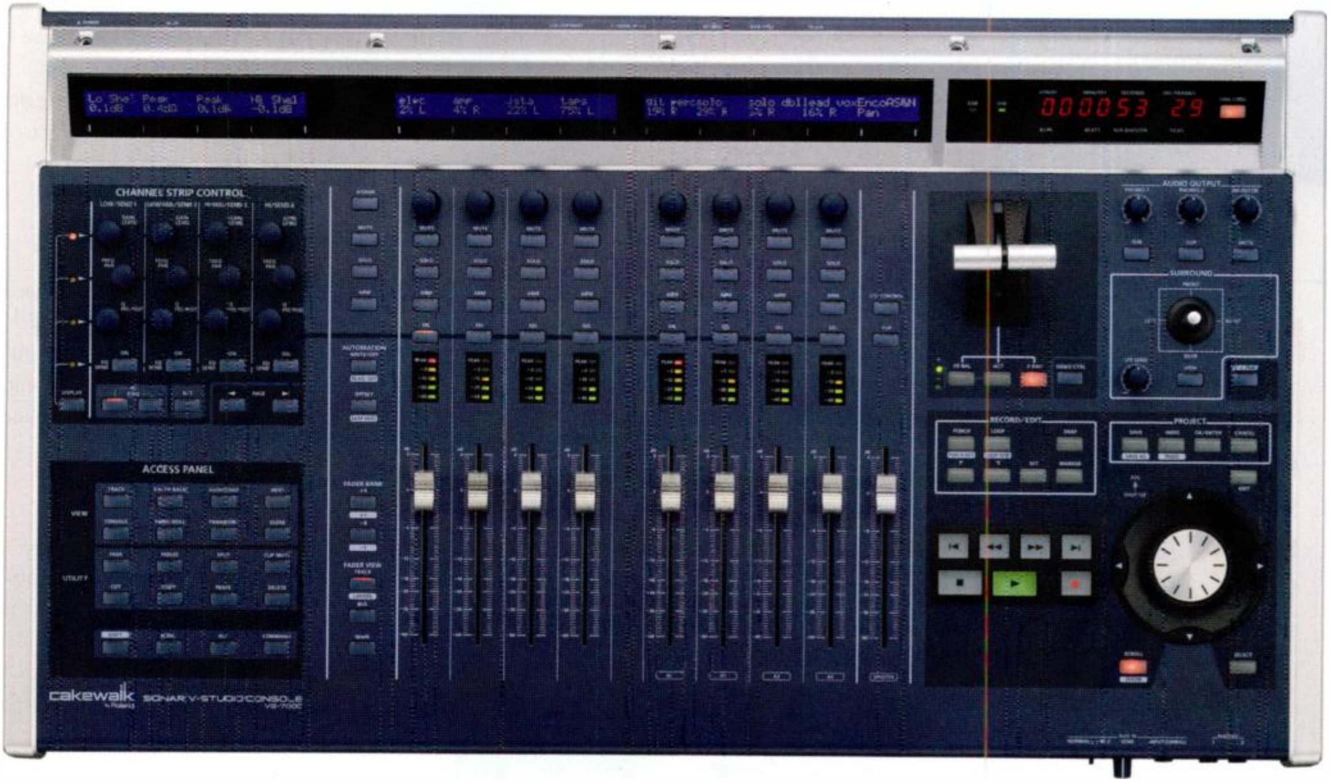


FIG. 1: The VS-700C is a well-laid-out control surface that integrates beautifully with SONAR. It also controls the interface's preamps.

eters. When assigning an audio input to a track, for example, the abbreviation -7001-2 is used to represent three different input options: Left VS-700 IN 1-2, Right VS-700 IN 1-2 and Stereo VS-700 IN 1-2. The rotary encoder has a separate click for each, but the display does not change, making I/O assignment a bit like reading Braille. Fortunately, you can tell SONAR to use "friendly names" for I/O and shorten the default names to better display on the LCD.

You can manually control the VS-700R's preamps largely from the control surface. A mode called I/O Control gives tactile control over the preamp gain, pad, polarity and low-cut filter, in addition to the attack, release, threshold and enable/disable of each channel's compressor. It would be nice if you could control phantom power and compressor gain and ratio, and if the LED could at least momentarily indicate which parameter is being controlled by the Mute, Solo and Arm buttons. (For tips on getting the most out of the VS-700C, check out the **Online Bonus Material** at www.emusician.com.)

I/O Silver

The VS-700R's eight remote-controlled preamps offer 64 dB of gain and sounded very clean and natural, capturing an orchestra concert quite nicely. Its eight-segment LED input meters are a welcome feature, although all other functions (outputs, digital I/O, MIDI I/O and so on) have only signal-present LEDs. All connections are labeled on the top of the unit, making it far easier to figure out where to plug things when you reach around the back. Two independent monitor outputs and word clock I/O are just two of many features that show that the VS-700R was designed for professionals.

The interface features direct monitoring by means of a simple mixer window that routes a single monitor mix to the main, sub or digital outs in any combination. I used this to create a monitor mix and to record a real-time stereo safety to a handheld recorder via S/PDIF. In a perfect world, I would have been able to create different mixes for each, and Cakewalk says this may be offered in a future update.

Before taking the unit on location, I set it up at home to record some mic inputs, routing that digital backup to my handheld, and then I shut down SONAR to see what would happen in the event of a crash. I was very impressed to find that the interface remembered its settings and kept on passing a clean signal to the backup. I restarted SONAR and picked up where I left off, comforted that I'd be able to copy and paste in the missing seconds from the safety if this ever happened on location.

The interface worked perfectly, sounded great and offered plenty of I/O options (see Fig. 2), so I feel a tad spoiled airing a few minor gripes. Sample rate is set by a front panel dial, and SONAR must be restarted to recognize the new rate. Ironically, the ability to make changes to the audio engine without restarting is one of the new features in SONAR 8 without the hardware; Cakewalk says this inconsistency will be addressed in a future update. On location, I wished the VS-700R had a headphone output, but because it was designed to be used

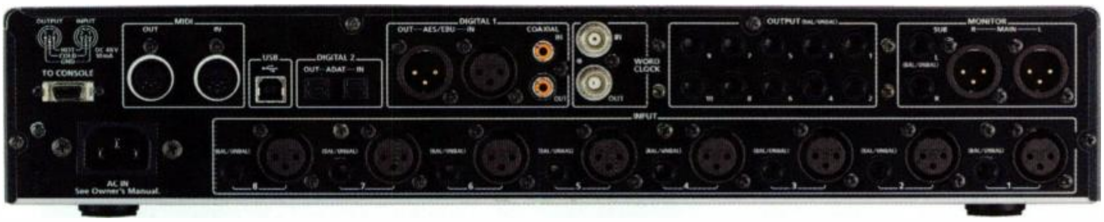


FIG. 2: The VS-700R interface features flexible I/O options, including eight mic/line inputs, eight line outputs, dual monitor outputs, digital I/O, word clock and MIDI I/O.

with the VS-700C, it wouldn't normally need one. The unit I reviewed also had a moderately noisy fan. It wasn't the loudest thing in my studio, but it was about twice as loud as my laptop and with a more of a pitch center, which made it stand out more.

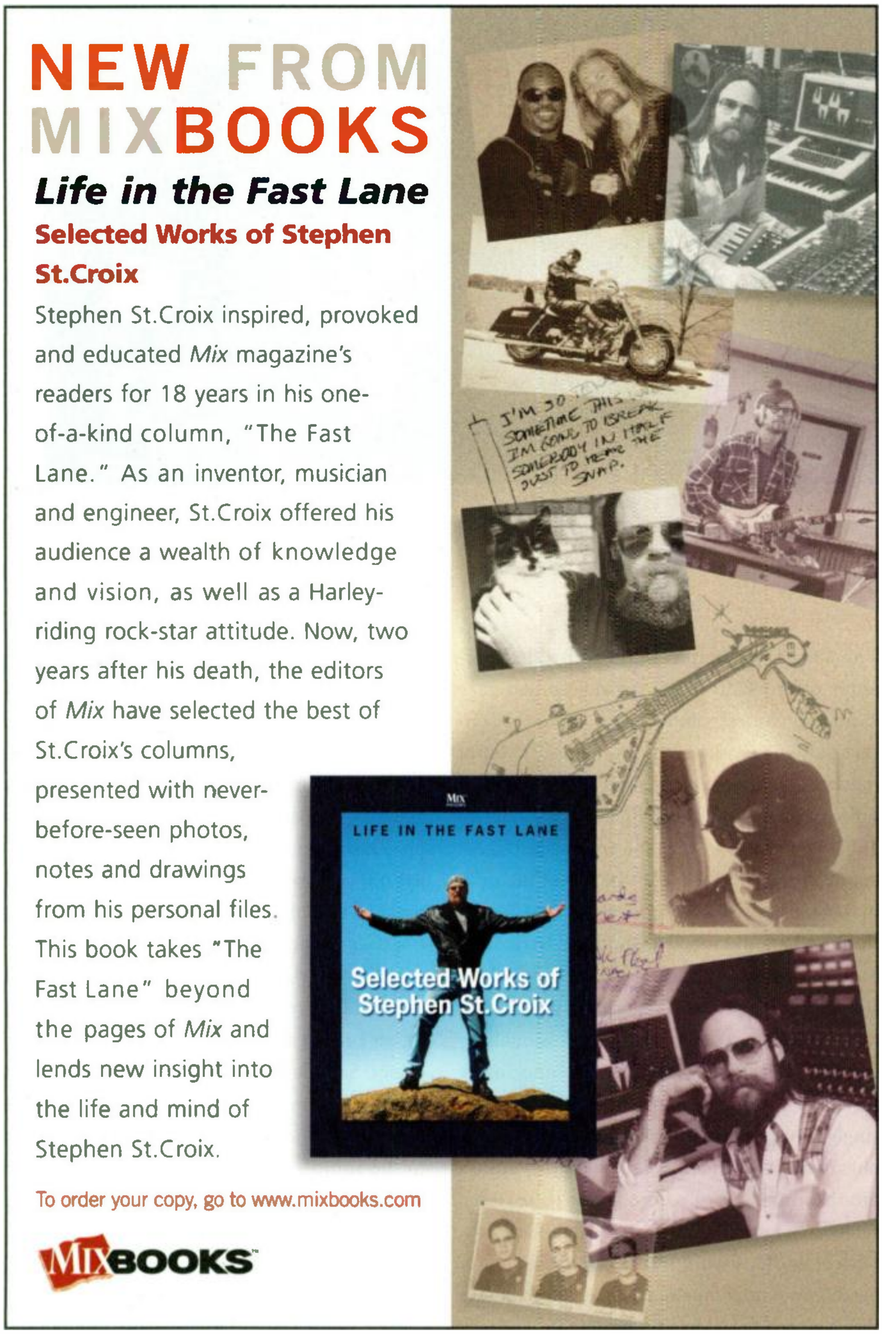
The Fantom Nose

Roland's Fantom line of synthesizers has a well-deserved reputation for excellence, and having a Fantom built into your interface is intoxicating. With more than 1,400 sounds, 16 parts, 128-voice polyphony and an ARX Series expansion slot, it's the gift that keeps on giving.

Being a hardware synth, the onboard Fantom has virtually no latency when monitored through the direct mixer. All of its parameters are exposed on the control surface for easy editing. It would be great to be able to assign patches from the control surface, but this, too, is on the wish list for a future update. My one beef is that the Fantom returns only a single stereo audio output to SONAR. To get serious independent mixing control of multiple Fantom parts in SONAR requires multiple real-time record passes, a surprisingly old-school inconvenience for such a state-of-the-art system.

The V-Studio 700 would make a fitting foundation for any project studio. It brings together first-rate components and integrates them quite well. Although its price may seem steep at first, it's a good value as compared with buying comparable pieces separately. Most of my quibbles are things that could be addressed by software updates, so the future is bright for V-Studio users.

Musician, engineer and author Brian Smithers is department chair of workstations at Full Sail University.



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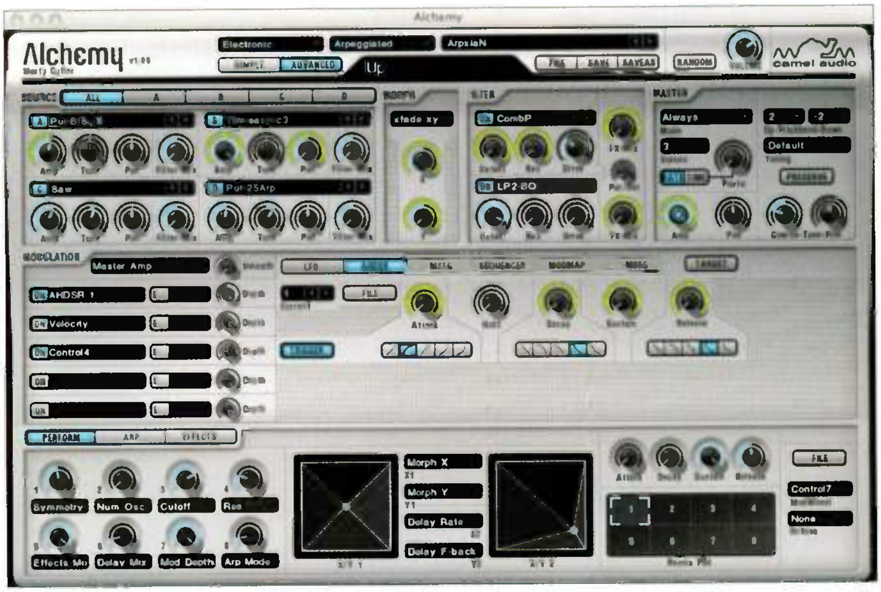
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Morph X
Morph Y
Delay Rate
Delay F-back
Control7
None

» FIG. 1: Alchemy offers a choice of user interfaces. Pictured here is the Advanced mode with all parameters available. Simple mode pares down the view to the header and the bottom row of real-time controls in the Performance section.

Camel Audio

Alchemy 1.09

Far smarter than your average sample playback synth.

By Marty Cutler

» PRODUCT SUMMARY

synth plug-in
$249

PROS: Abundant filters and modulation capabilities. Wonderful presets by all-star sound designers. Sample import and spectral modeling.

CONS: No stand-alone version. Awkward sample import window. Modulation section is visually hard to grasp.

	1	2	3	4	5
FEATURES				**4**	
EASE OF USE			**3**		
QUALITY OF SOUNDS					**5**
VALUE				**4**	

camelaudio.com

ONLINE BONUS MATERIAL

Alchemy 1.09 should put to rest any debate about the continued usefulness of sampling. Alchemy is not a sampler, though it supports multisampling through SFZ files. A generous toolbox of sample-manipulation features, including additive synthesis and spectral modeling, springboard the instrument into some pretty exotic-sounding territory.

Currently available by download only, Alchemy contains a factory sound library a bit more than 2 GB. You must also download the instrument, presets and key file separately. Camel Audio provided me with two optional Alchemy patch libraries: Atmospheric ($59) and Electronic ($59), each adding more than 150 presets and a raft of new samples to the 300 patches in the factory sound set (see the **Online Bonus Material** section at emusician.com).

You get an Audio Units plug-in version for the Mac, and VST 2.4 versions for the Mac and Windows. Camel Audio plans to release an RTAS version later this year, but there is no stand-alone version. I put Alchemy through its paces on an 8-core 2.8GHz Mac Pro running Mac OS 10.5.6. Hosts included Steinberg Cubase 4.1, MOTU Digital Performer 6.2, Apple Logic Pro 8.0.2 and Ableton Live 7.0.3.

Architecture and Alchemy

You must choose between two styles of user interface: Simple, which presents the Performance section of the instrument, and Advanced, which provides access to all of Alchemy's parameters (see Fig. 1). The Title Bar, common to both, lets you toggle Simple and Advanced modes, select a bank of sounds and select a specific patch—either from a drop-down menu or left- and right-arrow buttons. You can choose from 17 categories, including Arpeggiated, Pads, Brass, Loops and Soundscapes. The small voice-allocation window found in Advanced interface is missing from the Simple interface, where it would be especially useful.

In Advanced mode, several file-management buttons appear near the patch-selection areas. Selecting Check for Updates in the File menu opens your browser and takes you to Camel Audio's Login page, where there is no direct button to an update section. I'd much prefer a pop-up window that informs you Alchemy is up-to-date or offers a direct download.

Below the patch-selection area, a generously sized window displays any knob or parameter value on mouse-over, including percentages, milliseconds, decibels, semitones or whatever measurement is relevant. I much prefer that to balloon windows, which often obscure parameters. Finally, there's a patch-randomizing button (which produced remarkably useful sounds) and a main Volume knob.

Four-Chambered Heart

At Alchemy's heart are four sources, each containing additive, spectral and granular tone-generating engines called elements. Each source packs three multimode filters, each feeding a mixer that routes the result to two main filters. You can enable some or all elements simultaneously, although one element can limit the functionality of another.

The granular element also serves as the sampling section, and here you can set up looping and, if you choose, granulation parameters. Elements can load samples of your choosing, or you can import them for spectral analysis as long as they're AIFF, WAV or SFZ files. One small gripe: The window for importing audio resembles an old DOS tree menu. I find that type of menu cluttered and a bit cumbersome; standard Open dialog boxes would be more useful.

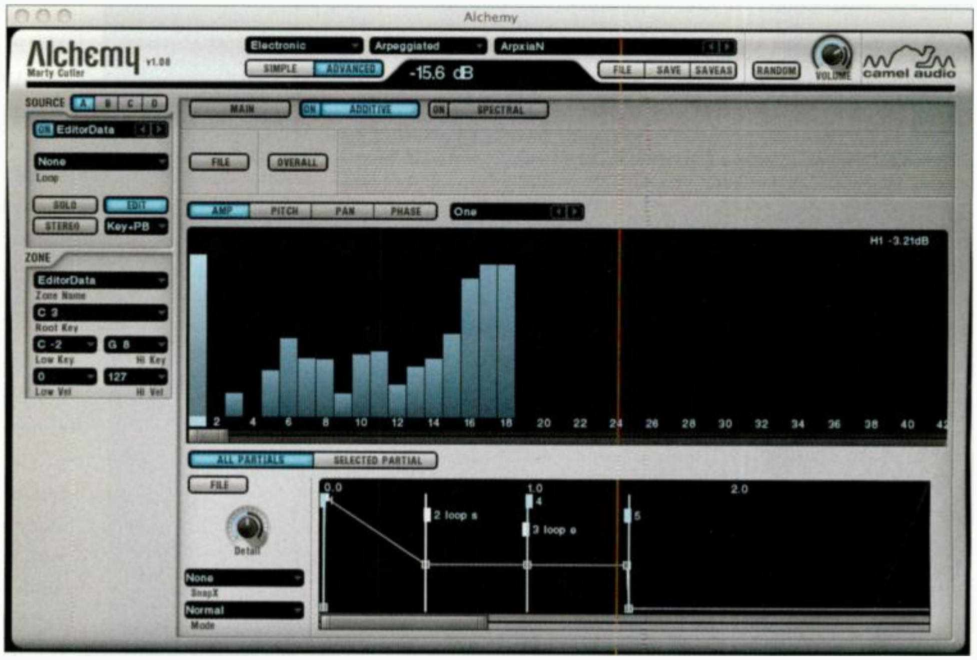
Switching on the granular element limits the additive element to virtual analog functionality, and the spectral engine then becomes a noise generator. With four sources available, however, you'll have plenty of room to pull out the stops and use all the elements you want, if your CPU is up to it. If you toggle granular synthesis on, you can adjust grain volume, size and density, and choose from several envelope shapes for the grains. Additional knobs control sample starting point and controls for adding random variations to sample start and pan position. My experiments with Alchemy's granular synthesis were hit or miss, ranging from beautiful and unearthly to very pedestrian noise.

Additive synthesis is nicely done in Alchemy, with only a few compromises in the interest of simplicity and processor overhead. Frequencies are represented in a familiar bar-graph form, and grabbing any partial with the mouse raises or lowers its amplitude (see Fig. 2). Similarly, bar graphs set each frequency's pitch, pan position and phase, with each of these parameters modulated by breakpoint envelopes. You can also choose to use the additive element as a virtual analog synth with pulse width and symmetry controls. Finally, the spectral element is best at interpreting a sound's noisier high-frequency components with the help of a highpass filter; as such, it is best used for translating polyphonic sounds, such as drum loops.

Each source provides three filters that you can arrange serially or in parallel topologies. A drop-down menu offers 11 filter types, ring modulation and a couple varieties of distortion. You can balance each filter's output with the Filter Mix knob.

If the source section's three multimode filters aren't enough, you can add either or both of the two master filters, which offer no less than 50 filter variants, including formant, comb, highpass and numerous lowpass versions with different slope and pole configurations.

The Morph section mixes the four sources in various ways, but don't confuse it with a simple crossfading vector; it can also crossfade modulation parameters, such as envelope generator, pulse width, pan and other settings, often producing wild sonic variations (see Web Clip 1).


Alchemy
Alchemy v1.00
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2 loop s
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FIG. 2: Additive sources provide as many as 600 partials. Create partials by clicking in a bar-graph-type editor.

RTFM

Alchemy's modulation section runs from left to right across the middle section of the instrument, and it's a mix of convenience and complexity. Randomly poking around yielded fascinating sounds, but my first attempt at deliberate modulation programming was

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less intuitive. I clicked, and I tried every click modifier, but could not call up anything but the matrix of modulation parameters for the Master Amp.

A quick read of the PDF manual revealed that clicking on any parameter (for example, an element's pulse width) changes the modulation section to expose its matrix, available modulation sources and related parameters. If I chose an LFO as a modulator, the LFO parameters would highlight in blue, as would the selected destination. It's a sensible way to reduce interface clutter and multiple pages, but because related components and parameters are not adjacent visually, grasping signal flow requires a conceptual attitude adjustment.

Squaresville

The Performance section is a playground for real-time control, sporting programmable arpeggiators, step sequencers (which can also serve as modulation sources) and a raft of effects ported over from Camel Audio's CamelPhat and CamelSpace plug-ins. Perhaps the most dramatic real-time tool in this section is the Remix Pad, a series of eight squares that work with all the other performance controls to create radical changes in the patch—arpeggiator behavior; morph settings; and envelope, filter and resonance parameters, to name just a few.

My quibbles about the Import menu and unfamiliar programming interface notwithstanding, Alchemy more than compensates with its stunning sounds and enormous flexibility. Importing and warping audio provide virtually unlimited sonic resources. I had spectacular results importing samples from Native Instruments' Absynth and Cakewalk's Rapture (see **Web Clip 2**). Alchemy's reasonable price delivers a lot for the money, and once you get over a few conceptual hurdles, you'll appreciate the design. Don't take my word for it; go to the Camel Audio site, check out the demos and tutorial videos, and then download the fully functional three-week demo and see if you don't agree.

By the time you read this, Marty Cutler's Website should include a page of gig announcements, more music and a working blog. Check it out at web.mac.com/martycutler.

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World Radio History

ELECTRO-HARMONIX

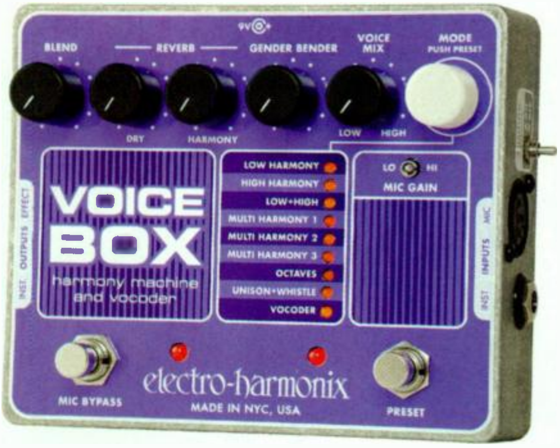
Voice Box

By David Battino

As soon as I saw Jack Conte's astonishing online demo (see **Web Clip 1**), I knew I had to check out the Voice Box. It looks like a guitar pedal, but it contains one of the best vocoders I've heard, along with a vocal harmony generator, a wonderful whistle effect and more surprises. And as Conte ably demonstrates, you can drive it with everything from guitar to keyboards. I've been controlling mine with iPhone synths for extra portability.

ONLINE BONUS MATERIAL

The Voice Box takes two inputs—microphone and instrument—and combines them in various ways. In Harmony modes (there are six variations), the box detects the note or chord your instrument is playing and uses that data to generate harmonies for the mic signal. In Vocoder mode, the instrument input determines pitch and basic timbre, and the mic input makes the instrument "speak." Octave and Whistle modes ignore the instrument input, processing just the mic input. You can store one set of knob settings per mode and recall them with a tap of your foot.



The rugged Voice Box is a vocoder and harmony processor with a strong personality, simple yet flexible controls and a friendly price.

OVER CONSTRUCTION

The Voice Box feels *solid*. It's built into a beefy aluminum case, with knobs, jacks and heavy-duty switches bolted on. The only weak points I spotted were the generic wallwart adapter (alas, battery power is not supported) and an unprotected switch on the right side that toggles phantom power for the XLR mic input.

The right side also holds the ¼-inch, unbalanced mono input for guitar or line-level signals. On the left are the effects output (a balanced XLR) and a ¼-inch pass-through jack for the instrument input. That lets you daisy-chain the Voice Box to a guitar amp or additional effects boxes. Electro-Harmonix says the XLR output interfaces better with mixers and breakout boxes. I think a combo XLR/¼-inch jack would have been more convenient, even if it cost more, because I often wanted to route the Voice Box into another effect.

The white knob on the top-right scrolls through nine effects modes: Low Harmony, High Harmony, Low+High Harmony, Multi-Harmony 1/2/3, Octaves, Unison+Whistle and Vocoder. Holding the knob down stores the positions of the other five knobs for that mode. Pressing down on the white knob loads the stored preset for the current effect. You can also cycle through the nine presets by stomping on the Preset footswitch on the bottom-right. It's an elegant system. The other footswitch, marked Mic Bypass, is actually an effects bypass, which initially confused me, but the concise manual explains everything clearly.

The remaining knobs control the mix of mic and effect; the amounts of reverb on the mic and effect signals; a formant shift (aka, Gender Bender); and the balance of harmony voices. In Unison+Whistle mode, this last knob pans between a formant-doubling effect and a whistle tone derived from the mic input. In Vocoder mode, the knob brightens the instrument signal to increase intelligibility.

VOICE SQUAD

The 256-band vocoder sounded both rich and intelligible, even when I drove it from a $15 dynamic mic. Unlike other vocoders, it has no confusing filter parameters; you just plug in and start sounding great. That said, you can alter the sound dramatically by changing the timbre you send to the instrument input. Buzzy sawtooth chords work well for classic vocoder effects, but I got some fascinating sounds by feeding the Voice Box some burbling textures from a PCM synth (see **Web Clip 2**).

I was less successful with the harmony effects, which generate a mixture of (mostly) thirds, fifths and octaves based on the mode and the input signal. With no pitch correction, these effects really depend on rock-solid singing to produce a pleasing output. The voices also sounded, well, *furry*, like a thickening effect rather than an additional singer (see **Web Clip 3**). I also had a lot of fun with the Whistle effect, which synthesizes a whistling tone two octaves up from the mic signal (see **Web Clip 4**).

THICK IN A BOX

At $215 street, the Voice Box would be an excellent value just for the vocoder, which sounds excellent and is easy to use. It's remarkably intelligible while still sounding lush. The harmony effects are harder to control and don't sound as natural as the competition, but can add richness if used subtly. Similarly, the murky built-in mono reverb didn't do much for me; I'd have preferred a delay with tap-tempo. Having just one preset per effect may seem limiting, but you can change the vocoder sound dramatically by selecting different input timbres. If you're looking to add expression or fullness to your sound, the Voice Box would like to speak with you.

Overall rating (1 through 5): 4
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World Radio History

TOONTRACK

The New York Studio Legacy Series Vol. 2

By Michael Cooper

The first expansion pack dedicated to use with Toontrack's Superior Drummer 2 (S2) software has arrived! (See the S2 review in the May 2009 issue of *EM*, available online at emusician.com.) The New York Studio Legacy Series Vol. 2 (Mac/Win, $149) provides full-length samples of multi-miked drums recorded at Allaire Studios and the now-defunct Hit Factory N.Y. The two sample libraries (one for each studio) were crafted by engineer and producer Pat Thrall, producer Neil Dorfsman and drummer Nir Z, all of whom have worked with numerous prominent pop, rock and R&B artists. Once you register the libraries at Toontrack's Website, you can also download a new 342KB MIDI library comprising grooves performed and recorded by Nir Z for EZplayer pro (the MIDI playback and arranging program included with S2).

ONLINE BONUS MATERIAL

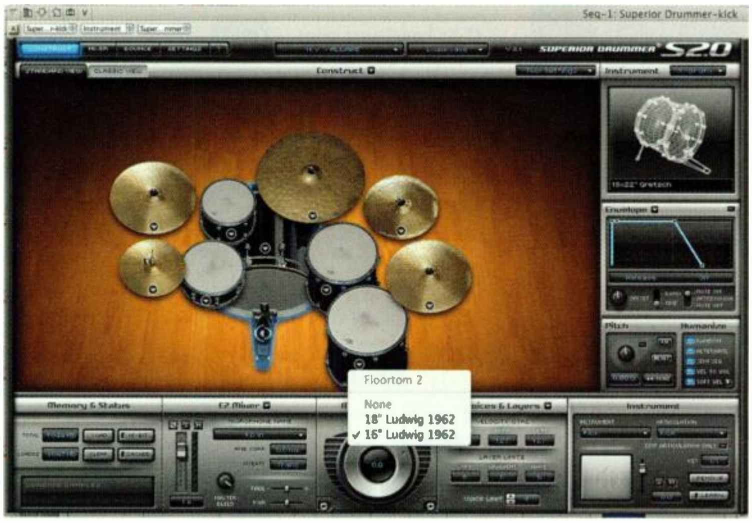

FIG. 1 In The New York Studio Legacy Series Vol. 2 drum kits, you can load alternative instruments (kit pieces) in many of the kit positions.

As with the Avatar Studios content supplied with S2, you can choose to install either full or basic (stripped-down) versions of the Vol. 2 libraries. Full installations of the Allaire and Hit Factory libraries weigh in at 7.4 and 4.1 gigabytes, respectively, whereas their basic installations—which include fewer microphones and only limited bleeds—are 2.3 and 1.3 GB in size, respectively. You can store the content on any internal or external hard drive.

HERE, KITTY KITTY

Both libraries' default drum kits are played with sticks, and include kick, snare, rack tom, hi-hat and two floor toms. The Allaire kit also has one ride and three crash cymbals. The Hit Factory kit loads with more cymbals—two rides and six crashes—and stick clicks (used, for example, for count-offs). Of course, you can always use S2's X-drums functionality to combine kit pieces from each library (or any other Toontrack library) to build a bigger kit.

Keep in mind that the foregoing discusses only how many kit positions load in the default kit from each library; it doesn't detail all the alternative traps or cymbals you can choose for each of those positions. For example, in the Allaire library alone, you can swap the Gretsch 18×22-inch kick drum for a Ludwig 16×22-inch or any one of four other kick drums (see **Fig. 1**). The two libraries combined offer a choice of eight kicks, 13 snares, six rack toms, seven floor toms, three hats, 16 crash cymbals and three rides.

Integral to each library are the microphones used and their positions on each kit. (Each mic channel appears automatically in S2.) You'll be happy to note that the producers used top and bottom mics for snare drums, inside and outside mics for kicks, separate mics for each tom and hat, and a supersized helping of overhead and ambient mics. In all, the Allaire kit offers a whopping 19 mic channels, and the Hit Factory kit includes 16.

The libraries also provide a selection of combined presets (presets containing both drum kit and mixer setups). The Allaire library offers 24 combined presets, whereas Hit Factory includes only 13. Many of the factory-combined presets drastically change the sound of each kit in useful and novel ways as they incorporate drum and cymbal substitutions, creative mixer routings and effects processing (using the excellent Sonalksis processors included with S2).

SAMPLES AND GROOVES

I generally liked the Allaire library best. Its selection of kick and snare drums covered a wider range of tones than what is provided in the Hit Factory library. The latter library offers only two different kicks, but you can always substitute another X-drum kick from the Allaire or any other Toontrack library if you need something different. Both libraries sounded great overall and captured the flattering room tones of the respective studios they were recorded in (**see Web Clips 1 and 2**). The toms and cymbals in both libraries had long, natural decays, and the hat work sounded realistic.

If you're not a drummer, you'll especially appreciate the new Nir Z MIDI files included with your purchase of the Vol. 2 expansion pack. Nir Z's MIDI grooves are among the very best available. I counted 623 MIDI files in total, all mapped to stick hits. There are 439 files in 12 songs in straight 4/4 time, 118 files in three songs in swing 4/4, 39 files in one song in swing 3/4, and 27 files in one song in straight 7/8.

Bottom line: The New York Studio Legacy Series Vol. 2 offers quality drum sounds, outstanding MIDI grooves and enough flexibility to make a yoga instructor blush. If you own S2, buying this expansion pack is a no-brainer.

Overall rating (1 through 5): 4
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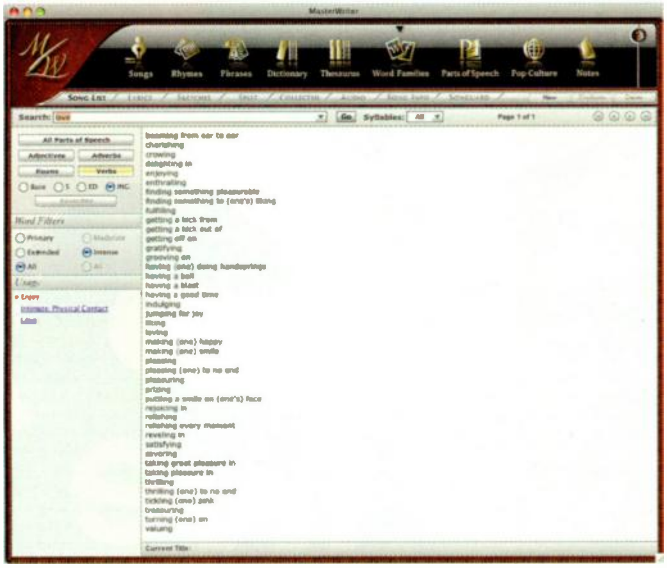
MASTERWRITER

MasterWriter 2 (Mac/Win)

By Michael Cooper

When MasterWriter songwriting software (offered by the company with the same name) was released five years ago, I threw away my traditional rhyming dictionaries and never looked back. The stand-alone program (reviewed in April 2004, online at emusician.com) included separate proprietary dictionaries containing tens of thousands of rhyming words, rhyming and non-rhyming phrases, alliterations and pop-culture references. Also included were a traditional dictionary, thesaurus, a rudimentary hard disk recorder (for capturing melodies and basic song arrangements), a database for basic song-publishing administration and the company's Songuard song-registration service (a proxy for interim copyright registration). As a testament to the program's strength, I used it to write the lyrics to a song that was recently cut by a prominent indie record label based in Nashville.

MasterWriter 2 features greatly expanded content and some unexpected and terrific new features. I reviewed MasterWriter 2 on an 8-core 2.8GHz Mac Pro running Mac OS 10.5.4.



beaming from ear to ear
cherishing
crowing
delighting in
enjoying
enthralling
finding something pleasurable
finding something to (one's) liking
fulfilling
getting a kick from
getting a kick out of
getting off on
gratifying
grooving on
having (one) doing handsprings
having a ball
having a blast
having a good time
indulging
jumping for joy
liking
loving
making (one) happy
making (one) smile
pleasing
pleasing (one) to no end
pleasuring
prizing
putting a smile on (one's) face
rejoicing in
relishing
relishing every moment
reveling in
satisfying
savoring
taking great pleasure in
taking pleasure in
thrilling
thrilling (one) to no end
tickling (one) pink
treasuring
turning (one) on
valuing

The Word Families dictionary in MasterWriter 2 shows grouped and filtered words and phrases related to your search item.

MASTER MAKEOVER

MasterWriter's user interface has been thoughtfully redesigned and is now resizable. The Lyrics and Sketches windows now conveniently show all your Favorites collected from searching MasterWriter's proprietary dictionaries. The Song Flags, Publishing and Recordings pages have also been consolidated into one multi-pane window under the Song Info tab. The Audio window now sports a full-sized window for viewing complete lyrics. AIFF, WAV, MP3, MOV (QuickTime) and AU (Unix) file formats are now supported, and you can import and export as many songs at a time as you wish.

The new Word Families dictionary is a great tool for both songwriting and creative prose. Type a word in its Search box, and then choose whether you want only adjectives, adverbs, nouns or verbs in your search results. In addition to synonyms, lists of unique and highly creative words and phrases not found in a thesaurus are provided. The search results can be filtered further to show only those containing a specific number of syllables or a word ending in "s", "ed" or "ing." For example, I performed a search on the word "love" and filtered results to show only verbs ending in "ing." This yielded colorful phrases such as "getting a kick from," "having a blast" and "beaming from ear to ear." Word Families wasn't yet fully developed when I wrote this review; be sure to check the company's Website for a planned free update.

The new Parts of Speech dictionary is mostly useful in alliterative song forms such as rap. The dictionary is an alphabetized collection of words filtered according to their moderately or intensely positive or negative connotations. You can filter your results further by specifying the number of syllables or the word class (adjectives, adverbs, nouns or verbs) you want to see. For example, choosing positive, intense adjectives starting with the letter "f" returned words like "flat-out," "favorite," "foxy" and "frisky." Filtering results again to show only nouns produced the word "flame," among others. Imagine how long it would take you to come up with a rap lyric like, "You're my flat-out favorite, foxy, frisky flame, girl." Using MasterWriter, I penned it in under a minute.

I was thrilled to note MasterWriter's Sound-Alikes dictionary has been greatly expanded in Version 2. Tired of predictable, sing-song-y rhymes? Sound-Alikes suggests phonetically similar "imperfect" rhymes that'll keep the listener guessing until the moment the singer delivers the lyric. MasterWriter 2 also includes a complete, searchable version of the Bible—both Old and New Testaments. You can also directly access the Wikipedia Webpage for any item selected in MasterWriter's Pop Culture dictionary.

A data-migration tool (for copying songs from MasterWriter 1.x to V. 2) should be available by the time you read this. And the company plans to add hundreds of new phrases and pop-culture entries to its respective dictionaries. All these updates will be free to registered owners of MasterWriter 2.

I hope future versions of MasterWriter will allow users to store their own Sound-Alikes. It would also be great if the included MIDI loops (accessible in MasterWriter's Audio window) could be exported to a DAW or a MIDI file arranger such as Toontrack EZplayer.

GUARD SERVICE

As was the case with earlier versions of MasterWriter, V. 2 comes with a free one-year subscription to the company's excellent Songuard service, which offers a money-saving alternative to costly copyright registration of unpublished songs. After the first year, the subscription cost is $30 per year (still a screaming deal).

MasterWriter 2 costs $249. Members of BMI, ASCAP and SESAC receive a special discount, and V. 1 users can upgrade to V. 2 for $119. It's money well spent. Whether you're an amateur or a pro, MasterWriter 2 will greatly improve your songwriting. I wouldn't want to write a song without it.

Overall rating (1 through 5): 5
MasterWriter
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EDITOR'S PICK

JOERG ALFTER

Honolulu, Hawaii

Joerg Alfter is a musician and composer whose songs were placed on several Gold and Platinum records, along with releases in Germany, Spain, Scandinavia, the UK, Canada and Japan. As a keyboardist, arranger and singer, Alfter's work can be heard on many international productions throughout the past 10 years.

Song releases include titles like "Here's to You" (Bernard Lachance), "Endless Way" (Smokie), "Navidad Sin Ti" (Toni Santos) and "Tu Volveras" (Naim Thomas). As a producer, he's worked on such albums as *Shades of Duke* (jazz icons Joe Wulf and Bob Barnard) and *Groovin' Bone Guitar* (guitarist/writer Christoph Lindner).

His unmistakable love for orchestral arrangements and film scores led him to television work and industrial scores. "Whenever there is a chance for some orchestration, I am more than happy to do that", Alfter says. Looking forward to more scoring for film projects, Alfter is still writing and producing for different labels and artists.

After many successful studio years in the 1980s and '90s, Alfter started producing and composing for and with several national and international artists, as well as with singer/songwriter Joshua for their *Urgent Music Project*. He then signed a publishing contract with Global Chrysalis Music in 2002. One year later, the first song was placed on a five-time Platinum record for the Spanish version of *American Idol* called *Operacion Triunfo*. "Tu Volveras," performed by *Operacion Triunfo* contestant Naim Thomas, was also written and arranged by writer-duo Joerg Alfter/Joshua.

Since 2007, he has been living on the beautiful islands of Hawaii, working on several projects along with names like Michael Ruff, Jon Basebase, Sunway, Lance Jyo, Bruce Gaitsch and many others. A solo album is planned for later this year.

MICHAEL DOBBINS

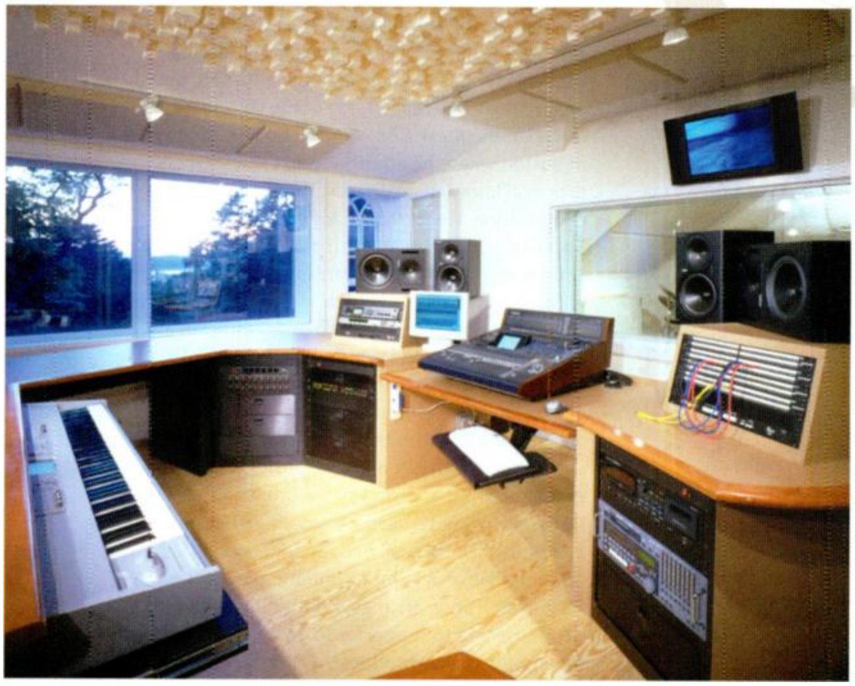
Van Nuys, Calif.

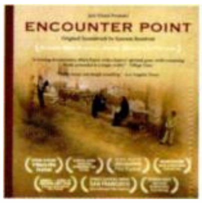
Michael Dobbins began music training on violin at the age of 4, switching to horn at age 12, and is now living out his dream as a film composer and music editor in Los Angeles. With a quickly growing resume, he has worked as technical score assistant and score editor on several projects for composer John Frizzell, and has also worked in TV as an assistant music editor on a major reality TV show. Dobbins has composed music for nearly 20 projects and placed music in several feature films through music libraries. He is a member of the Society of Composers and Lyricists and ASCAP.

Dobbins does most of his work in his home studio, where he sequences on Apple Logic Pro 8 and edits in Digidesign Pro Tools. To create his scores, he uses the Vienna Symphonic Library Cube; Sonic Implants Orchestral library; Vienna Ensemble, EW/QL RA, Choirs and Colossus; and Native Instruments Reaktor, FM8 and Komplete 5. He supplements synth scoring by recording himself live on horn, trumpet, guitar, mandolin, harmonica and other acoustic sources. Dobbins records with a RØDE NT1-A mic and a Crown SASS-P MKII stereo room mic, and a PreSonus FireStudio 26 interface.

Before composing, his musical upbringing allowed him to thrive on both horn and guitar. During his youth, Dobbins became passionate about film scores because the horn is often a prominent instrument in films. Dobbins received a scholarship to Baylor University, where he earned his degree in Music Performance in 2000. During his junior and senior years, he auditioned for and won positions with both the Waco and Richardson Symphonies in Texas. Dobbins has performed in many concerts, including performances with Bruce Hornsby and the late Ray Charles.

Upon graduation, Dobbins moved to Japan for two years where he was a horn player for the Nishi Tokyo (West Tokyo) Philharmonic Orchestra. Additionally, he studied Koto, a 13-string Japanese harp.





SCOTT FREIMAN

Irvington, N.Y.

Scott Freiman may be the only person to have sold out Carnegie Hall and been a finalist for Ernst and Young's Entrepreneur of the Year. A member of New York's prestigious Manhattan Producers Alliance, Freiman is a composer, sound editor and producer whose music spans a variety of musical styles—from orchestral to electronic. His original music and sound design have been featured in award-winning films.

Freiman's original film music has been performed at Lincoln Center (live with picture) and at a sold-out Carnegie Hall concert, "Composed By Scott Freiman." He composed the original score for the feature film *Ivory*, starring Martin Landau, as well as original scores for the films *Undone* and *Exit* (Best Director Platinum Award at the 38th Annual WorldFest, Houston International Film Festival). Freiman's other film scores include the award-winning *Bodies* (Ojai Film Festival, Best Narrative Short) and *Foreign Policy*.

In addition to composing the scores for *Ivory*, *Undone* and *Exit*, he also provided sound editing, design and mixing for the films. Other credits include sound editor and re-recording mixer for *Encounter Point* (Tribeca Film Festival, San Francisco International Film Festival—Audience Award, Best Documentary), and a documentary from Ronit Avni and Julia Bacha, the writer of *Control Room*. He was also sound editor and re-recording mixer for *Puppy Love*, the 10-episode Web series from *Sex and the City* producer Amy B. Harris.

Freiman is the owner of Second Act Studio, a state-of-the-art music and video studio for composition, recording and production designed by studio architect John Storyk. Second Act Studio has played host to a wide range of musicians—from children to Grammy winners, such as bassist John Patitucci and the Tokyo String Quartet.

ROB GIRONDA

Encinitas, Calif.

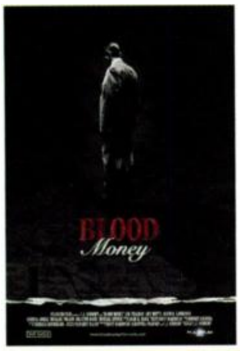
Rob Gironda has a deep passion for music, starting his musical training at the young age of 8 years old, then becoming a multi-instrumentalist and performing in bands as a teenager. His love of musical composition and arranging turned him toward the credentialed side of music, and he attended the prestigious Berklee College of Music in Boston where he absorbed and expanded his practical knowledge of musical arranging and composition. He furthered his education with a Bachelor's degree in Music from William Paterson University in Wayne, N.J., earning a teaching degree with an emphasis on classical.

Spending years as a performance musician and as a composer, Gironda started on the path of work for hire for compositions and soundtracks of various eclectic independent projects and musical genres.

Since 2000, Gironda has become more involved with song placement and the music-library world due to his insatiable and successful ability to musically adapt to nearly any style. Whether it's customizing a musical bed for a 30-second TV commercial, providing a 4-minute piece for an in-house hotel spot, arranging multiple pieces of his various works to support a 30-minute documentary or serving as a co-producer/writer on a singer/songwriter CD, Gironda's true talent is in his diversification and understanding of providing the appropriate musical foundation for any project. Several of his pieces have been placed on major networks including MTV and ABC.

Gironda continues to express his passion with his ongoing involvement in live musical projects, as well as his studio endeavors. Combining a true musical talent with an educated background—along with an ability and desire to adapt to the needs of the project and client—make Gironda's job and career as a composer/arranger multi-faceted and highly satisfying. More importantly, client after client are equally as satisfied with his ability to blend all of his attributes to help any project he is involved with become a musical success. Such clients include Marriott Hotels, YNR Marketing, ABC, MTV and many indie films (most recently *Blood Money*).

No Really I'm Fine
CARRIE WEILAND
Love



FOREVER SPORT
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JOHN KROGH, TONEWHEEL SOUND + MUSIC

Duarte, Calif.

Award-winning composer, engineer, producer and multi-instrumentalist John Krogh (ASCAP) has written music for a wide range of advertising, TV, film and new-media clients. Specializing in creating rich, compelling under-score and evocative textural palettes of sound, Krogh's passion lies in combining his creative and technical talents in support of "good work." It doesn't matter the format—whether it's a low-budget short, a corporate branding video or a national advertising campaign, Krogh's aim isn't just to get the job done, but to deliver excellence.

Tonewheel is Krogh's music and sound design studio, where he has provided music, post mixing and sound design services for a wide range of high-profile clients, including Fox Sports, HP, Nike, Ubisoft, Sprite.com, Frontline World News, the National Parks Service and EA Games, to list a few.

In 2007, Krogh was awarded two Telly Awards: one for music he composed for a national broadcast 60-second spot for American Cancer Society's Relay for Life, and another for his score to *The Rainforest Action Network*, a documentary written and produced by Sundance Award–winning director Mark Decena.

Other accolades include *SHOOT* magazine ranking a series of Verizon "Dead Zone" commercials among the Top 10 spots of the Summer 2008—of which Tonewheel and Krogh composed the music for the spots, which were inspired by such cult horror flicks as *The Shining* and *Amityville Horror*.

Krogh's music production background is as deep as it is diverse. From a stint as the keyboard player and co-songwriter for alt-country darlings Big Blue Hearts (Geffen/Interscope), to remixing artists such as Supreme Beings of Leisure (Palm Records) and The Fixx (MCA), and touring the globe with legendary rock and pop icons such as Whitney Houston, The Eagles, Don Henley, Roger Waters of Pink Floyd and Jennifer Lopez, Krogh has covered more musical territory than most.

Search for these composers and other sound-for-picture artists on Reel-Exchange.com.

ARIAN LEVIN

Tallinn, Estonia

Arian Levin is a music composer and sound designer based in the Northern European country of Estonia with 10 years of experience. Levin's work can be found on various commercials, television shows, shorts, feature films and documentaries.

In 2007, Levin founded his own company, Kinky Kong Productions, which mainly produces sound and music for TV and radio commercials. Projects Levin has composed and produced include the main identity music for the Estonian Music Awards, image music for the largest brewery in the Baltic region, A Le Coq, music compositions for the international phone operator Tele2 and TV channel Kanal 4.

Levin's work can also be heard on television commercials for the Animated Dreams International Film Festival, where he created the music and sound design amd won the prestigious Estonian "Golden Egg" advertising award.

One of Levin's passions is writing music for films, and has done scores for many short films including *Old Men's Paradise* (directed by Ove Musting), which won a Best Short Film Award in 2005. He has also done sound design for many feature films and documentaries, including work as location sound mixer and boom operator for film and TV projects.

Levin's musical talents include violin, bass guitar and keyboards, as well as some guitar, and writes music for hip-hop/reggae band Def Räädu, which has been nominated for and received many awards during the past decade.

ANTIQUES ROADSHOW

TOM MARTIN & TOM PHILLIPS, OBT MUSIC

Hopedale, Mass.

OBT Music is a film music library comprising works written for major network documentary films, feature films, planetariums, advertisements and museums, to name a few. It is music that was scored to real films by veteran award-winning composers Tom Martin and Tom Phillips, projecting a depth in composition and a sensibility to visuals that is unlike other music production libraries.

Martin and Phillips have been scoring films for more than 30 years, and credits include *The Antiques Roadshow* theme, multiple episodes of *American Experience, NOVA, Nature, Discover* magazine, Discovery specials including *Engineering the Impossible* and *Beyond T-Rex*, and dozens of films for other national broadcast and cable networks.

Recent OBT Music credits include several NOVA episodes, *The Four Winged Dinosaur* and *The Great Energy Gamble*, National Geographic's *Five Years on Mars*, feature films *One Fast Move or I'm Gone* and *Mega Mall*, and several films for PBS.

OBT Music recording facilities includes two rooms—one room equipped for acoustic instrument recording using Cakewalk SONAR 8 and MOTU Digital Performer; Neumann, AKG and Coles microphones; and Grace microphone preamps. It is geared toward more acoustic instrumental scoring with VSL, Sonivox and East West sample libraries. The second room uses Digital Performer with an extensive array of hardware and software synths, and samplers including Gigastudio, Spectrasonics Omnisphere and Stylus RMX, MOTU Mach Five and Ethno.

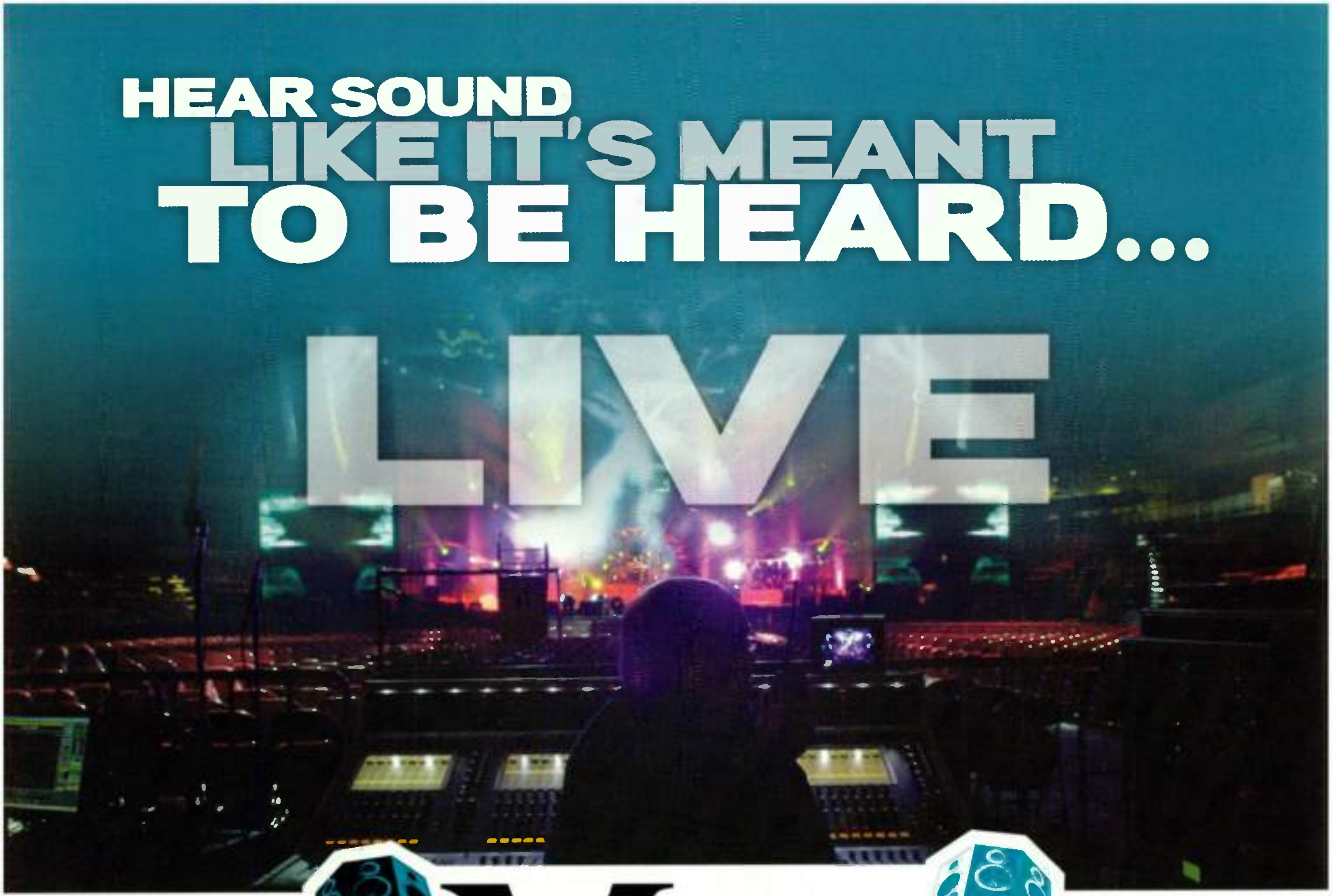
Martin and Phillips continue to score films for network broadcast television and are adding cues to the library in an ongoing basis. Current projects include "Freedom Riders" for *American Experience, Terraforming on Mars* for National Geographic and *Skatopia*, an independent feature film.

BRUCE SALES, 2BRUCE STUDIO

Asheville, N.C.

An accomplished pianist and composer, Bruce Sales graduated from the prestigious Berklee College of Music in Boston. He then moved to New York City, where he worked for 17 years at top audio post-production houses such as HEA Productions and David Horowitz Music Associates (DHMA). But he was lured back to Asheville, N.C., his hometown, which is enjoying incredible growth that is reflected in the burgeoning production scene.

Sales has contributed his talents to significant local film productions that are putting Asheville on the map. His recent credits include: *Anywhere USA* directed by Chusy Haney-Jardine of Found Films Inc. (an official selection at the 2008 Sundance Film Festival); *Climate Alive!*, directed by Kurt Mann of American Green with the Media Arts Project and HUB Alliance; numerous award-winning TV commercials for The Grove Park Inn, a world-class spa and hotel; *Fully Awake: Black Mountain College*, a documentary about the experimental arts college that fostered such luminaries as Buckminster Fuller, Robert Rauschenberg, Willem de Kooning, Franz Kline and others; and a TV commercial for the Biltmore Estate, America's largest home and a popular winery.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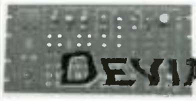

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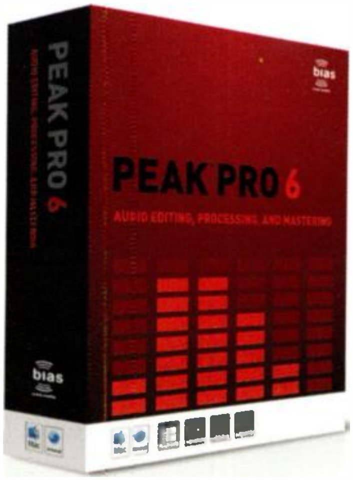
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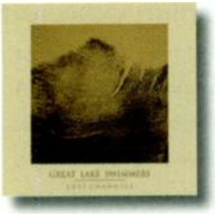

Home base: Toronto, Ontario, Canada
Primary software: Digidesign Pro Tools
Field mics: Peluso P12, Apex 460 (modified), Neumann KM 184
Website: www.greatlakeswimmers.com

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Sweet Reflections

Great Lake Swimmers venture out of the studio in search of great acoustics.

Recording musicians often use convolution reverb plug-ins to infuse the ambience of classic halls, churches and other spaces into their recordings. Canadian folk-rockers Great Lake Swimmers took a different approach, choosing to actually record many of the tracks on their fourth album, *Lost Channels* (Nettwerk, 2009), in some unusual-sounding venues and spaces to capture their natural acoustics.

By Kristi Kates

The band worked with local Ontario historian Ian Coristine, who helped them locate a number of acoustically unique locations in the Thousand Islands region. The result was an album of ghostly atmospheres, inspired vocals and amazing natural reverb. "It truly is a thing of beauty; there's a certain magic to that region," GLS' Tony Dekker says. Drums were tracked beforehand at Andy Magoffin's House of Miracles studio in London, Ontario, and bass at Halla's Music Studio in Toronto. These tracks provided a solid foundation for the band's field-recorded overdubs.

Portable gear was then trekked by car—and boat—to various Thousand Islands historical sites, where the band overdubbed vocals, acoustic and electric guitars, and banjo into a laptop-based Digidesign Pro Tools setup.

"The portable rig was basically a Digi 002 rack with a Mac laptop, with vintage mic preamps from the 1960s," Dekker says. "We used an array of mics: Peluso P12s for the vocals [with Digidesign and Chandler preamps], modified Apex 460 tube condensers set back for an immediate sound and two Neumann KM 184s further back in the room to capture ambient sound. It was really about collecting as many different vantage points as possible and then figuring it out in the mix."

> "St. Brendan's Church was my favorite place to record vocals."

After the remote recording, the Pro Tools work continued back at Magoffin's studio, but it was the locations themselves that proved to be the highlight. "We recorded parts in a series of different locations and tied them together," Dekker explains. "The Brockville Arts Center is one of the oldest film theaters in Canada; with its sloped seating, the sound is huge. St. Brendan's Church was my favorite place to record vocals—the acoustics were warm and pleasant because of the wooden floors and rafter beams. It seems to me that some rooms are like old guitars: After 100 years of music being played in them, they become seasoned, more conducive to certain tones."

Dark Island's Singer Castle was perhaps the most unusual place where GLS recorded. "Recording 'Concrete Heart' [see **Web Clip 1**] there was particularly appropriate because we were in the cavernous concrete-and-brick Great Hall," Dekker says. "We used three of the domes in the large, arched ceilings for microphone placements. The performances were done in the center, toward the back; the two arches on either side were outfitted with a left and right stereo [mic] pair. We also set a stereo pair just in front of the performer, and close mics up front. What impressed me were the thick stone walls—the reverb effect there was almost like an echo or slap-back.

"While we were recording there, the bells in the castle's bell tower were chiming on the hour," he continues, "so we got a unique opportunity to record the bells and all of the associated gears and pulley systems. I liked the feeling that we were documenting the sounds of a place, as well as the songs."

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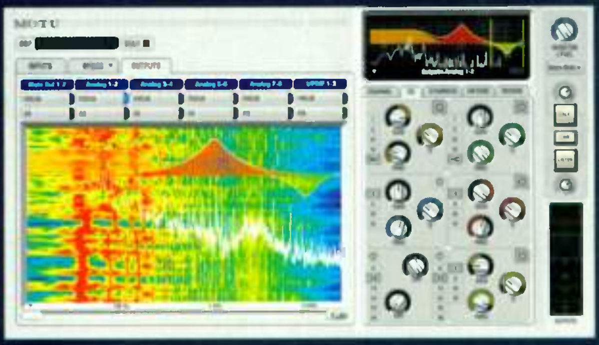

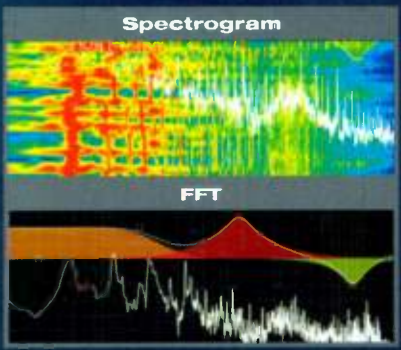
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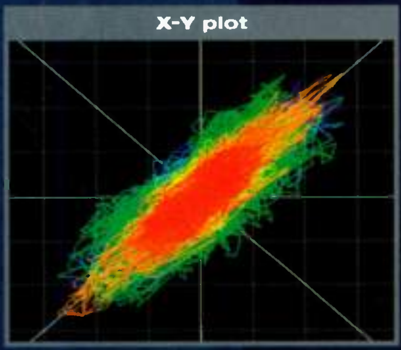
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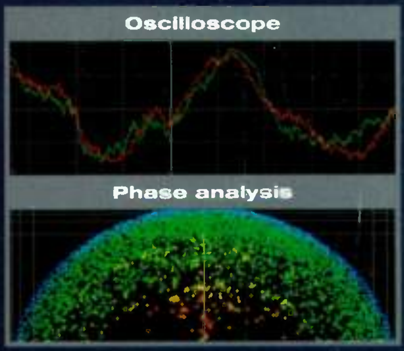
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