

SEPTEMBER 2010

# em

ELECTRONIC MUSICIAN

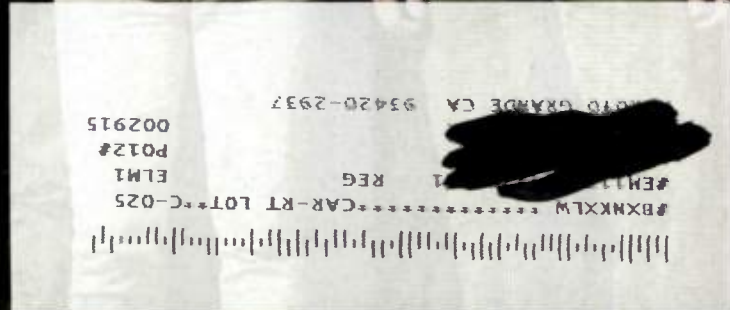
**Little Compressors That Could: We Test Six 500 Series Units**

**Online Resources for Licensing Your Music**

**How to Improve Your Drum Programming**

# MAROON 5

Recording *Hands All Over* with Mutt Lange



**TOMMY LEE: THE METHOD TO HIS MADNESS**

A PENTON MEDIA PUBLICATION

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World Radio History

FEATURES

Photo by Davis Factor



COVER STORY

## 30 OUT OF THE COMFORT ZONE

When preparing to record their new album, *Hands All Over*, Maroon 5 spent six months of songwriting and demo tracking in a cramped studio they constructed in lead singer Adam Levine's garage. Then they traveled to Switzerland to record the album with their producer, the reclusive Robert "Mutt" Lange, at his well-appointed studio. *EM* talks to Levine and keyboardist Jesse Carmichael about both phases of the project.



26

### 26 DYNAMICS GONE MODULAR

Big, high-end compression sounds from compact units? You betcha. *EM* looks at six new compressors in the popular 500 Series modular hardware format.

36

### 36 LICENSE TO EARN

You don't have to be a superstar to get your music on the big—or little—screen. Thousands of songwriters now license their music worldwide. We offer a comprehensive guide to online sites that help you get your compositions into TV, film, and more.



REVIEWS



46

**46 LINE 6 POD FARM 2**  
(MAC/WIN) amp-and-effects modeling software

**50 SLATE DIGITAL TRIGGER PLATINUM**  
(MAC/WIN) drum-replacer plug-in

**54 MOTU ETHNO INSTRUMENT 2**  
(MAC/WIN) software instrument



59

58 QUICK PICKS

**TOONTRACK EZMIX**  
(MAC/WIN) mixing-effects plug-in

**E-MU LONGBOARD 61**  
performance keyboard

**FABFILTER PRO-Q**  
(MAC/WIN) equalizer plug-in

**BEYERDYNAMIC MC 950**  
microphone



61



## COLUMNS

16



### 16 GEAR GEEK: STREETLY ELECTRONICS MELLOTRON

A staple of British rock in the '60s and '70s lives on today.

### 18 PRO/FILE: COMPOSER'S INTUITION

Composer Mike Olson re-imagines abstract performances.

### 20 COMPOSER SPOTLIGHT: AS SWEET AS IT SOUNDS

Scoring to picture and plenty more at Chicago's Soundcake.

### 22 D.I.Y. MUSICIAN: GET THE MOST OUT OF MERCH

How to use today's tools for music merchandising.

### 24 INSIDE TALK: METHOD TO HIS MADNESS

Tommy Lee on collaborating with the public via the Web.

### 40 SOUND DESIGN WORKSHOP: DRAWING THE LINE

Add tempo-synched motion with breakpoint envelopes.

### 42 PRODUCTION CENTRAL: BEAT OF A DIFFERENT DRUMMER (PART 1)

Tips and advice for improving your drum programming.

### 44 REMIX CLINIC: THE FINAL PASSES

The mixes you need at the end of a project.

### 66 IN THE MIX: TOO MUCH INFORMATION

What happened to the mystery of show business?



22

24

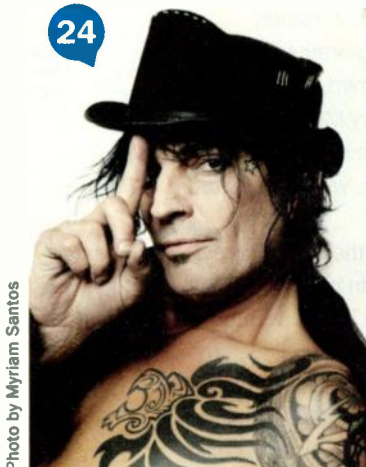


Photo by Myriam Santos

42



20



## DEPARTMENTS

8 FIRST TAKE

62 MARKETPLACE

10 FRONT PANEL

63 CLASSIFIEDS

12 WHAT'S NEW

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# FIRST TAKE



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## You Win Some, You Lose Some

This month's Maroon 5 coverage gives me an opportunity to relate a story from back when I was editing *Onstage*—which, for those who don't remember it, was a magazine for live musicians that spun off from *EM* in late 2000. In 2002, I received a CD from the publicist of a then-unknown band called Maroon 5, along with an invite to go hear them play a showcase set at a club in Manhattan called the Village Underground. The publicist was, of course, hoping I'd decide to run a story about Maroon 5.

I really liked the CD, so I checked out the live show. The band performed impressively in the small and packed club. But later, when the publicist pressed me to write a story about them, I balked. I just didn't think they were well-known enough to justify giving precious page space to. I always regretted that decision because even though the album, *Songs About Jane*, didn't really catch fire until 2004, it would have seemed awfully prescient to have featured them before they became superstars.

Naturally, this time around, it was a no-brainer to cover them on the occasion of the release of their third album, *Hands All Over*, which was produced by the legendary Mutt Lange. For the story (see p. 30), I interviewed Adam Levine (no relation) and Jesse Carmichael from the band, as well as Noah Passovoy, who engineered their numerous demo sessions for the album.

All three were very forthcoming and offered lots of info about the recording process. However, I was almost thwarted by a sudden power outage in my home office while I was interviewing Carmichael by phone. I was recording the interview into my DAW, and when the power went out, the recording disappeared (which reminded me how much I need to purchase an uninterruptible-power-supply unit). Fortune smiled on me this time, however, as, for the first time, I had a battery-operated stereo recorder running concurrently with my DAW—as a backup during the interview—so I was able to salvage that portion of my discussion with Carmichael. Score one for redundancy.

Another artist story in this issue that I want to spotlight is the interview with Tommy Lee in the "Inside Talk" column (see p. 24), where he talks about the online public collaboration that was part of the production process for his about-to-be-released *Methods of Mayhem* album, *A Public Disservice Announcement*. He posted stems on a site called [thepublicrecord.com](http://thepublicrecord.com), requesting people to download the tracks and add their own parts or do remixes. He got 10,000 submissions. From those, he chose a bunch to incorporate into the songs he and his band had already recorded.

On the subject of submitting music online, did you know that there is a growing number of websites that facilitate music licensing for independent musicians? Licensing has become an important part of many musicians' incomes these days, so you'll want to check out "License to Earn" (p. 36). In it, author Dave Tough, a Nashville-based producer, songwriter, and mixer, goes through all the major licensing sites and gives you the rundown on how they work, what they cost, and more. Enjoy the issue.



Photo by Laura Baer



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# FRONT PANEL

DOWNLOAD OF THE MONTH

## APPLIED ACOUSTIC SYSTEMS TASSMAN 4

By Len Sasso

Tassman 4 (Mac/Win, standalone and plug-in) from Applied Acoustic Systems (AAS) has long been one of my favorites and is my go-to synth for all types of physical-modeled sounds. When I saw the incredible July special price reduction from \$349 to \$99, it was too late to write it up for "Download of the Month." I mentioned that to AAS, and the company offered a coupon extending the special price to *EM* readers until the end of September. To use the coupon, go to [applied-acoustics.com/tassman/buy](http://applied-acoustics.com/tassman/buy), fill out the order form, and enter **EMFALL2010** in the Coupon Code box.

Tassman is a modular synth, which means that it is as many different synths as you can imagine and then build from its 100 or so basic modules. But if the time-consuming black art of building your own synths doesn't hold great

appeal, consider that Tassman comes with a huge collection of instruments already designed, built, and loaded with presets. Those are spread among acoustic, analog, FM, hybrid, organ, and processing categories and include step-sequenced and keyboard instruments, as well as effects processors (see **Web Clip 1**).

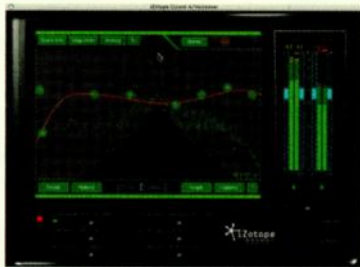
Tassman uses physical modeling in all of its modules. For example, rather than recording samples of a dulcimer or DX-7, it does the math to model the way those acoustic or synthesized sounds are created. One happy consequence is that new and totally unexpected sounds are only a few knob tweaks away; you don't even need to get under the hood (or, in

Tassman speak, delve into the Builder). Beyond that, Tassman is fun to play with. The control panels have a retro feel that draws you in, and you can assign MIDI CCs with a mouse click. In a nice touch, you can load and save presets at all levels: individual modules, module collections called *Sub-Patches*, and the whole instrument. This lets you quickly copy one part of a preset and apply it to a different preset using the same module or Sub-Patch. Check out Dennis Miller's detailed review of Tassman 4 online in the March 2005 issue of *EM*. \*



### OPTION-CLICK

Hold the Option (or Alt) key and drag across iZotope Ozone's EQ graph to audition just one frequency band.



## A DIP IN THE OZONE

iZotope Ozone's hidden option-drag feature

One of the secrets of using EQ is that cutting the problem frequencies is often more effective than boosting the good

ones. Cutting creates more sonic space, allowing parts to blend better. A quick technique to find the problem frequencies is to boost a narrow frequency band



## THIS MONTH'S SOUNDTRACK

By Mike Levine

Here are some of the more notable albums that passed across my desk this month. Except for Steve Roach, the artists are all individuals who use band-like monikers. While there's no musical significance to this, it is an interesting coincidence.



### ARP: THE SOFT WAVE (SMALLTOWN SUPERSOUND)

Original and often experimental-sounding instrumental pieces from ARP (aka Alexis Georgopoulos), all tracked to 2-inch analog tape. The arrangements deftly combine electronic and acoustic textures.



### BACK TED N-TED: THE MIRROR (MODERN ART RECORDS)

A cheerful set of synth pop with plenty of processed vocals and catchy melodies. Back Ted N-Ted is the nom de guerre of Ryan Breen, and *The Mirror* is his first album as an artist after years of producing others.

### STEVE ROACH: SIGH OF AGES (PROJEKT)

The renowned composer/musician returns with another stellar ambient-electronic effort. His arsenal for this all-synth album includes an Oberheim Xpander and Matrix 12, a Waldorf Q, a Nord Lead 2, a Roland JX-3P, two Dave Smith Evolvers, an E-mu E-Synth, and an ARP String Ensemble.



### OVAL: O (THRILL JOCKEY)

The first album in 10 years from Oval, the project of glitch-music pioneer Markus Popp. The 2-CD set, which was recorded on a "cheap, stock PC" offers 70 pieces of music, many very short. The pieces feature glitchy, staccato melodies over electronic pads and comping.



### SKY SAILING: AN AIRPLANE CARRIED ME TO BED (SKY HARBOR/ UNIVERSAL REPUBLIC)

An album of pre-Owl City music from Adam Young, for which he used the name Sky Sailing. Melodic, earnest folk-tinged-pop that—like his Owl City material—sounds great, especially considering it was self-recorded on cheap gear in his parents' basement.



with a parametric EQ as you sweep the frequency range up and down. When you hit a problem area, it will really stand out. You then reduce the level at that point.

IZotope Ozone, the powerful mastering plug-in, has a clever hidden feature that makes that search-and-destroy

mission easier. If you hold down the Option key (Alt key on Windows) while dragging across the paragraphic EQ, Ozone will temporarily set all other EQ bands to zero so you can sweep without affecting your curve. —DAVID BATTINO, [BATMOSPHERE.COM](http://BATMOSPHERE.COM)

## THIS MONTH ON EMUSICIAN.COM

### ACOUSTICS 101



### ALL NEW// MIX AND EMBOOKS

The all-new *Mix*- and *EMBooks* give you in-depth tutorial tips and techniques for any recording project. Now available: *Acoustics 101* and *Studio Design* at [mixbooks.com](http://mixbooks.com)

### EM CAST// TOMMY LEE

Lee had a lot more to say than what we could fit in this month's "Inside Talk." Check out the rest at [emusician.com](http://emusician.com).



Photo by Myriam Santos

### VIDEO// WAYNE COYNE OF THE FLAMING LIPS

An exclusive chat with the outspoken singer/guitarist/songwriter.



### ONLINE EXCLUSIVE INTERVIEW // LAURA ESCUDÉ

Music technologist, composer, violinist, and sound designer Escudé has been called "the Ableton Live authority" in the Los Angeles area. She talks here about the production of her debut album, *Poracora*.



# WHAT'S NEW

By George Petersen



ALTA MODA AUDIO

## HIPPO

**BIG SOUND, TINY MODULE**

The Hippo (\$1,175) from Alta Moda Audio ([altamodaaudio.com](http://altamodaaudio.com)) is a VCA-type comp/limiter housed in a double-width, API 500 Series-compatible module that's modeled after

well-regarded analog in-console stereo bus compressors used throughout the '80s and '90s. Features include sidechain filters for better bass control, a Warmth function for added harmonics, a wet/dry blend control, and a Dual Mono mode that allows the two channels to operate independently.

MACKIE

## ONYX BLACKBIRD, BLACKJACK

**IN THE BLACK**

Mackie's ([mackie.com](http://mackie.com)) new recording interfaces combine Onyx mic preamps with high-end Cirrus Logic AD/DA converters. The rackmount Onyx Blackbird (\$499.99) has eight preamps, a 16x16 FireWire interface, 8x8 ADAT, and word clock I/O. Two front-panel Super Channels have low-cut filters, phantom power, and hardware monitoring options for zero-latency tracking. The Blackbird Control DSP Matrix Mixer allows quick setup of independent mixes and routing any input to any output. The compact, bus-powered Onyx Blackjack (\$199.99) 2x2 USB interface has two Onyx mic preamp channels, each with built-in DIs. Separate level control for studio monitors and headphones, and zero-latency, true analog hardware monitoring take the guesswork out of computer-based production. Both units are Mac/PC compatible, work with most major DAWs, and include Traktion 3 recording software.



PROPELLERHEAD

## REASON 5, RECORD 1.5 DUO

**QUITE REASONABLE**

Slated to be shipping at presstime are new versions of Propellerhead's ([propellerheads.se](http://propellerheads.se)) Reason and Record production software for Mac/Windows. Reason 5/Record 1.5 Duo (available separately or as a combo package) adds new instruments, effects, sequencing, and more for composing, beatmaking, loop-mangling, vocal treatment, songwriting, and music creation. New features include a Blocks sequencing mode for creating short song section patterns and linking them for fast arranging; Neptune (pitch correction and voice/harmony synthesis); Kong Drum Designer/Dr. OctoRex loop player; and an expanded Factory Sound Bank. The Reason Record Duo sells for \$449 standalone; Reason 5 is \$349; and Record 1.5 is \$299. Various upgrade paths are also available.





## AUDIO-TECHNICA

### AT2021

#### SHORT AND SWEET

Designed for studio or stage use, the AT2021 (\$79) from Audio-Technica ([audio-technica.com](http://audio-technica.com)) is a condenser mic offering a wide 30Hz to 20kHz response, and the ability to handle high sound pressure levels (145dB max) in a compact 4-inch body. The price includes a stand clamp and carry pouch. The mic requires 48VDC phantom power and features a cardioid pickup pattern and a low-mass diaphragm for fast transient response on piano, drum overheads, or acoustic instruments. The AT2021 is also available as the AT2041SP Microphone Pack (bundled with the larger-diaphragm, side-address AT2020 studio condenser mic) for \$169.



## ZOOM

### R24

#### AFFORDABLE 24-TRACK—AND MORE

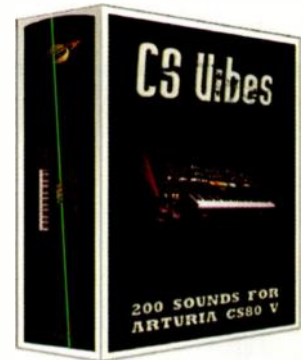
Building on the capabilities of its popular R16 multitrack, the new R24 (\$499) from Zoom ([zoomfx.com](http://zoomfx.com)) adds an onboard sampler/drum machine and eight additional recording tracks, featuring 24-track playback, 8-track simultaneous recording directly to SD card media, eight XLR mic preamps with phantom power, USB audio interface for computer recording, onboard studio and mastering effects, and a DAW control surface. Two dozen built-in voices can be triggered using eight pads to create loops or use the internal drum machine and 400 rhythm patterns to create original beats. The R24 can interface with most DAW software, and it ships with Steinberg Cubase LE 5 and loops by legendary drummer Peter Erskine.

## SOFTUBE

### TUBE-TECH PE 1C

#### VIRTUAL PULTEC

Softube ([softube.com](http://softube.com)) expands its software versions of Tube-Tech/Lydkraft gear with the PE 1C (\$249 native VST/AU/RTAS; \$449 TDM), modeled after the Danish hardware based on the classic Pultec studio equalizer. Each component of a pristine PE 1C was modeled, from the tube to the power transformer, with attention paid to recreating circuit gain-staging and component interaction for an analog sound. Its airy top end is ideal for vocals and guitars, while the two independent cut/boost filters on the low end have slightly offset frequencies for dialing in the signature Pultec scoop sound, often used for kick drums. Features added by Softube include output gain control and stereo operation.



## MUSICROW

### CS VIBES

#### EXPAND YOUR ARTURIA CS80 V

Musicrow's ([mcrow.net](http://mcrow.net)) fifth soundset for Arturia synths, CS Vibes (\$49), is a collection of 200 sounds for the CS80 V, taking full advantage of the Yamaha CS80's classic qualities with fresh up-to-date sounds, rhythmic sequences, somber pads, fat leads, thick basses, and unique arpeggiated sounds. It is available as a direct download from the site, and a demo bank of 20 presets is available.



## SONIVOX

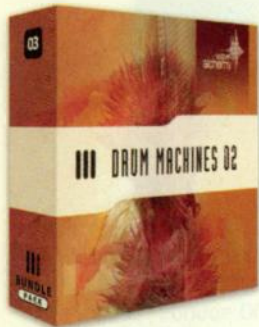
### REGGAETON INSTRUMENTO VIRTUAL

#### GET THE BEAT, MON

Reggaeton producers finally have a virtual instrument dedicated solely to their craft, with Reggaeton Instrumento Virtual (\$99) from Sonivox ([sonivoxmi.com](http://sonivoxmi.com)). The plug-in offers quick pro beat construction and effortless integration of MIDI keyboards and pad controllers, bridging the gap between MPC-style music creation and the computer-based virtual instrument environment. It ships with 7GB of premium instruments and a selection of loop-based construction kits by noted Reggaeton producer Michael Cipriano. It operates either standalone or within a host PC (VST/RTAS) or Mac (AU/VST/RTAS) DAW.

## SOUND ADVICE

By Len Sasso

WAVE ALCHEMY  
DRUM MACHINES 02

Wave Alchemy ([wavealchemy.co.uk](http://wavealchemy.co.uk)) bundles three of its micro-series packs of sampled analog drum machines in an economical (\$38) download library available from its website and

from Loopmasters ([loopmasters.com/wavealchemy](http://loopmasters.com/wavealchemy)). Drum machines include the classic Roland TR-808 and TR-909, along with the lesser-known MFB Schlagzwerk and Drumfire DF-2000. More than 1,500 samples were recorded at 24-bit resolution using a high-end analog signal path and a variety of hardware processors. Dithered 16-bit versions of all samples are included for users of hardware drum machines. In addition to the WAV format samples, the 322MB download includes nine preassembled kits formatted for Native Instruments Battery 3 and Kontakt 4, Steinberg HALion, Propellerhead NN-Xt, Apple EXS-24, and Soundfont-based samplers. But the real fun is building your own layered kits, and there's plenty of material to work with (see **Web Clip 1**).

FUTURE LOOPS  
GAI BARONE PROGRESSIVO

Italian DJ and producer Gai Barone delivers a 2GB library of cohesive 128bpm loops and one-shots in Gai Barone Progressivo (\$39.96, download) from Future Loops ([futureloops.com](http://futureloops.com)). The loops and one-shots come in WAV format; the loops are also provided as REX2 files. The loops are divided into three categories: bass (50), beats



(531), and synths (50). The beats are further split among beats (with/without kicks), fills, percussion, and processed patterns, which include synth and sound-effects overlays. The one-shots add atmospheres, pads, and sound effects to the mix and include synth, bass, and drum hits for designing your own instruments. With an ear to dance/trance/house music orientation, the sounds lean toward the hypnotic, but there's lots of useful material for other genres (see **Web Clip 2**).

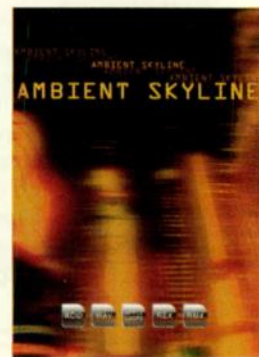
SONICCOUTURE  
NOVACHORD

In a never-ending quest to save ancient/obscure acoustic and electronic instruments from extinction, Soniccouture ([soniccouture.com](http://soniccouture.com)) has patiently sampled and remodeled the 1939 Hammond Novachord. The project begins with a 3.5GB collection of 24-bit/44.1kHz samples made from the painstakingly restored Novachord of synth designer and restorer Phil Cirocco. His website, [discretesynthesizers.com/nova/intro.htm](http://discretesynthesizers.com/nova/intro.htm), details the restoration and is worth visiting. Soniccouture Novachord (Mac/Win, \$129) comes in Kontakt 4 and Kontakt 4 Player formats and is available on DVD or download. It starts with two Kontakt instrument models: the 2-layer NovaSynth and the 1939-2039 NovaSynth. The former layers two tricked-out Novachord models and comes with 50 authentic, multisampled Novachord presets—it's the beast for quickly whipping up Novachord sounds as featured in films as varied as *Gone With the Wind*, *The Maltese Falcon*, and *House of Frankenstein*, as well as

*The Outer Limits* and *Twilight Zone* TV shows. The 1939-2039 NovaSynth lets users design sounds from the ground up. It starts with individual controls for and samples of the original Novachord elements: Tones, Resonators, Attack, Filter, and Vibrato. Clicking the 2039 button adds modern niceties such as full ADSR envelopes and multimode resonant filters, and you can set everything individually for each tone and resonator (see **Web Clip 3**). Once you've designed your sound, switch to the Effects panel to add convolution reverb, delay, phase, chorus, rotary speaker, and cabinet modeler.

BIG FISH AUDIO  
AMBIENT SKYLINE

With the release of Funk/Soul Productions Ambient Skyline (\$129, DVD), Big Fish Audio ([bigfishaudio.com](http://bigfishaudio.com)) delivers 5GB of all things ambient to your sound library. The Steve Sechi-produced collection of 2,266 24-bit/44.1kHz Apple Loops and WAV files are divided into loops (941) and one-shots (1,325); REX2 files are also available for the loops. Instruments include rhythm and lead guitars, acoustic and electric pianos, bass, tuned and untuned percussion, saxophones, pads, and vocal phrases. In addition, you'll find an abundance of ambient atmospheres derived from New York City field recordings. All loops are at 60bpm or 65bpm so you can easily mix and match with minimal time-stretching. Most major and minor keys are covered, and the collection doesn't stint in any category. The material is well suited to creating evolving ambient atmospheres, but there's enough lead material, especially vocals and saxes, to craft a full piece (see **Web Clip 4**). \*





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Prior to the bestselling Model 400 (shown here), most Mellotrons—including the one The Beatles played on “Strawberry Fields Forever”—had two side-by-side keyboards and were designed for home entertainment.

# Streetly Electronics Mellotron

An analog sampler with a surprising history

If you're a fan of British rock from the late '60s and early '70s, you're certainly familiar with the Mellotron. Made famous by the Moody Blues, King Crimson, Yes, and Genesis (not to mention Led Zeppelin, Pink Floyd, and The Beatles), it almost sounds like real strings, flutes, brass, and choirs, but with a distinct timbre all its own. That's because the Mellotron plays magnetic tape recordings of the original instruments.

The technology behind the Mellotron was developed not in England but by Iowa native Harry Chamberlin, who invented sampling more than 30 years before the first digital sampler. He recorded members of Lawrence Welk's orchestra playing one note at a time—a technique still used today—and then played the tapes on a keyboard instrument he called the Chamberlin. Each key was attached to a 6-foot strip of tape pulled across a playback head by its own individual tape transport. To reproduce transient attacks, the spring-loaded tape instantly returned to its beginning when a player released a key. After years of tinkering, Chamberlin began shipping his first handmade instruments in 1948.

## THE GREAT DECEIVER

In 1962, a shady salesman took two of Chamberlin's instruments to England and claimed the invention as his own. He sold the design to an engineering firm later called Streetly Electronics, which refined it and devised techniques to efficiently manufacture the Mellotron Mark I. Streetly was unaware it was actually Chamberlin's invention until 1965, when the company first showed the Mellotron at NAMM. When contacted by Chamberlin's attorneys, Streetly quickly hammered out an agreement: Chamberlin would sell his instruments in North America, and Streetly would sell Mellotrons in Europe and pay royalties.

Like the Chamberlin, the Mellotron was originally designed for home entertainment and not for use onstage or in the studio. The Mellotron reached its height of popularity with the Model 400, a marginally roadworthy model designed for professional use. It had a 35-note keyboard, pitch bend, and interchangeable tape frames that allowed users to swap out three sounds at a time relatively quickly. Beginning in 1970, approximately 2,000 Model 400s were

built before Streetly Electronics closed its doors in 1986.

## RETURN OF THE GIANT

The Mellotron sound is still popular thanks to virtual instruments that play original Mellotron and Chamberlin samples, such as Mellotronics M3000 for the iPad and IK Multimedia SampleTron for Macs and PCs. I reviewed a Mellotron sample library in these pages more than 15 years ago, and many sample-playback synths today feature Mellotron among their stock sounds. Two companies that restore old models—Mellotron Archives ([mellotron.com](http://mellotron.com)) and the resurrected Streetly Electronics ([mellotronics.com](http://mellotronics.com))—also manufacture new tape-based instruments designed to satisfy dedicated purists. These updated Mellotrons are pricey, but a slew of technical enhancements make them considerably more dependable than their forebears. \*

EM contributing editor Geary Yelton lives in Asheville, N.C., where he recently returned from a roadtrip across the entire United States.



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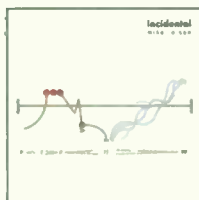
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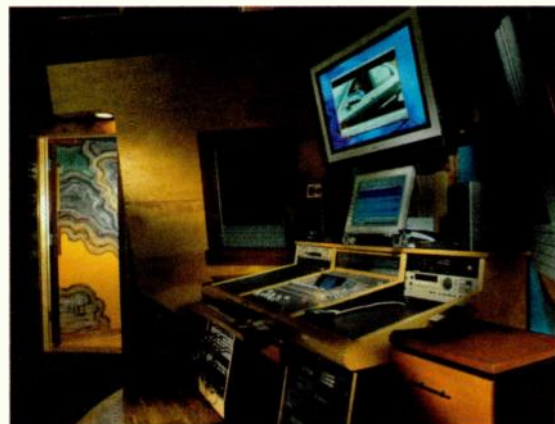
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Composer Mike Olson uses a Yamaha O2R digital mixer, MOTU 2408, and Avid Mbox2 interfaces, among many other pieces of gear, in his studio.

# Composer's Intuition

Mike Olson pieces together *Incidental* using his musical instincts

Minneapolis composer Mike Olson's genre-defying CD *Incidental* (Henceforth Records), which was five years in the making, is 45 minutes long and comprises six movements that Olson built from thousands of audio region fragments that he edited, combined, nudged, and processed, using "whatever sounds good" to create a sonic landscape for each movement.

"I consider the two worlds of music composition and performance to be fully merged in my overall compositional process," Olson says. "I freely incorporate signal processing and other manipulations of my source recordings, and see it as a natural extension of my sonic palette. Live string glissandos sound great, but they also sound great backward through a ring modulator."

By day, Olson is an engineer whose business, Intuitive, offers voice-over and post-production services to corporate clients. His studio houses a Yamaha O2R digital mixer, MOTU 2408, and Avid (formerly Digidesign) Mbox 2 audio interfaces; a Summit Audio MPC-100A compressor/limiter; a Drawmer 1969 vacuum-tube compressor/preamp; and soffit-mounted Tannoy System 15 and

PBM 6.5 monitors. Olson's vintage synth collection includes two restored Moog synthesizers and a Fender Rhodes, which Olson plays throughout *Incidental*.

For *Incidental*, Olson created abstract graphic scores and presented them to guest musicians. (For examples of Olson's scores, see the "Online Bonus Material" at [emusician.com](http://emusician.com).) "I was collecting tiny chunks of raw material that I could then manipulate in whatever way sounded right to me," he says. Eighteen Minneapolis-area musicians appear on *Incidental*, both solo and in sub-groupings, including session bassist Anthony Cox, guitarist Steve Tibbetts, woodwind player Pat O'Keefe, percussionist Heather Barringer, and chamber-music ensemble Zeitgeist.

In a kind of improvisatory coaching process, Olson combined some of his own preconceived ideas about what his graphics might sound like with the performers' interpretations of them. Olson recorded the musicians in no particular order and with no agenda as to what the final composite mix would end up being. Musicians also recorded their parts without hearing each other's performances. To record drums, Olson went

to Pachyderm Studios in Cannon Falls, Minn., and used its room acoustics, Neve console, and vintage Neumann mics.

Olson then engaged in extended periods of editing, primarily using MOTU Digital Performer and BIAS Peak Pro on a Power Mac G4. He processed the audio using plug-ins within those programs, starting with a sound and then asking himself what would sound good next. "I typically used multiple channels for each instrument, with different signal processing configurations on each track," he says. "I generally prefer this method to automating my effects, though I do use some automation on them. I like being able to drag a clip between the different tracks and quickly hear how it would sound with the different processing setups." (See **Web Clips 1** through **6** for excerpts from Olson's six movements.)

This entire process is dedicated to creating what Olson calls a "transcendental musicality" that speaks to the composer and listener emotionally, and comes purely from Olson's instincts in concert with the music: "I have absolutely no qualms about using anything and everything at my disposal in the creation of a piece of music." \*





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**Marco Migliari** Producer/Engineer Robert Plant  
**John Seymour** Producer/Engineer Santana  
**Tony Mangurian** Producer/Engineer Willie Nelson  
**Chuck Ainlay** Producer/Engineer Vince Gill  
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**Blake Eiseman** Producer/Engineer Kanye West  
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# As Sweet As It Sounds

Brando Triantafillou's Soundcake delivers on original music

When Brando Triantafillou moved to Chicago in 1991 to work at the now-defunct Editel post house as an assistant audio engineer, he didn't realize that a few years later, he'd be composing. The company brought in Avid video-editing systems in '94, giving him the opportunity to compose to rough cuts, many of which were screened in front of the client. "This is where I really began learning how to score to picture," says Triantafillou, who also feels comfortable behind the drums, guitar, or keyboard. When Editel closed its doors in '96, Triantafillou and two business partners opened Rhythm Café, focusing on original music and sound design for TV and radio. He threw in some producing/engineering/mixing credits for indie bands along the way, as well as recording his own music. Fast-forward 10 years, and Triantafillou is living well in his home studio under the banner of Soundcake.

## How has recording your music helped you as a composer?

I think being a composer and working on

tight schedules has helped me with my own songwriting. I was recently asked how I go about writing songs, and I mentioned that one thing I've learned to do quite well is to separate myself from my work—take a look at what I am writing/composing objectively. I listen to what I've composed on a very macro level rather than focusing on specific elements with the composition. I ask myself, "Is this music doing what I want it to do? Is the song working as a song? Is this musical idea adding or taking away from the song as a whole? Does the composition couple with what's onscreen without getting in the way of the scene?" Many times, this is difficult to do because we become so close to our work, but I really think that it helps considering that much of what we do is work-for-hire.

## Tell me about your studio.

It's located in the lower level of my house. I constructed a small control/writing room, along with an iso booth and a medium-sized live room. I didn't go crazy with the build-out since I am plan-

ning on moving to a new location. The acoustics are good overall. I have a drum kit that is set up in the live room, and I get very nice drum sounds. I've recorded several different instruments/groups in the room, and they all sound very good.

## What are you composing to?

I compose and mix using [Avid] Pro Tools and use the Euphonix MC Control in HUI mode. I have an HD4 rig running on an Apple platform using 24 channels of Lynx Aurora converters and eight channels of an Avid 192 interface. I sum 32 channels of audio and effects returns to an SSL X-Rack and monitor using the X-Rack Master module. There are two 4-channel modules and three 8-channel modules for summing. Rounding out the X-Rack are two 4000 Series compressor/gates.

I use TDM and native plug-ins including McDSP Channel G, Waves SSL 4000, Steve Massey, Crane Song Phoenix, all the standard Pro Tools plug-ins. I don't use reverb plug-ins; I mainly use outboard reverb units. For composition, I use EastWest Play libraries, [Spectrasonics]



Omnisphere, Avid instruments, and NI instruments mainly.

Additionally, I use a Yamaha S90 controller and a Korg Triton Rack unit, along with an Access Virus and an original mono Oberheim Matrix-1000. The audio from these synths goes to a 16-channel Allen & Heath submixer that routes directly to Pro Tools.

### How does Pro Tools help you get the job done?

Composing within a DAW is a great way to realize your vision quickly. Also, creating various versions of an idea is easy. If you are working mainly with sample libraries and MIDI files, it's nice to compose and then record them in as audio files all within the same application. Doing all the mixing in the box but using the SSL X-Rack to sum and monitor gives me the best of both worlds when mixing.

### And monitors?

I've really come to trust my ATC SCM20s powered by an Adcom hi-fi amp. I also have a pair of Yamaha NS10s for use as a second reference, although I rarely use them because mixes I've done on the ATCs translate so well already. I only work in stereo as my space is not large enough to accommodate a surround setup.

### How do you split responsibilities with co-owner Jared DePasquale?

I do the vast majority of the music production for Soundcake. Jared works with me on a per-project basis. He is a great orchestral composer/arranger, as well as an accomplished session guitar player. Normally, we are collaborating on projects, bouncing ideas off one another until we land on something we both really feel good about.

### You just finished work on the short film *An Evening with Emery Long*. How did you get that gig?

Prior to starting the project, we all [Laura Szymer, producer and Brian Kallies, editor] got together to discuss what Brad



At Soundcake in Chicago, Brando Triantafyllou uses an Avid Pro Tools HD4 rig and Euphonix MC Control in HUI mode to compose and mix.

[DeMarea, writer/director] was looking for regarding the music and sound design. They had placed some temp music over some of the scenes to give me an idea of the style of music they wanted. It was what I like to call 1960s-era Latin/organ music. Basically, it's a simple percussion bed with organ playing both the melody/harmony and bass parts. I composed a theme that I felt matched the quirkiness of the film, then recorded real percussion including bongos, guiro, clave, and shakers. Once I made a few small changes, I recorded a keyboard player playing the organ part and adding in the swells and Leslie effects that you hear in the final music. The organ patch we used is from the Roland VK-8M module. The music you hear in the last scene, which takes place in a bar, is something I had recorded about a year earlier that was never used.

Additionally, I cleaned up the dialog tracks, added some SFX/Foley elements and mixed the final version of the film. The film was shown at the 2009 [Los Angeles Film Festival]. It is still showing at festivals around the country.

### How has the composing business changed since you started at Editel?

The biggest change has been the Internet. We now have a much bigger potential client base, but also much more competition. Before the Internet, things didn't happen as fast and there was more face-to-face time with clients.

We used to have more time to put demo tracks together, and they didn't need to sound like finals in the demo stage. Now, if music doesn't sound as close to a final, mixed and mastered version at the demo stage, clients aren't going to be very impressed. With everything being literally instant today, a client can audition anything they want basically from anywhere at any time.

The ability to access music quickly translates to us as composers when the client says, "I need it to sound like this by tomorrow." Sometimes the temp music is simple and an original track can be produced very quickly. Other times, the temp track is very complex and most likely took months to produce, but we have to create something similar in a day with ever-shrinking budgets. This has become the norm in the industry. We as composers need to be able to produce many different styles of music quickly and for less money. This means that we not only need to be great composers, but also accomplished musicians, engineers, and sound designers. At the end of the day, the more we can do ourselves, the more money stays in our pocket.

Technology has really allowed this to happen. Today you can produce just about any style of music with a computer and a few microphones, but that doesn't mean anyone with these tools can produce a high-quality product—that takes years of experience. \*



Feehan



Chertkow

## Get the Most Out of Merch

Being a musician, you probably sell more than just music. T-shirts, apparel, posters, and other merchandise are all a traditional part of a musician's income. While the goal of selling merch to your fans is the same as it has always been, you now have many options and tools for creating, distributing, and selling beyond traditional manufacturing, such as print-on-demand and fulfillment services. The question is how to use these services effectively.

The place to start is print-on-demand. Sites such as CafePress, Spreadshirt, and Zazzle allow you to upload any image, create an online store (or embed widgets on your website), and immediately start selling a large variety of branded merch. With these sites, nothing is physically made until a customer actually orders one of the products. Because the companies keep no inventory, these stores have zero upfront costs. You can make money on the very first sale. Of course, your margin depends on the price you charge above their baseline cost of each item.

Sounds great, right? Generally, it's a good option, but one of the issues with print-on-demand services is their products are already priced high, so you make

low profit margins unless you charge outrageous prices to build up your cut. In addition, because of the methods these companies use to print on apparel, your images sometimes don't last beyond a few washes. Finally, they usually won't pay you until you meet a minimum payout value. With low profit margins, it can take many sales to ever hit that threshold.

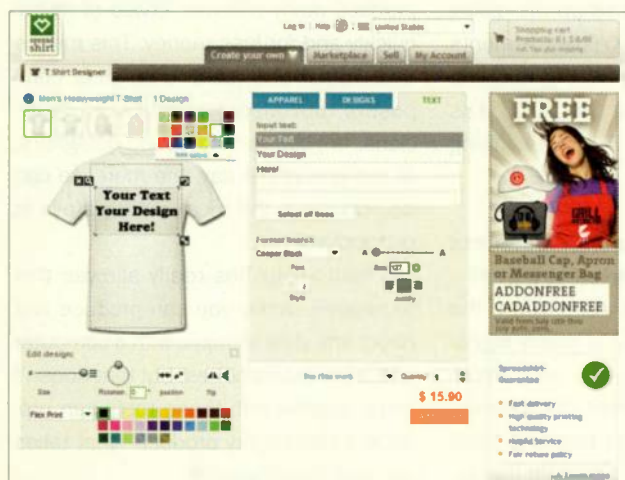
Because of these disadvantages, many musicians use print-on-demand services to test out designs to see which ones sell. You can even make samples for yourself at cost to see what they look like, as well as try them out on fans (such as using the designs as displays at shows). Once you find out what designs get the most interest, you can take them to a traditional manufacturer and do a standard print run locally to avoid shipping costs. Ordering in bulk will reduce the price per item and give you greater margins. Plus, depending on the company's printing technique, the quality may be much better. Once you decide to do a traditional run, you have yet another choice. There are numerous outlets to make your merch online, but if you are fortunate enough to have a local T-shirt or merchandise shop, use it. You'll be able to save on shipping costs, and you might be able to make some samples. Furthermore, most of the folks at these stores are quite knowledgeable about the options available, which may produce a more effective run.

Doing a traditional print run causes a new problem: You have to take orders and ship them to your customers yourself. Worse, how do you sell them online at your website? To solve these problems, you can use services like PayPal to handle credit card transactions or create an eBay storefront to take orders. But you'll still have to ship everything yourself.

For a more complete solution, you can use a fulfillment service to do it all for you. Services like IndieMerchandising, Nimbit, Amazon Fulfillment Services, and Yahoo! Merchant Solutions can handle inventories, fulfill orders, and ship your product for you for a fee. Once you have your account set up, you simply ship the company some product, and it will do the rest. Compared to print-on-demand services, fulfillment services using pre-manufactured merch will give you a better profit margin, although it is reduced by their fees and the cost of shipping your product to their warehouses. Working the various merch options that are available today can help you be smart about your choices so you can maximize your return on investment. \*

Randy Chertkow and Jason Feehan are the authors of *The Indie Band Survival Guide* ([IndieGuide.com](http://IndieGuide.com)).

Print-on-demand sites such as Spreadshirt will let you create custom T-shirts and other merchandise.





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Tommy Lee's new *Methods of Mayhem* album includes material submitted by the public in an online collaboration.

# Method to His Madness

Tommy Lee collaborates with the world



Photo by Myriam Santos

**A** *Public Disservice Announcement* is Tommy Lee's first *Methods of Mayhem* album since 1999, and it will be released Sept. 21 on the Loud & Proud/Roadrunner imprint. For this incarnation, Lee decided to post selected individual tracks from the songs on thepublicrecord.com site, and invite users to download them and record their own additions and variations. One million page views and 10,000 submissions later, Lee and crew chose the best of the submissions and incorporated them into the final mixes. I spoke with Lee about the how and why of this collaborative album.

## How did you decide on this public collaboration idea?

Well, my buddy [producer] Scott Humphrey came up with this idea one day, and we're sitting there kind of just jokingly, going like, "You know what'd be really cool? Obviously, [to] do another *Methods of Mayhem* record, but just do it in a different way. Rather than have all the big guest stars all over it, let's go crazy and collaborate with the world and just let everybody have a rip at it." And I'm sitting here, thinking, "Okay, well that could be cool. It's kind of like, you know, guys do remixes. They send out

the parts and guys get on it and tweak it out, and they send it back to the artist, right?" Then we started talking more and more about it, and we thought, "Whoa, why don't we do an entire record like this?" It's never been done, and I kind of like that a lot. So we set out to do this, to kind of be the first at making an entire record through thepublicrecord.com. This is where we would, once a week, put up the raw tracks.

## Overall, what was the quality of the material submitted like?

We had the craziest submissions; you would not believe, dude. If you can just imagine some really amazing stuff and some really crazy-sounding s\*\*t that's terrible [laughs]. Just imagine that entire spectrum from spoken-word parts from some dude in Prague, and bagpipes from Scotland, and hand drums from the Middle East. It was a lot of fun. We would sit there every day—we'd wake up around 8 or 9 in the morning—and go through hundreds or thousands of submissions from all over the world.

## How many of the tracks that you got back ended up on the final? Does every song have something in it that was submitted?

Yes. You know, it varies. One could be a break feed that plays maybe for three seconds, to maybe a cool vocal part or a piano part. So it's kind of all over the place. Typically, I guess, per track, some tracks probably have maybe 15 snippets of people's submissions. Others maybe have 25 in one, and some have like six.

## Yeah, I noticed there's a lot of variety musically on the album, stylistically. Some heavy stuff, some sort of power-pop stuff, and a lot of dancey stuff. Was that because you had all these people submitting and it changed the feel of some of the songs?

Pretty much most of the stuff was the way you've heard it, except for "Back to Before," which really just took a full 180. It's one of those things. Stylistically, I'm just all over the place, and I love records that don't sound the same from track 1 to track 11 [laughs]. And with the first *Methods of Mayhem* record, that was kind of a hybrid—I don't know. There was everything from hip-hop to electro to industrial to rock to—I mean, it was all over the place. I'm just a huge fan of a lot of different styles of music, so this would be typically just going down that same kind of crazy, all-over-the-place kind of a record. \*

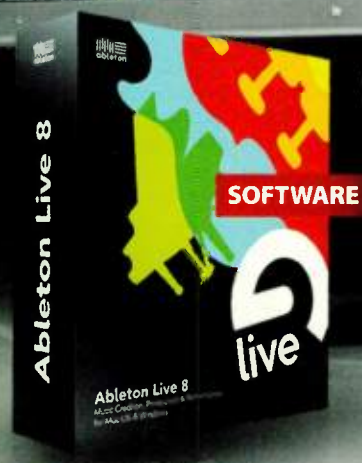




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API's six-slot Lunchbox housing sparked a movement toward using 500 Series-format modules as outboard processors. Shown here are the six modules tested this month (from left): Pendulum Audio OCL-500, AnaMod AM660, Inward Connections VC500 and OPT1A, Chandler Limited Little Devil, and Purple Audio Action.

# Dynamics Gone Modular

Six 500 Series compressors for less than \$1,300

By Eli Crews

The market for 500 Series units has exploded in the past few years, with many manufacturers adapting current models or designing new products for the compact, modular system. Developed by Automated Processes Inc. (API) founder Saul Walker more than 40 years ago, the original design wasn't originally intended as a standalone module system, but it allowed the company to readily configure customized mixing consoles for customer needs by using interchangeable combinations of modules in a console frame. Later, API and other companies developed Lunchbox carriers and rackmount units that were equipped with standard I/O connections and a power supply, allowing the modules to be used as outboard equipment.

One benefit of the modular approach is its small form factor: Several channels of processing can fit into a relatively small amount of vertical rackspace. Modularity is another plus; a mic pre used for tracking can be swapped out with a compressor for mixdown, for exam-

ple. And as the individual modules have no onboard power supply nor I/O jacks, this helps keep the cost down for the modules themselves. Drawbacks also exist: The power specs are lower than what is possible in a standalone unit, and the faceplate's small (1.5x5.25-inch) real estate limits the size and layout of the front-panel controls.

There are many types of preamps and processors available in this format. In this article, we'll focus on six compressor/limiter modules priced less than \$1,300 each. To some, that may seem like a lot of money for one channel of compression. However, while gaining popularity, 500 Series modules still have a somewhat limited market. Manufactured in small numbers by boutique audio companies, these devices tend to have high-end component selection and build quality. As an indication, most feature custom transformers and proprietary discrete op amps, and all offer true hardware bypass, a testament to their manufacturers' dedication to pristine audio quality.

Aside from API itself, a few companies make 500 Series housings, usually in either six- or 10-slot configurations. The Lunchbox six-slot racks have a handle and feet for tabletop use, and the larger units are three-rackspace designs. Both styles have integrated power supplies providing juice to each installed module, as well as XLR I/O for each slot. Purple Audio kindly provided the rack I used for these tests, a 10-space chassis called the Sweet Ten. One cool feature of the Sweet Ten is an extra jack for each module, which provides easy stereo linking capabilities for its own Action modules, as well as any other dynamics modules with the appropriate edge connector pin-6 pinout (API's 525 and 527, or Inward Connections' OPT1A and VC500 compressors, for example).

## ANAMOD AM660

AnaMod (anamodaudio.com) was formed by Greg Gualtieri of Pendulum Audio and Dave Amels of Bomb Factory fame. As the name implies, the company is devoted to the fully





Pendulum Audio OCL-500 (left) and AnaMod AM660 (right)

VU meter and a switch for the hard bypass. Notably absent is an output/makeup gain control. To achieve a desired gain reduction vs. output level, you have to carefully balance the input gain and threshold controls.

### CHANDLER LIMITED LITTLE DEVIL

Of the six compressors I tested, the Little Devil (\$1,180) has the most interesting feature set. Wade Goeke at Chandler Limited ([chandlerlimited.com](http://chandlerlimited.com)) is a master of innovation, and the FET-based Little Devil is a culmination of a number of his past products, most notably the Germanium Compressor (see my review in the April 2008 *EM*, available at [emusician.com](http://emusician.com)). As on the Germ Comp, Goeke has left specific value numbers off, opting for a

simple 1 to 6 scale for each of the controls rather than decibel or millisecond values to make the process of setting the controls more intuitive and less analytical. Continuous controls include Input, Output, Attack, and Mix, the latter of which lets users enable the Little Devil as a parallel compressor without having to split the signal to two channels. Like that of the Purple Audio Action, the Little Devil's attack range is wide, allowing for a large amount of influence over the tone and contour of the compressed sound with this single control. There are three-position switches for determining both the ratio (Hi/Med/Lo) and the release (Fast/Med/Slow), and a six-position switch for choosing the sidechain highpass filter (HPF) frequency (Out/30Hz/60Hz/90Hz/150Hz/300Hz). Three of the other compressors in this roundup have sidechain HPFs, but the Little Devil is the only one offering variable frequency selections, which are handy for sculpting the sound of a kick drum or bass, or for preventing the low-end energy from triggering compression on a submix or on

analog modeling of revered vintage gear. For the AM660 limiter (\$1,295), the target piece of gear was the Fairchild 660 limiter, the Holy Grail of vintage compressors that can fetch tens of thousands of dollars used. All of the Fairchild's electronics—including its compression curves, time constants, and transformers—are modeled by the AM660's analog computer, which AnaMod describes thusly: "Instead of writing software code to describe how a complex audio system behaves, we developed special analog building blocks that are 'coded' to emulate the behavior of the audio system." Never having used an actual Fairchild myself, I was less concerned with the accuracy of the modeling than with the sound and usefulness of the AM660 relative to the other compressors in my rack. The AM660 has Input Gain and Threshold knobs, as well as a rotary switch for choosing one of eight Time Constant settings, three of which are designed specifically for vocals and two of which have multislope release times based on the original Fairchild's parameters. Other than that, there is only a classic-looking

the stereo bus. Lastly, a Curve switch allows changing the knee of the compression curve from Germanium to Zener—the former being a harder, more aggressive sound and the latter being extremely gentle.

### INWARD CONNECTIONS OPT1A

The OPT1A (\$1,095) limiter is a solid-state opto cell limiter, based roughly on Inward Connections' ([inwardconnections.com](http://inwardconnections.com)) TSL-3 Vac-Rac tube limiter, the favored vocal dynamic controller of many an engineer. There are only two knobs on the unit—Gain Reduction and Output Level—and a recessed trim pot for setting the zero level of the vintage-style VU meter. The OPT1A allows you to meter either the output of the unit or gain reduction. There is also a switch for engaging the 250Hz sidechain HPF, a switch for stereo linking, and a hard bypass. There are transformers present in the input and output stages. This is the only unit in this lineup that doesn't offer any control over the attack and release times; they are set at 3.5ms and 500ms, respectively, although they vary slightly with the amount of gain reduction induced. This lack of control can sometimes be a good thing, as long as the time constants complement the program material, as it gives the user less to mess up.

### INWARD CONNECTIONS VC500

The sole VCA-type compressor in this lineup is Inward Connections' \$1,095 VC500, designed by longtime gear guru Steve Firlotte. This compressor has the most standard controls of the lot: Gain Makeup, Threshold, Ratio (2:1 to infinity:1), Attack (0.2ms to 20ms), and Release (100ms to 3 sec). It also sports a 250Hz sidechain HPF, stereo linking, and hard bypass. The input stage is differential transformerless, but there is a transformer on the output stage. Gain reduction is shown on the fast-acting, 10-segment LED meter, from 2dB to 20dB of attenuation.

### PENDULUM AUDIO OCL-500

The OCL-500 (\$1,295) is a solid-state version of Pendulum Audio's ([pendulumaudio.com](http://pendulumaudio.com)) tube-based OCL-2 compressor, designed by Greg Gualtieri. It uses an opto cell in the compression-detection circuit, like many



Inward Connections OPT1A (left) and VC500 (center), and Chandler Limited Little Devil (right)

renowned models of yesteryear (such as the UREI/Teletronix LA-2A), but it provides more control over the attack and release times than on vintage optical compressors. The continuous controls are Threshold, Ratio (1.5:1 to 15:1), and Output. There's a 150Hz sidechain HPF, a hard bypass, and a rotary switch for choosing one of six time constants (Fast, Average, Vintage 1 and 2, and Manual 1 and 2). Manual 1 has medium attack and release times; Manual 2 features slow time constants. The Class-A, transformerless audio path helps provide a high-fidelity method of controlling dynamics without coloring the sound of the signal.

### PURPLE AUDIO ACTION

Although Purple Audio's ([purpleaudio.com](http://purpleaudio.com)) \$725 Action compressor has its roots in UREI's venerable 1176 compressor, designer Andrew Roberts makes it clear that it's no 1176 clone. The controls, however, are the same: An input pot drives the custom input transformer

(taken from Purple's revered MC77's design); an output pot drives the output transformer, continuously variable attack (from 20µs to 800µs), and release (50ms to 1.1 sec) controls; and a five-position rotary switch determines the ratio (4:1, 8:1, 12:1, 20:1, or infinity:1). The infinity setting is modeled after the 1176's popular "all buttons in" mode. There are also switches for engaging the hardwire bypass, and one that either engages stereo linking (via an additional rear-panel jack on the Sweet Ten) or bypasses the FET-based compression, leaving the amplifiers and transformers in the audio path. The Action excels at adding girth and grit to whatever is passing through it, even with no gain reduction. Gain reduction is measured by an eight-segment LED ladder, which shows 1dB to 12dB of peak attenuation.

### CAN I KICK IT?

On bass drum, the Purple Action immediately showed its mettle. With a fast release time, a

semi-slow attack, a 4:1 ratio, and about 5dB of gain reduction, the Action really thickened up the sound, providing extra attack and a solid, tight low-end punch without getting woofy (see [Web Clip 1](#)). The Little Devil also shone, getting quite grabby while in the Germanium curve setting, but sounding much less apparent in Zener mode. The wide range of attack times, variable highpass sidechain filter, and Mix control let me dial in a superb kick sound with the ideal beef-to-attack ratio. I liked the Little Devil's filter in this application set to 30Hz. All the other compressors' sidechain HPFs had too high of a corner frequency to function ideally with bass drum. I did find a good sound with the OCL500, with the ratio set to about 10:1, and the Average time constant and the threshold set with around 5dB of gain reduction. The VC500 gave me a wide range of peak-taming possibilities, but I found myself wanting the release time to go a little faster than the 100ms minimum. The OPT1A did a good job at evening out the dynamics in the performance, but it didn't quite have the sound I was looking for because of its relatively slow attack and release times. The AM660 gave me a nice, even sound with its fastest time constants; however, with no sidechain filtering, any more than about 3dB of gain reduction sounded too squashed.

### CAUGHT IN A SNARE

On snare drum, every compressor gave me a sound I really liked, although they were quite different. On the Little Devil (in Germanium mode, with a low ratio, slow attack, and fast release), the snare had a nice heft while it seemed to brighten up a little at the same time. When switching the ratio to the high setting, it felt a little too squashed, but adjusting the HPF to 150Hz let the snare's body come through in a pleasing way (see [Web Clip 2](#)). The Action, with a slow attack and fast release, yielded an excellent *thwack* that I'd been missing on the dry signal. In Vintage 1 mode, the OCL-500 brought life to the performance, as if the drummer started hitting the snare harder, even at only 3dB of gain reduction (see [Web Clip 3](#)). On the VC500, I dialed in a setting that tamed the performance significantly while retaining the sound's richness, with a full-bodied low end and a crackly



top end (see Web Clip 4). The OPT1A also provided a rich, round sound (especially with the sidechain filter engaged), increasing the drum's sustain without making it too ringy. The AM660 truly impressed me in this application: Cranked up to provide more than 10dB of gain reduction, it imparted a special vitality to the performance while keeping the dynamics completely in check. Time Constant 6, with its fast attack and triple-slope release time, was my top choice for this snare drum, although Time Constant 1, when set to its fastest release time, also sounded good.

## GET A ROOM

Using compressors on drum room mics is one of my favorite applications, so I had to hear each of these boxes perform this task. When compressing the room mics, I often look for a lot of character, and the AM660 was the star in this function. When slammed hard, the drums exploded, and the best part is that the cymbals didn't get overly brash like they often can during heavy compression. Time Constant 6 sounded the most natural, whereas Time Constant 1's faster release provided the best pumping, overcompressed sound of the lot (see Web Clip 5). The OCL500, VC500, and Action all offered a wide range of sonic possibilities that I would readily employ in a mix. Neither the Little Devil nor the OPT1A were my favorites in this application. They both sounded too good and didn't produce the nasty compression artifacts I was looking for, even when I pushed the units hard.

## BASS FOR YOUR FACE

On bass guitar, however, the lack of artifacts was exactly what drew me to the OPT1A. Even at gain-reduction values up to 7dB or 8dB, with the sidechain filter in, the OPT1A provided extremely smooth leveling on a dynamic performance, and the sound thickened without getting boomy (see Web Clip 6). The



Purple Audio Action

Little Devil also helped thicken the sound, and the variable filter made it easy to let the lowest fundamentals through while still smoothing out the attacks of each note. With its superfast attack capabilities, the Action really grabbed the transients and darkened the tone a bit. Reducing the attack slightly brought more life back into the performance, with the dynamics still being deftly controlled. The AM660, with Time Constant 2a, also made the bass seem more alive and more three-dimensional, even at very small amounts of gain reduction. Pushing the input hard resulted in a very pleasant distortion, just enough to give the bass a little extra teeth in the mix. The OCL-500, with the sidechain filter engaged, got rid of some of the clacky finger and fret noises while retaining the body of the bass. With numerous control options, the VC500 was adept at unobtrusively taming the performance inconsistencies.

## VOCALS

Each vocal performance demands a different kind of compression, yet two of these devices consistently impressed me on all types of vocals across different genres, tempos, and intensities: the OPT1A and the AM660. I also got excellent results with the other four, but these two stood out as superb tools for the job. Even at high amounts of gain reduction, they both just worked, taming the dynamics but also providing that intangible finish that makes a vocal sit in the right place. For lower vocals, the sidechain filter on the OPT1A helped the bottom end push through a little more, whereas higher vocals usually sounded better with the filter off. The best-sounding Time Constants of the AM660 varied from song to song, but I usually settled on one of the three vocal-specific settings. It's easy to see why the predecessors of these two compressors (the Vac-Rac and the Fairchild, respectively) are widely renowned as first-choice processors for vocals.

## STEREOPHONIC

I had two units of only two models, the Actions and the Little Devils, so I tried these in stereo applications. The Little Devils don't employ stereo linking, but thanks to the third jack on the Sweet Ten, I was able to test the linking function on the Actions, which reduced gain roughly the same on both sides (as long as the settings of the two units were the same). On stereo drum subgroups, both sets of compressors gave me highly desirable results, thickening up the drums and giving the cymbals more sustain. The Mix knob on the Little Devils let me easily dial in the (phase-coherent) compressed sound to my taste. I also liked both pairs on the stereo bus. Between the Mix knob and the sidechain HPF, there was far more control on the Little Devils, but the Actions had a special warmth and charm, and ended up getting used on the 2-bus on quite a number of final mixes for a recent record project.

## TAKE A FEW, THEY'RE SMALL

Comparing this many high-quality compressors literally side-by-side was a blast, as well as an educational and illuminating experience. While each unit had its strengths and weaknesses, any one of these modules would make an excellent addition to your 500 Series collection. The price/performance ratio is definitely tipped in favor of the Action as it's \$300 cheaper than the other models and sounds fantastic. The Little Devil has the most interesting and extensive feature set, and the ability to run parallel compression within the unit itself is a huge bonus. Both the AM660 and the OPT1A have simple yet effective controls, and provide very smooth compression at high gain-reduction amounts, especially for vocals. Both the OCL-500 and VC500 proved extremely versatile, with perhaps more fidelity and less character than the others in this lineup. If you have a 500 Series rack with a few open spaces and a love for high-quality compressors, give each of these models a listen. You may find it hard to part with any of them once you do. \*

*Eli Crews operates New, Improved Recording (newimprovedrecording.com), a studio in Oakland, Calif.*

# OUT OF THE COMFORT ZONE

Maroon 5 journey to Mutt Lange's studio in Switzerland to track their latest

By Mike Levine

“L.A. is my home town and one of my favorite places in the entire universe,” says Maroon 5 lead singer Adam Levine. “However, it is very distracting.” So in addition to the appeal of working with producing legend Mutt Lange, recording at Lange’s Swiss studio seemed like a good way for the band to get down to the business of recording, free of the distractions that they’d face at home.

“What took us—what’s going to be, I guess, coming up on a year—would probably have taken 10 years if we had tried to do it [in L.A.],” Levine says. “It was nice getting out of our own element, getting into a space that maybe wasn’t as comfortable—wasn’t our comfort zone. But it was new and different and adventurous and exciting. I think that kind of contributed to the energy of the record.”

*Hands All Over*, the album to which Levine refers, is Maroon 5’s third studio effort, which will be released on Sept. 21. (The first single, “Misery,” came out in July.) The band’s instantly recognizable sound—which mixes rock with elements of R&B, funk, and pop—shines through on every track, as do Lange’s consummate production skills. The album was mixed back in L.A. by Lange’s longtime collaborator, Mike Shipley, with Lange participating remotely.

I had a chance to separately talk with Levine and keyboardist Jesse Carmichael about recording with Lange, their songwriting process, and the demo studio in an L.A. garage where much of the songwriting and preproduction took place prior to the Swiss excursion. Their interviews appear here consecutively, starting with Levine’s. I also talked to Noah Passovoy, who engineered the demo sessions (see the sidebar “Demos in the Box” on p. 32).

## ADAM LEVINE

**How did you guys decide on using Mutt Lange as your producer? Was it a band decision or a label decision?**

We decide. We are the ultimate source [laughs]. Just kidding. It was one of

those things where he’s kind of a reclusive, enigmatic dude. He wanted to work with us, so he said, “Hey, let’s do this,” and he kind of came around. He wanted to meet with us and he wanted to talk to us; he solicited our attention.

**That’s cool.**

It was really kind of a great thing. We were really excited about the opportunity







Maroon 5 (L-R): Matt Flynn, James Valentine, Mickey Madden, Adam Levine, Jesse Carmichael

because we were just curious about what it would be like to work with the guy.

#### **How did Lange affect the sound of the band on this album?**

I think there's no doubt that it sounds bigger. The way he makes records sound, they're always larger than life. It's just very clean and very basic. I think that's what's always been our idea of sound—

and the sound that we put out there—making it clean and simple and no-frills, or not too many frills.

#### **The drums on the album sound huge, as do the guitars; everything really.**

Yeah, I love when drums and vocals lead the way. It feels much more rhythmic that way and much easier to understand. I don't like when there's too much going on.

#### **Was the material all written when you left for Switzerland?**

It was tricky because it was never really finished, the songwriting was never really done. We went to Switzerland to do this, basically to execute, when we knew we had enough material parts-wise to piece together [an album]. I think that was when we pulled the trigger and decided we had enough stuff. Nothing was really



# OUT OF THE COMFORT ZONE

worked out or organized; it was just kind of demo'd. We had a lot of material going into the experience. I think that's the best thing, when you make sure you have a surplus of ideas to work with. You don't want to get there, and say, "Okay, here we go." I hate putting this big moment on it, like, "Okay, now it's time to write and produce a record." It's much better when you kind of futz around with ideas and have a lot in the bank.

## **Sure, and then when you start recording you can see what's working.**

Yeah. "This part works here." "This part, miraculously enough, works perfectly with this part." Because when you're a songwriter, all your parts, in some weird

way, could work together if you changed the tempo and adjusted things a little bit. You develop a style and a rhythm to what you do, so I think the way that we all do it best is to take it as a puzzle. It sometimes comes in a more pure, simple, straightforward way, where a song just happens, but I think that's more rare. If you were to go on that philosophy, I think it would take a lot longer to make a record because those moments don't happen every day.

## **What is your process for songwriting? Do you just get hit with an inspiration and go record it onto a little portable recorder or your computer?**

For me, it's weird. It happens in the show-

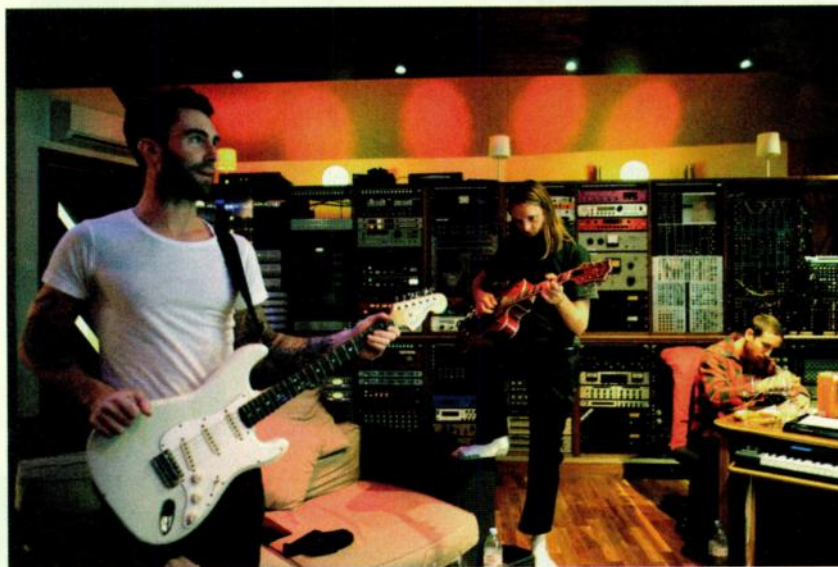
er, or I'll be humming a tune. It rarely ever happens when I'm sitting playing guitar. That's not how I get the juices flowing. I think my favorite part about music is that it's so unselfconscious. I think the best songs that are written are completely free in how they were conceived. You can really tell when something's been haggled over to the point where you're changing the melody 100 times. Melody is just what comes out of you naturally. It seems like it's obvious when something's more contrived melodically and it's more formulaic, and it's someone looking at it scientifically as opposed to just having fun with it and humming a tune, which is a very natural thing. That's what I like it to be—or at the very least, that's what I like it to come off as, even if it's not [laughs].

## **So you demo'd a lot before going to Switzerland?**

Yeah, we demo'd a lot of material. A lot. And that was a huge part of the process. We set up a little home studio and recorded and wrote a lot of stuff. It's best to always have too many ideas.

## **What was your demo studio gear like?**

It was very unsophisticated. I like to demo in the most remedial way possible. For me, expensive, amazing studios with walls upon walls of gear—that's for when you're really ready to work, not when you're brainstorming. We just use an [Avid] Pro Tools HD rig, an older rig that's actually James [Valentine's], our guitar



L-R: Levine, Valentine, and Carmichael in Lange's well-equipped Swiss studio

## DEMOS IN THE BOX

Engineer Noah Passovoy has worked with Maroon 5 since the band was recording its last album, *It Won't Be Soon Before Long*, back in 2006. Although he wasn't involved with the tracking at Mutt Lange's Swiss studio for *Hands All Over* (Lange uses his own engineer), Passovoy engineered all the songwriting and demo sessions in the garage-based studio of Levine's rented L.A. house.

The band constructed the studio for these sessions and tore it down afterward. "[They] just kind of threw up four walls, soundproofed it so that anyone could be making noise in there at all hours and not annoy the neighbors [laughs]," Passovoy says.

The studio was built into two spaces in the three-car garage. "The biggest problem was the ceilings because we couldn't

build past the beams of the garage. So you had maybe 7-foot ceilings [laughs]. It was really kind of a box.

"We set up as much gear in there as possible and they just started writing," Passovoy continues. "That was about six months prior to them going to Switzerland. It was really just a daily [thing]—people going into the studio, whoever had an idea, and just getting it down."



player's. The limitations of something like that, to me, are good when you're demoing because you shouldn't even be thinking when you're demoing. You shouldn't be worrying about the performance of something, and you should be able to just use stupid plug-ins, and have it be, "Oh, here's a drum beat." "Okay, cool, this is a good idea for this song," and just play all the way through it.

And maybe something starts off with an MPC, and then I'll go play the drums along to it to thicken up the sound, and then we'll Beat Detective that. Just simply for the sake of getting the idea done. And then, obviously, when the band goes in and re-creates all of this, they go and do real takes. The demo process is not about feel and it's not about sonic quality; it's really more about ideas, so I like everything to be at my fingertips as opposed to doing [multiple] takes of things. Everything's a first take; you never really fix anything. Things are off-key; things are crappy. There's no thought involved at all. I think the gear needs to reflect that attitude [laughs].

#### **How much did Mutt get involved in culling the material and helping develop it?**

Mutt was really involved. Every day, basically, he would be critiquing or helping push us to get through a certain thing that wasn't right. He's a producer first and foremost, but he's obviously more than accomplished in songwriting, too. That's



*Hands All Over* is Maroon 5's third studio album since the band debuted in 2002.

part of what he does and part of what he offers. With our band, though, I think we have our way of working, songwriting-wise, that he really respected and trusted. So he was a producer for us, and he wasn't writing as much as he was guiding. He'd say, "Oh well, this needs to be this way. Give me something like this here," and I would do it. That relationship was a very valuable one because I've never had a relationship where a guy was coming at it from a songwriting point of view. Which was cool because I trusted everything he had to say. The best thing to do is to try to—I mean it never happens—but try to check your ego, where you just don't worry about yours versus his.

#### **Otherwise, it could be problematic.**

That's always the hardest thing to balance in the studio. You've got five guys, five different opinions, plus a pro-

ducer, and that battle, and that wrestling match—which will inevitably take place—is kind of what makes for either a great record or a crappy record [laughs].

#### **How did you guys record it?**

Mutt's central thesis behind making records is, "It's got to be the best it can possibly be." If it's not good enough, make it better. Make it better always. It was like a blank canvas. It's such a beautiful thing, though. Technology's sort of a double-edged sword because you've got all these things and all these capabilities you never had before, and they're all hundreds of times faster than ever before so you can run into the trap of going too far, and it can drive you crazy. But the good thing is, you can really exhaust every possible idea. And then once you've done so, and you've thrown everything onto the canvas and tried everything and just beaten yourself to death over a certain part or a certain song, then you go back and you refine it by taking the best things and tweaking those and focusing on the bread and butter of what it is. I love that about Pro Tools. I embrace that fully. There are benefits, obviously, and downfalls to this kind of new technology. But it's really fascinating and really fun. Yes, it can be misused, but I think we used it properly.

#### **Did you guys all record together for that band energy or was it more layered?**

I think sometimes it's just layer upon layer; sometimes it's us playing together

Though small, the studio wasn't Spartan gear-wise. "We set up a drum kit, guitar amps, bass amp with DI, keyboards, an MPC, a vocal booth, and then a Pro Tools rig and a Logic rig," Passovoy recalls. "We crammed, physically, as many things as possible into the room."

Given the small dimensions, the space wasn't going to yield top-notch acoustics. "It was obviously a very tight sound," Passovoy says. "There wasn't a lot of room on it. But [it was fine] to

get the idea across. The way they like to demo is to really build up an entire song—drums, bass, guitars, keys, vocals, whatever other odds and ends on top of that—so having a drum kit was sort of a necessity."

Some of the tracks from the demos did make it onto the final songs.

"Basically, everything ended up in Pro Tools at some point," Passovoy explains. "Jesse and James work a lot in Logic, so their demos would start in

Logic and then at some point we'd move over to Pro Tools to finish off the demo. And then all of those Pro Tools sessions went to Switzerland, and at that point, Mutt started taking them apart and working with the band on arrangements and changing some things around and everything. But a lot of parts that we recorded—I don't think any of the drums ended up on the record—but a lot of other things [did]. A lot of guitars, there's vocals, a lot of keys."

er. The most important thing is that it's not formulaic, and you're not going and doing the same thing every time. Sometimes we go in and cut something just three of us or four of us or two of us. Maybe it'd just be Jesse [Carmichael] and James, and then I'd go in and write a vocal. It was all very unformulaic, which I like. I like when every song has a different energy.

## JESSE CARMICHAEL

**What did you think when Mutt Lange approached you guys?**

I thought it was an honor. I thought it was a cool idea; I thought it sounded fun.

**Adam termed this album as "bigger-sounding." Is that how you'd put it too?**

Yeah, I would say bigger, and I would say cleaner, and I would say thicker.

**Was that due to just the way Mutt records stuff or how he mixes?**

He has such sensitive ears that I think he literally can almost see the spectrum of frequencies and knows exactly how much low end is needed on this instrument and on this one so that when it's all combined together, the result is pretty thick and filled-in. I think he and [Mike] Shipley have really mastered that art of EQ'ing things so that nothing steps on anything else and everything sort of fits together. And you listen to some sounds on their own, and you're like, "That's the worst-sounding thing I've ever heard," but then you listen to it with all of the low end next to it, and suddenly it works.

**What's his studio in Switzerland like?**

He's got a Pro Tools setup and a Logic setup, and they work with each other, which is pretty cool.

**Why does he have both, do you know?**

Well, Logic gives us a lot of versatility in terms of MIDI, which I think is superior

to Pro Tools, working in Logic with MIDI. But I still think Pro Tools has the edge in terms of editing. So [they were] running in Logic on a separate computer, all synched up but sort of run into Pro Tools as if it were an instrument.

**Did you play a lot of keyboard parts that were MIDI-based initially and then you got the sounds later?**

We did that sometimes. It was interesting because we put this record together first in L.A. with demos that we made in our home studio, and then we worked off of those tracks and replaced certain things or added certain things.

**So you kept some of those tracks?**

We did, yeah, so it's interesting.

**Talk about the L.A. demo studio.**

We built it at a rental house ... that Adam [Levine] had taken up when he was doing some remodeling on his own house. It had a perfect space in the garage for a studio, so we had one built within that space so that we weren't even touching the walls of the existing structure; we just built a little box in there.

**Did you have the drum kit miked up and everything?**

We definitely had to do some scratch drum takes, but the sounds weren't that amazing in this little box of a studio. The main things that the demo process provided for us, though, was the right tempos for the songs because we were really working on that.

**Because it's easy to get a tempo wrong in the studio sometimes if you don't have it figured out in advance, right?**

True. But we would re-assess everything, even when we were in Switzerland, and there were some things that we changed just 1bpm in one direction or the other, and I think it really made a difference.

**When you're on tour, do you guys bring laptops along and write in your hotel**

**rooms, or is it pretty much just when you're off the road?**

We work on the road as well. [But] there's a certain type of energy conservation that you need to do on the road, where you have to pour your energy into the shows. And when you get into songwriting mode, you have to be open to the idea that maybe you won't go to sleep tonight when you're working on this idea because you don't want to let it go. We can't totally do that on the road because we have to almost be like athletes; we stay healthy.

**How do you get your inspiration for writing your progressions and stuff? Does it just come to you?**

Absolutely. I mean, there's an endless amount of combinations of chords and melodies and rhythms. I find it really helpful to just not think about anything and work quickly on your instrument.

**So you'll typically be sitting at the keyboard and an idea will come, and you'll say, "That's it."**

There's a certain feeling when you hear something. You get a certain spark and you know there's something cool here; something that's going to turn into something that will be good for this band and good for our fans. It's really kind of strange. I mean, it's always been that way—even from before we had a fan base.

**You've definitely defined a certain kind of sound in your songs over the first couple albums. Is there a feeling like you have to be consistent with that when you write new songs?**

It just happens naturally. Luckily, our whole emphasis when we were writing songs was to have it feel really authentic and spontaneous, and not calculated at all. So when that happens, and something just comes out of us in a pure way, it ends up sounding like us. And that's how we've always done it [laughs]. \*

*Mike Levine, no relation to Adam, is EM's editor and senior media producer.*



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# License to Earn

How to place your music in film, TV, and video projects

By Dave Tough

As record sales continue to decline, songwriters are looking to license their master recordings for film and TV projects. Department store commercials now feature the melodies of Robert Plant and Alison Krauss. The music of Imogen Heap and The Who makes regular visits to primetime TV. But you don't have to be a superstar to get your music on the big—or little—screen. Thousands of songwriters now license their music worldwide.

Opportunities to license your music include films, TV series and commercials, corporate training videos, and multimedia productions for the Internet. The best way to get your music into these projects is by developing personal relationships with producers, directors, and ad executives. However, nurturing these contacts is a full-time job. You'd have to spend a large percentage of your working time finding out what projects need music, making the required business contacts, and staying on top of music supervisors' changing needs. Most songwriters would rather spend that time making music.

A growing number of production-music companies will promote, license, and administer your pre-existing music for these uses in return for a share of any revenues generated.

Some of these companies work only with ad agencies or music supervisors. Others license music to any party, including independent producers and the general public. Some companies are highly selective, offering a small catalog of high-quality music in only a handful of genres, while others offer large catalogs with searchable databases, representing many styles of music. Here's a brief overview of some popular production-music companies and what they require in exchange for their services. The following information is taken from my personal experience and research. You should always inquire with each company individually to confirm its actual terms before engaging its services.

## GETTING WIRED

**Audiosocket** (audiosocket.com) is a non-exclusive music-licensing agency that represents independent artists for placements to all media platforms, including film, TV, videogames, advertising, online, and social networks. Artists can submit up to four MP3s for review. Audiosocket selects about 20 percent of those to represent on its roster. The initial term of the contract is two years, after which you can remove your music from the catalog with written notice. The company shares equally in

upfront revenues with the artist. Artists retain all of their share of royalties for music licensed under the agreement, and Audiosocket keeps 50 percent of the publisher's share.

**Beatpick** (beatpick.com) caters mostly to store chains and the film, TV, and advertising industries. The company takes 50 percent of the licensing revenue, but you get to keep 100 percent of the performance royalties. You can submit music to Beatpick online for free, and the company will get back to you within 16 weeks with a decision.

**Broadjam** (broadjam.com) connects artists with industry pros that need music. You sign up for a yearly membership; then, when you submit to a listing, you pay a small fee that varies depending on membership level. Except when submitting to labels, publishers, or songpluggers, artists typically keep all revenue generated from each placement. Web hosting, contests, social networking, and a real-time review mechanism are also included in the Broadjam membership.

**Crucial Music** (crucialmusic.com) is similar to Audiosocket, but it doesn't charge a fee for music submissions. You initially submit your music online in MP3 format and upload a WAV file if it's accepted. After a song is approved,



Crucial's staff adds it to the company's catalog and applies tags and metadata so it can easily be found in a database search. The company offers writers a nonexclusive deal that lasts three years. Crucial Music retains half of any licensing fees it collects. Most of the company's pitches are to music supervisors working for the major TV networks, but it also tries to place songs in major and independent films.

People registered with production-music company **Dittybase** ([dittybase.com](http://dittybase.com)) can browse its online database of music. Registration is free. Dittybase accepts writers' music submissions on CD or through file-sending services such as [yousendit.com](http://yousendit.com). The company also invites songwriters to email information about themselves and their music.

**The Film Music Network** ([filmmusic.net](http://filmmusic.net)) is a membership-based organization whose website posts solicitations by music supervisors, film studios, libraries, and commercial production houses to place music in films, television, and videogames. All music submissions go directly to the job posters and are available for immediate listening by them—none are withheld or disqualified by the Film Music Network. Nonmembers can also submit music for many listings.

Founded in January 2010, **Hello Music** ([hellomusic.com](http://hellomusic.com)) gives independent artists access to traditional venues such as film, TV, and advertisements. It also provides connections to companies such as Yahoo! Music, where artists can get their music on Internet radio. Hello Music employs professional A&R staff to provide "real ears" to connect artists with the right Hello Music partners. You can submit your music to the site and then A&R takes over, screening the submissions and determining what Hello resources fit your music. The company takes nothing up front for pairing artists with companies. However, if the partnership yields revenue for the artist, Hello Music takes a share.

**Magnatune** ([magnatune.com](http://magnatune.com)) licenses music for many types of creative projects, including films, TV, websites, videogames, and more. Its catalog is available to the general public through unlimited download memberships for \$15 per month. Music supervisors can also license the music for use in a film or TV show.

Artists receive half of all revenue from membership and licensing fees, and they can submit their music online free of charge. Magnatune accepts about 3 percent of the music submissions it receives. The company actively showcases its artists' works, promoting the music through press, web, advertising, tradeshow, and events.

**Megatrax** ([megatrax.com](http://megatrax.com)) mostly produces its music in-house. However, the company indicated that independent songwriters and artists can submit their music for consideration by emailing a link to [info@megatrax.com](mailto:info@megatrax.com) (MySpace or artist's website preferred).

The international market is another option. **Muziko** ([muziko.com](http://muziko.com)) is a new European production-music library that offers opportunities to the independent songwriter and is currently seeking new music (mainly instrumental) for licensing in TV, films, and advertising. The company offers a 50/50 split with the songwriter on mechanical, sync, and broadcast royalties. You can submit tunes via its website.

## GHOST IN THE MACHINE

**Phantom 4 Music** ([phantom4music.com](http://phantom4music.com)) is a Canadian company that prefers to initially listen to new music online (for example, music posted on your MySpace profile). If the company reps like what they hear, they'll ask you to email MP3 files of the songs. The company pitches songs it represents for nonexclusive placement in movies, TV shows, and commercials. It also pursues exclusive song placements with A-list recording artists. The company offers its writers an even split of royalties on their songs.

Claiming to own the largest production-music library—with about 80,000 song placements per year—**Pump Audio** ([pumpaudio.com](http://pumpaudio.com)) asserts that music accepted for its catalog has a high chance of getting placed. The company's sales staff of 600 has licensed music in more than 20 countries for TV commercials and shows, in advertisements, and for use on websites and radio. Past clients include MTV, VH1, Oprah, Nike, A&E, and NBC.



Phantom 4 Music pitches songs it represents for nonexclusive placement in movies, TV shows, and commercials.

**Pump Audio** offers nonexclusive contracts to writers it's interested in working with. Although the company retains 65 percent of licensing fees it secures, it pays you half of the publisher's share of performance royalties. Your Performing Rights Organization (PRO) pays all of the writer's share directly to you.

**Rumblefish** ([rumblefish.com](http://rumblefish.com)) is an online catalog of music that both professionals and the public can browse. It offers its songwriters a nonexclusive contract with a one-year term. Signed songwriters retain all performance royalties collected for their music. Rumblefish retains half of all licensing fees, paying the remainder to you four times a year. Submit your music online free of charge. Songs may also be mailed on CD provided they include an addendum that lists the included songs and writers along with their CAE numbers and signatures. (A CAE number is the personal identification number assigned to a writer by his or her PRO.) Most of Rumblefish's success has been in placing music for ads and training videos, although it also does quite a bit of licensing to content creators on YouTube. Rumblefish has deep relationships with companies such as Microsoft and Nike that are based in the Northwest.

**Song Street Records** ([songstreetrecords.com](http://songstreetrecords.com)) accepts music submissions in MP3 format uploaded to its site. There is no fee to submit your music. The company will listen to your submissions within 30 days after they are received. The company offers exclusive deals to writers it is interested in, and it retains half of the money earned by music placements. It pays your royalties in the quarter following their collection.

## EYES ON THE PRIZE

**Songs With Vision** ([songswithvision.com](http://songswithvision.com)) pitches its catalog of music to its contacts in the film and TV industries. The company's writers sign a nonexclusive co-publishing agreement: The company earns half of the publisher's share of royalties and fees, whereas the writer keeps all of the writer's share and half of the publisher's share. You must pay a fee to submit songs. Songs With Vision offers critiques and feedback on every submission it receives, accepted or not.

**The Sync Agency** ([thesyncagency.com](http://thesyncagency.com)) works specifically with ad agencies. Although most of its music placements are with firms in Europe, the company also pitches a lot of American music. It is different from most music-licensing companies in that it does not represent any specific artists or catalog but exists to help ad agencies find the music they are looking for. The Sync Agency is open to hearing new music, but it does not have a specific submission procedure.

**TAXI** ([taxi.com](http://taxi.com)), a pioneer in the indie artist/music-licensing field, offers project listings provided by production-music libraries, film and TV music supervisors, ad agencies, and videogame manufacturers. To submit songs to TAXI, you pay a yearly fee. The company's A&R screeners forward your best material to the industry contacts that requested specific types of music or artists. TAXI doesn't take any of the publishing-related income.

**YouLicense** ([youlicense.com](http://youlicense.com)) specializes in licensing for small-scale uses such as corporate DVDs and software, webisodes, indie/documentary films, and art clips. Anyone can join and upload their music for free. Music supervisors can browse the online music database, which includes metadata such as genre, style, and mood. You are allowed to upload 10 songs with a free account. YouLicense retains only nine percent of any licensing fees, leaving you with a hefty 91 percent. All payment is done directly between seller and licensee via PayPal.

## ONLY THE BEGINNING

If you'd rather not sign with a production-music company, there are shortcuts to pitching your music yourself. Several subscription-based services provide leads for projects in the film and TV industries that are currently in need of music, and they even include a list of the music supervisors for each project. These services include **CueSheet** ([cuesheet.net](http://cuesheet.net)), **The Hollywood Reporter** ([hollywoodreporter.com](http://hollywoodreporter.com)), and **Songrunner** ([songrunner.com](http://songrunner.com)). Sign up on Songrunner's website to receive free periodic email listings of its projects. *The Hollywood Reporter* and *Cuesheet* charge substantial fees for their services. The latter is published by SongLink International and delivered twice-monthly by email. \*

*Dave Tough is a music producer, mixer, and songwriter in Nashville. His songs have been licensed for commercials, major motion pictures, corporate videos, and advertisements.*

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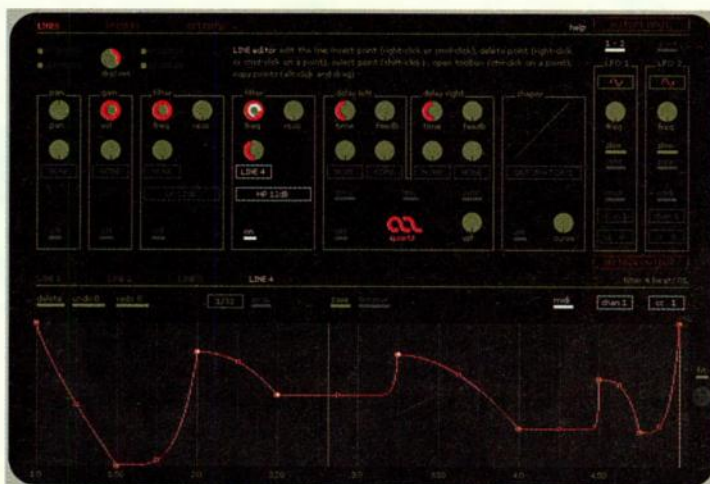
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**FIG. 1:** Artificial Audio Quartz multi-effects processor lets you route its four Line Modulators to other plug-ins as MIDI control change messages. The envelope shown here sends out a 4-bar pattern of MIDI mod wheel (CC1) messages.

# Drawing the Line

Use breakpoint envelopes to modulate effects settings

Breakpoint envelopes are among my favorite sound-design tools, especially on synths that also offer a robust modulation-routing scheme. But it's rare to find them on special-purpose synths such as emulations of classic electronic and acoustic instruments, and it's even more unusual to see them on effects processors. So when Artificial Audio ([artificialaudio.com](http://artificialaudio.com)) released its multi-effect Quartz, boasting four of them, I couldn't wait to get my hands on it. Quartz calls them Modulation Lines and lets you also route them to other devices as MIDI control change messages (see **Fig. 1**).

To route Quartz's Modulation Lines when using the AU version on a Mac, most DAWs make you use an IAC bus—a process that has some inherent lag. So if your DAW supports VST plug-ins, that's usually the way to go. On the other hand, if you want to control external hardware or a software application that doesn't support plug-ins, the AU version with an IAC bus is the best route. For example, this lets you control Propellerhead Reason and Record devices when you run Reason or Record as a ReWire client to your DAW.

Vintage keyboards such as organs, electric pianos, and string machines had few controls and nothing resembling an envelope generator. Software emulations such as the physical-modeled Applied Acoustics Systems ([appliedacousticsystems.com](http://appliedacousticsystems.com)) Lounge Lizard EP-3 expand the control set to let you dial in your own sounds. But they are usually light on modulation, that not being in the spirit of the original instrument. To use Quartz's Modulation Lines on these instruments, you'll need to route Quartz's MIDI output to the instrument plug-in, and how to do that depends on your DAW. I used Ableton Live 8 and Lounge Lizard for this example.

I started by inserting Quartz VST as the last plug-in on the track containing Lounge Lizard. Alternatively, you can insert Quartz on any audio or MIDI track or as a send effect. To send MIDI from Quartz to Lounge Lizard, I created an empty MIDI track, set its MIDI From boxes to point to Quartz, and set its MIDI To boxes to point to Lounge Lizard. I then used Lounge Lizard's MIDI Learn to assign MIDI CC numbers to the controls I wanted to modulate: Pickup Symmetry,

Mallet Strength, and Notch Filter Rate (see **Web Clip 1**).

Rather than create Modulation Lines and then dial in Quartz effects settings, I prefer to browse Quartz's presets to find an effect I like and then set up external modulation. Typically, the presets use one or two Modulation Lines, which you can see in the upper half of the control panel as you select presets. You can use those simultaneously for external modulation, thereby syncing to the effects modulation, or you can create separate Modulation Lines in unused slots.

Keep in mind that the Modulation Line graph spans the full MIDI controller range. You can limit the range by lassoing some or all of the breakpoints and dragging them up or down. Some synth controls—all of Lounge Lizards panel B controls, for example—affect only notes triggered after they are changed, so you may need to nudge all break points a few ticks early to achieve the intended effect. \*

*Len Sasso is a freelance writer and frequent EM contributor. For an earful, visit his website, [swiftkick.com](http://swiftkick.com).*



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## Beat of a Different Drummer (Part 1)

I've always had a fascination with percussion instruments and groove-oriented music. In fact, the drum kit would have been my first musical instrument if my parents hadn't persuaded me to take up the guitar. I love playing the guitar, but I've always been a bit of a tinkerer. When I was a child, my guitar would soon see its strings reduced from six to two, and the pick give way to an old broken drumstick, which I'd use to bang out rhythmic patterns while fretting different note progressions. The

guitar became a homemade two-string dulcimer of sorts, and by playing with this technique, I was able to focus more on the rhythm and less on the tonal passages. Variations in time became as important as altering the pitch of the notes themselves. The feeling was

tribal and I had found the groove. Or maybe the groove found me? Either way, I've spent my entire musical career putting as much weight on the rhythmic elements of music as on the melodic.

There is an art and science to programming drums. What makes a drum progression interesting is the push and pull (swing) between notes and the weight each hit has in comparison to each other. The tonal characteristic of a drum changes with different strikes, and different players hit with difference emphasis. One of the hard-

est techniques in drum programming is making a passage breathe—adding a human element where there is none. Although humanizing a programmed beat is often less important in electronic music, in rock music the human touch is what makes a record feel alive.

In part one of this column, I'll look at drum programming as it pertains to electronic music. Next month, I'll get into more advanced methods, such as shifting elements in time or removing notes from the quantization grid, methods of loop editing, creative uses of loops, and “live” drum programming.

### INTO THE SWING OF THINGS

Drum machines and sequencers can create perfect rhythmic passages that have the machine-like characteristics common to early '80s pop, hip-hop, and straight-eight dance music. The choices for quantization include whole-, quarter-, eighth-, 16th-, 32nd-, and 64th-note values in straight, dotted-note, and triplet varieties. When we introduce swing to this quantization, we have the luxury of almost any variation of time in between these standard subdivisions. Most sequencing software allows free movement on the grid, as well as movements as small as a tick.

Swing is what gives rhythmic passages their funk, and it is one of the most critical programming elements to understand. The classic drum-machine reference for swing is the Akai MPC-60 shuffle. For the examples I'm discussing and showing here, I'm using the Propellerhead Reason ReGroove mixer and applying the MPC-60 shuffle percentages. What I love most about the ReGroove mixer (see **Fig. 1**) is its ability to apply a groove or swing to multiple tracks. Changes made to that groove affect the tracks that have the selected groove associated with them. This comes in quite handy when you want the whole sequence to have the same groove as a drum loop or rhythmic passage. Experimenting with different grooves in a sequence becomes as easy as loading a new groove template in the ReGroove mixer.

“  
This technique  
is what I call the  
“James Brown.”



**FIG. 1:** One of the handy features of Reason's ReGroove mixer is its ability to apply shuffle globally.



To illustrate the importance of swing, take a classic *boom-bap* drum pattern with 16th-note hi-hats and apply different percentages of swing to it. (Note: All the note volumes are the same.) First listen to the passage with a straight 16th-note quantization at 95bpm. Then listen to the passage as you add different amounts of swing. Start with 51-percent shuffle, followed by 55, 57, 60, and all the way up to 75 percent. Notice how the beat transforms from a straight robotic pattern to one that gets jazzier and seems a bit loose as the swing increases (see **Web Clips 1** through **4**).

It's interesting to note that if you change the tempo of the beat to other genre-specific settings, it's the swing that gives those feels their characteristic sound. For example, a programmed beat with 55-percent shuffle at 130bpm is the classic sound of Florida breaks. Drum and bass at 165bpm often uses a shuffle of 55 percent on the hi-hats while the kicks are shuffled at 63 percent for a slightly jerky feel. Get used to these different types of shuffle quantizations (see sidebar "Common Shuffle Settings") because they are the bread and butter of programmed beats.

## TURN IT UP

Next up: volume. A drum loop that was played by a live musician has natural volume accents and tonal change between strokes. These accents add variety and can help a static 8- or 16-bar loop have more life. When programming, the best way to figure out where the natural accents would be if played by a live drummer is to physically tap out the beat. You'll notice that you'll strike the hi-hats louder on the beats that hit concurrently with the snare and kick. Once you get the general volumes in place, try altering the volume of the accent hits by plus or minus one to five ticks.

I'll often make a copy of a 16-bar pattern and change the volumes of the hi-hats, but keep the same kick and snare pattern. This technique gives me two distinct patterns that tend to fool the human ear into thinking there are more changes in the programmed beat than actually occur.

Another classic technique is giving the first beat of a measure the strongest accent. This technique is what I call the "James Brown" as Brown was the king of that kind of rhythm. Fatboy Slim, The Prodigy, the Chemical Brothers, and the Crystal Method all use this weighted first beat in their productions. In electronic music, the beat often has an 808 kick on the first note of the measure to really drive home that weighted first note.

If you are programming a shuffle hi-hat, try altering the volumes so that the odd-numbered hats are louder than the even-numbered hats. This creates a more natural shuffle feel and is a major part of programming shuffle beats and snare rolls. Experiment with different volume differentials to see what works best for you. An example would be the loudest notes at



## COMMON SHUFFLE SETTINGS

Here are typical settings for shuffle in various musical styles.

**Hip-hop:** MPC 55 to 59-percent shuffle

**R&B:** MPC 61-percent shuffle

**Break beat:** MPC 57- to 62-percent shuffle

**Two-step:** MPC 65 to 69-percent shuffle

**Drum and bass:** Kick and snare 55- to 61-percent shuffle; hi-hat 60- to 63-percent shuffle

**Florida breaks:** 55-percent shuffle

a volume of 127 and the secondary volumes at 124 or 122 or even lower.

## CHANGING TONES

I often use multilayered samples that are tonally different depending on the volume of the strike. Another method would be to use a filter with a frequency modulated by the volume. Louder hits are full frequency and the softer hits are slightly muted or rolled off. Remember, our ears like change and tonal changes create interest.

The next step in programming a great beat is adding grace notes. These are the notes that happen in between primary hits and ghost notes on the snare, and as drummer's stick rests on the snare. I often program snare drags that roll into a kick and hi-hats that open and close, tightening and loosening the feel of the progression. I usually play these into the loop live and don't quantize them to give the loop more movement. \*

---

*Ming (mingsmusic.com) is a New York City-based artist, producer, and DJ. He owns Hood Famous Music and co-owns Habitat Music (habitatmusic.com).*



## Final Passes

At the end of the mixdown phase on any given song, it's customary to print several different versions of the mix, including an instrumental and an a cappella. These are part of the group of mixes (aka the *final passes*) that make up the master recording. Actually, the instrumental and a cappella versions are only two in a running list of what the label or artist may require. Other industry-standard passes include the main pass (full mix), as well as the main pass (vox up) and main pass (vox down), which have the vocals slightly up or down. There's the radio edit (shortened for radio) and sometimes a TV track (a mix minus the lead vocal). A clean pass may also be needed for broadcast for a song with explicit lyrics.

With a dance remix project, there are two types of passes that you'll always need to do: the extended pass and the radio edit. In album situations, the extended pass can serve as the main mix of the song. It has extended intro and outro sections of about a minute each. These sections allow DJs to mix the song in and out with others in their sets. The radio edit is cut to less than four minutes in length.

### MIX EXTENSIONS

Once I have a handle on the direction and basic groove and structure of the remix, I'll start working on the extended version, which will usually be somewhere in the neighborhood of six to seven minutes long, featuring purpose-built intro and outro sections and geared toward beat-matching and DJing.

I'll move all the regions I've created toward the right side of my DAW's timeline, creating about a minute of space in the front (I'll tighten the timing later) to work on the intro section. I'll then copy the drum tracks from the main part of the song, which I've already worked on, and paste them at the beginning of the extended intro. I'll use them as a starting point for that section (see **Fig. 1**). I'll then experiment with muting various mix elements and auditioning different track combinations until I figure out how I want the intro to build. Even though it's an extended section designed for DJ transitions, you still need to make it as creative as possible, populating it with signature elements such as synth parts, featured loops, and anything that will give the record its own identity and help lead into the main part of the song.

Once the intro is mostly fleshed out, I'll copy it to the end of the record and create a quick outro by flipping the arrangement (essentially creating a mirror image of the intro with the fuller part at the beginning instead of the end; see **Fig. 2**). I will come back to it later when the other sections are exactly how I want them and make it more interesting and precise.

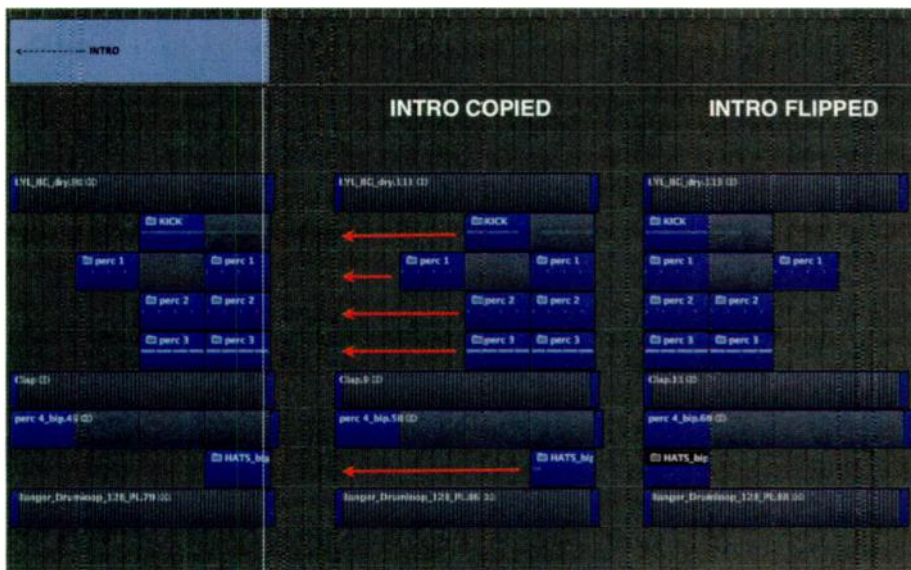
### ON THE RADIO

After the extended mix is complete, I move on to the radio edit. Only if I am in a major time crunch will I carve that from



**FIG. 1:** To get a quick start on your extended intro, move the existing tracks about a minute later in the timeline, and copy and paste the drums to the new bar 1.





**FIG. 2:** One way to create your outro is to copy the intro and flip it so that it starts fully built up and winds down.

the stereo file of the extended mix. I prefer to create the radio edit directly in the extended mix's multitrack session. Doing so allows me to maintain consistency so that if I change an element along the way, it will get translated across both mixes. Also, by using the multitrack session, I have much more creative control. If I'm editing the 2-track file, there may be a sound effect, cymbal crash, or other sustaining element that ends up getting cut off or cut short due to an edit. If there's a long breakdown section, which is typical in dance mixes, editing it down in the multitrack allows you to re-create it to fit the shorter format and still have control over all its elements.

The first thing I do when making a radio edit is to copy all the regions for the entire extended mix to later in the timeline, which is where I'll work on editing it. Make sure to also copy all the automation. Depending on your DAW, you can do this either through a preference setting or with a simple copy and paste. For sound effects and other elements that have very important automation data, I might bounce the track in question as a new audio track. In Apple Logic, I can set the automation to be region-based so that it is more visible and always travels with the region.

After everything has been successfully copied, I start carving down the radio edit. The easiest places to start chopping are the intro and outro sections. These can be cut almost entirely out, leaving only eight to 16 bars to get into the first main musical section. As mentioned, the other section that can often be cut is the breakdown. I will typically edit it down to be eight to 16 bars in length and see how it sounds. Sometimes, those two steps are enough to get the mix to be less than four minutes.

If so, I'll then make sure that the overall arrangement holds up at the new shorter length and balances the contrasting song sections effectively. The trick to maintaining the same

energy and feeling as the original mix is to not cut out sections entirely but shorten them. In the clubs or on an album, you can take longer to build your arrangement. On the radio, things need to happen faster, so aim to catch people's attention in different ways and get to the main sections quickly.

## LAST STEPS

Once both versions are complete, I begin printing the final master passes. I have my own standard list of mixes that I print whether or not the label or artist asked for them: extended mix (main pass), extended mix (instrumental), extended mix (a cappella), radio edit (main pass), radio edit (instrumental), and radio edit (a cappella), all in both full-bandwidth 24-bit WAVs and 320kbps MP3s. The vox up/down passes are not as critical nowadays as that is an easy recall within the DAW session if it is needed. \*

---

*Vincent di Pasquale is producer/remixer who works out of his project studio (vcdstudios.com). He has remixed songs for One Republic, Madonna, Nelly Furtado, and many others, and he is the author of The Art of the Remix, a comprehensive interactive remixing course available now at faderpro.com.*

# REVIEWS

**FIG. 1:** A custom Dual Tone setup showing the Lo-Fi mic preamp in the foreground.



MAC/  
WIN

## Line 6 POD Farm 2

Unlimited tone for any instrument

By Gino Robair

\*

### PRODUCT SUMMARY

#### AMP-AND-EFFECTS-MODELING SOFTWARE

**PRICE:** \$49 for Line 6 hardware; \$99 for iLok; \$249 (Platinum) for Line 6 hardware; \$299 (Platinum) for iLok

**PROS:** Excellent sound quality. Intuitive interface. Wide variety of gear.

**CONS:** Standalone version requires Line 6 hardware.

<b>FEATURES:</b>	1	2	3	4	5
<b>EASE OF USE:</b>	1	2	3	4	5
<b>QUALITY OF SOUNDS:</b>	1	2	3	4	5
<b>VALUE:</b>	1	2	3	4	5

line6.com

#### 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

Up to Line 6's release of POD Farm in 2008, to use the company's exceptional amp-modeling software, you either had to have an Avid (then Digidesign) Pro Tools TDM system or access it using Line 6's proprietary hardware. POD Farm offered standalone and native plug-in versions (VST, AU, RTAS) that worked with any interface you wanted to use. All you needed was an iLok if you weren't already using one of the Line 6 POD Studio interfaces. (The standalone version requires a Line 6 POD Studio, TonePort, or GuitarPort. If you use Line 6's interfaces, however, you get virtually no latency.)

This year, Line 6 has released POD Farm 2. While it's not an upgrade in terms of the quantity of gear models, version 2 adds important features. Michael Cooper covered the original release in his roundup of amp modeling software in the September 2009 issue of *EM* (available at emusician.com), so let's look at what the upgrade offers.

### CHOOSE YOUR PATH

The basic signal path in POD Farm is called a Tone, and it can include an amp, a cabinet, a mic, and up to 10 effects. The basic version of POD Farm 2 offers 18 guitar amps, 24 guitar cabinets, five bass amps and cabinets, 29 effects, and six mic preamps, while the Platinum version increases the number of guitar amps to 78, the bass amps to 28, the bass cabinets to 22, and the effects to 97.

Originally, you could run two Tones in parallel, each with its own volume, pan, and mute controls. Version 2 adds greater flexibility to Dual Tones by letting you combine or switch between them with the onscreen A/B/Y box (see Fig. 1). Double-click on the box at the other end of the signal chain to get the Mixer view. At the left are switches for selecting one or both of the signal paths. In the mixer, each signal path includes meters for input and output level, an output level control, a pan control, and a Mute but-



ton. In addition, there are knobs for DI level and delay, which let you dial in your direct, unprocessed sound and delay it to time-align the processed and direct signals (see **Fig. 2**).

To set up Dual Tone, click on the Dual button next to the name of your preset. A dropdown menu gives you two choices: Create Empty Tone or Copy Current Tone. If you want to create two similar signal paths, you'll want to copy the single Tone. Otherwise, start with a clean slate and build your Tone from scratch. There are plenty of single and Dual Tone presets to start with, but creating your own couldn't be any easier: Select Gear view, click on a category (Guitar Amps, Bass Amps, Wahs, etc.), select the model you want, and drag it to the signal-flow display.

Because POD Farm 2 has MIDI support, guitarists can now use a foot controller, such as the Line 6 FBV Express MkII or Shortboard MkII, to switch between Tones, control amps, and effects parameters, and to use tap tempo. You can also use desktop control surfaces thanks to POD Farm 2's MIDI Learn functionality. You'll want a MIDI pedalboard to work with the wahs and modulation effects in a guitaristic way.

## ELEMENTAL TONE

Another important feature of version 2 is that each family of amps and effects is now available individually as an Element, of which there are 11. Want to run your track through an amp and nothing else? Fire up POD Farm Guitar Amps or POD Farm Bass Amps. Need only a guitar tuner? Launch POD Farm Tuner (available as a plug-in in this update). There are Elements for reverbs, filters, delays, modulation effects, wah-wahs, dynamics processors, and preamps/EQs, with mono and mono-to-stereo versions.

Of course, the Elements aren't just for guitar tracks. You'll want to try running vocals, drums, and keyboards through the wealth of effects POD Farm 2 has to offer. And having each effect available individually will save you from using

multiple instances of the full application, buying you back some CPU cycles.

If you're wondering what the category of preamps/EQs refers to, it's a selection of six channel strips (microphone preamp and EQ combos) that are modeled after API, Neve, and other classic mixing consoles. Although I didn't have access to the hardware versions to test how accurate they are, the EQ sections offer a great deal of sophisticated tone shaping. You can place them anywhere in the signal path, which makes them all the more useful for sculpting interesting guitar sounds. I used POD Farm 2's preamps and EQs on a wide variety of tracks—they are extremely versatile.

## QUICK-CHANGE ARTIST

The POD Farm 2 interface gives you an instant gestalt of your setup. To change the order of the elements in the signal path, simply drag them to a new position. As mentioned earlier, you can use up to 10 effects in each Tone, and you can experiment by placing them before or after the amplifier, even while you play. In most cases, the sound changes immediately, with little or no hiccup in playback. This makes it easy—and exciting—to build a Tone from the ground up.

When you mouse over one of the components in your signal chain, the name of the element appears below and a yellow Bypass button appears above—very handy. Of course, each component in the signal path sucks up some number of CPU cycles, so if you're at a point where you're straining your computer's resources, you can see which effects are the biggest resource draw by individually bypassing each element.

That's not to say that the program is inherently a CPU hog. I ran POD Farm 2 as an RTAS plug-in on a MacBook Pro (3.06GHz Intel Core 2 Duo) within Pro Tools LE 8.0.3, and a single instance

running Dual Tones, with each signal chain sporting an amp/cab combo and three effects (reverb, fuzz, phaser), usually took less than 20 percent of the CPU dedicated to RTAS plug-ins. I had no problem running several full instantiations at a time.

Running an Element plug-in usually took around 10 percent of the CPU bandwidth. Of course, it depends on what kinds of effects you're using—some are hungrier than others for CPU cycles. But I was surprised by the light load compared to the high sound quality I was getting.



**FIG. 2:** A close-up of the A/B/Y mixer, with both channels on.

## PLUG AND PLAY

Line 6 has done an exceptional job of making POD Farm 2 intuitive. From the iLok authorization process to assigning MIDI parameters, the software is very easy to use. Care to synchronize the effects with the tempo of your host DAW? No problem: A button on the upper right lets you toggle between following the host tempo or a user-set tempo, which you can type in or set with the Tap button. The button flashes to the tempo you've chosen. (It's worth noting that when an effect's Sync button isn't engaged, the speed/tempo parameter can far exceed that of the global or DAW tempo. For example, the speed of the Random S&H effect can go to 15Hz—almost audio rate.)

As you would expect with Line 6's modeling software, there are excellent examples of every important name-brand in every category—amps, cabinets, mics, preamps, and effects. It would be ridiculous to try to name them all. The sounds are often easily identi-



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fiable—or at least evocative—of the product in question. And with so many options from which to choose, let alone configurations, you can start with, say, a Hendrix- or Clapton-style tone and refine or transform it in innumerable ways.

I tried POD Farm 2 with single-pole and humbucker pickups, and I was able to create a sound that fit any genre I could think of, from scooped metal to twangy country, and from silky jazz well into the avant garde using the modulation effects. Many of the presets are named after famous songs (e.g., “American Woman,” “And Your Bird Can Sing,” “Red House”) or refer to styles or musicians. Play the appropriate part for the preset, and you’ll find that the model is usually dead-on.

For my own work, I’m not looking for something that perfectly re-creates a song or artist. I want a tonal palette that I can tweak to fit the needs of a song, and that’s where POD Farm 2 shines. As you get deeper into the parameters, it’ll feel like there is an infinite number of ways to work with timbre once you start adding up the tone controls on the amps, the preamp equalization, the cabinet choices, the mic selection, the various effects, and the ability to split the signal into two paths and blend the output.

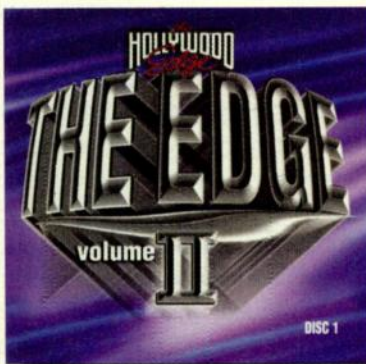
**TONE HARVEST**

POD Farm 2 offers a wealth of features that anyone playing guitar or recording other instruments will enjoy using. It’s easy enough to use that you’ll find the right tone for songwriting or demo tracking without much menu surfing, but deep enough that you can tweak your tones to a high degree when you’re laying down important tracks.

Although the basic version costs about as much as a few packs of strings, the Platinum version offers enough variety to inspire you for a long time, and it’s well worth the investment. \*

*Gino Robair is editorial director of Gearwire.com and a former editor of EM.*

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**FIG. 1:** Trigger's excellent GUI includes an intuitive dynamic waveform display (top-center of this figure) that greatly aids triggering setup.



MAC/  
WIN

# Slate Digital Trigger Platinum

Drum-replacer plug-in with acclaimed Steven Slate Drums Platinum library

By Michael Cooper



## PRODUCT SUMMARY

**DRUM-REPLACER PLUG-IN,  
SAMPLE LIBRARY**

**PRICE:** \$299.99  
\$129.99 (EX)

**PROS:** Outstanding sound quality. Extremely reliable triggering. Easy to use. Competitive price.

**CONS:** Stepped adjustment of ASR values. No undo or redo. GUI doesn't show name of current preset.

<b>FEATURES:</b>	1	2	3	4	5
<b>EASE OF USE:</b>	1	2	3	4	5
<b>QUALITY OF SOUNDS:</b>	1	2	3	4	5
<b>VALUE:</b>	1	2	3	4	5

slatedigital.com

Trigger heralds a new generation of drum-replacement plug-ins with advanced features that improve performance and enhance realism. This cross-platform (Universal Binary AU, VST, and 32- and 64-bit RTAS), iLok-protected plug-in lets you trigger multiple drum samples at once—such as those recorded with close and room mics, respectively—with accurate phase. In other words, there is no phaseyness when combining multiple samples, nor is there flammng when layering replacement samples with your original drum tracks.

Trigger includes all of the drum samples from the Steven Slate Drums Platinum sample library (31 kicks, 45 snares, and eight sets of toms) and two kicks and snares each from the company's upcoming Deluxe library. All the drums use Slate's proprietary .tci (Trigger Compressed Instrument) multi-sample format, which squeezes 6GB of 24-bit samples into 2.3GB in lossless fashion. You can also use your own custom WAV and AIFF samples in Trigger

after converting them to .tci format using the included Trigger Instrument Editor, a standalone application.

Each instrument (multisampled drum) in a Trigger drum kit can have a whopping 127 articulations, 127 velocity layers, and 127 alternating samples (which precludes hearing the same sample triggered repeatedly). An innovative Leakage Suppression function prevents, for example, kick-drum hits that bled into your recorded snare track from triggering snare-replacement samples.

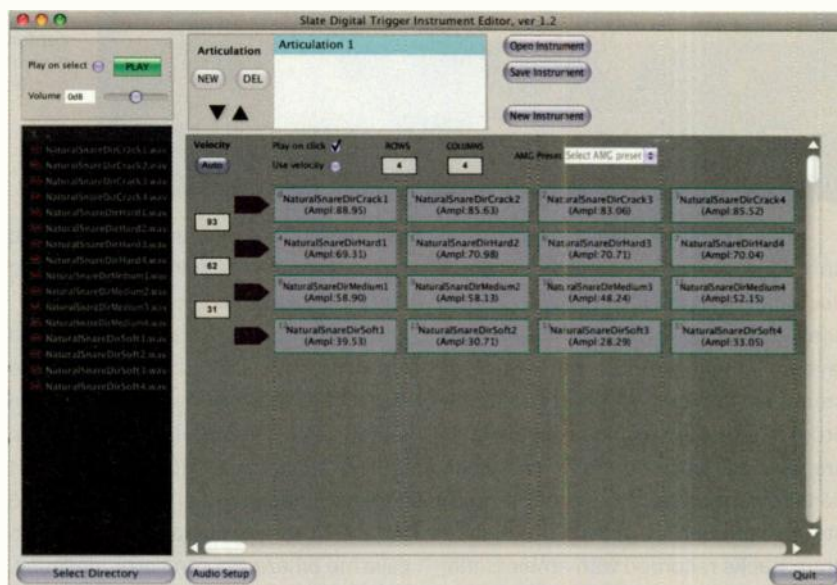
I reviewed the AU version of Trigger Platinum Version 1.5 in MOTU Digital Performer V. 7.12, using an 8-core Mac Pro running Mac OS X 10.5.4. The less-expensive Trigger EX plug-in uses the same software engine but includes only about a quarter the content of Platinum (nine kicks, 10 snares, and three tom sets).

## DRUMS À LA MODE

Trigger offers two detection modes. Accurate is for use in the studio



**FIG. 2:** The standalone Trigger Instrument Editor lets you convert WAV and AIFF multisamples to the .tci format for use in Trigger.



and imposes 11ms latency with DAWs that don't offer automatic latency compensation. For the stage, the Live mode provides less-accurate velocity response but near-zero latency.

Using Trigger's browser, you can load up to six instruments (six snare drums, for example) into one instance of the plug-in. Audition the sound of the instruments' samples at each velocity layer by clicking in the plug-in's main display with your mouse. A Mix control allows you to totally replace your original drum track with the instruments' samples or blend the two sources together.

Where multiple instruments are loaded into one instance of Trigger, you can independently set each instrument's volume, pan, polarity (phase-inversion setting), and pitch (tuning) using the onboard 6-channel mixer. Tweak ASR envelope controls for each instrument to shape its attack and release curves and adjust sustain time. Each instrument can also be soloed or muted.

Yet another control section adjusts a selected instrument's dynamic range to, for example, rein in samples replacing original kick-drum hits that fluctuated in level. You can even make loud hits trigger low-level samples—great for taming behemoth drums on the stripped-down verse of your song.

All of the instruments have different articulation presets. For example, each instrument can be made to play samples from any velocity layer or just the higher layers (the latter for a more consistently aggressive sound). Snare drums go one further: They also include soft (lower-velocity layers only) and rimshot articulations. Instrument articulations can be changed using

your mouse, MIDI continuous controllers, or your DAW's automation. (Many of Trigger's controls can be automated.) Instrument combinations and all of their control settings can be stored and recalled in presets, a dynamite shortcut for building an arsenal of at-the-ready custom drum sounds.

Several controls are provided to improve sample triggering, and a dynamic graphic display aids greatly in finding the optimal settings (see **Fig. 1**). Adjust the input level of the original drum track in the plug-in and filter it with the included adjustable highpass filter, if necessary, to improve triggering. Set the sensitivity control high enough that even quiet drum hits trigger samples in the plug-in. The Detail control determines what threshold an input signal must surpass to trigger a sample (or several samples at once if multiple instruments are loaded). The Retrigger control sets the minimum time interval between sample triggers to preclude unintentional double hits caused by bleed or sloppy playing on the track. (If you set the Retrigger control too high, then Trigger will not handle flams and rolls properly.) Once your samples are triggering properly, adjust the plug-in's output level to taste.

## WHEN MORE MUSCLE IS NEEDED

On dynamic drum tracks containing a lot of bleed, Trigger's Leakage Suppression control can consistently trigger samples properly. Use of this control requires instantiating Trigger on the first insert of a stereo aux (or group) in your DAW. Stereo configurations of Trigger use the left channel for triggering samples and the right channel as a sidechain input. (This is true whether or not Leakage Suppression is used.) Bus the track you want to replace or layer with samples (for example, the snare drum track) to the left channel of the stereo aux, and route bleed sources (kick, toms, and hat) to the right channel. Then turn up Trigger's Leakage Suppression control until only the intended drum (the snare) causes samples to be triggered.

Trigger also accepts a MIDI input, so a MIDI track or external controller can trigger the samples loaded into the plug-in. Using Trigger's MIDI output controls, you can convert audio-input signals into MIDI notes to trigger sounds in a virtual instrument such as Native Instruments Kontakt or Toontrack Superior Drummer. But Trigger's included sample library should keep your appetite sated.



**FIG. 3:** The ASR envelope (bottom-center of figure) of a Trigger instrument derived from room mics can be edited to create gated-reverb effects.

Many of the Steven Slate Drums samples were recorded at NRG Recording (North Hollywood) to 2-inch analog tape and provide three sample layers, including those derived from stereo room mics. Some of the mono drum sounds were close-miked and are very dry, while others employ additional overhead mics. Also offered are stereo samples of heavily processed drum tracks recorded with ambient-mic setups in a large, concrete warehouse. You can create a terrific range of drum sounds by combining these different types of samples.

The Trigger Instrument Editor lets you browse and audition your own WAV and AIFF samples and auto-map them to up to 127 velocity zones (see **Fig. 2**). Map up to 127 alternating samples for each velocity zone. Create and name up to 127 articulations for your custom instrument. Then save the whole enchilada as a multisampled .tci instrument for use with the Trigger plug-in.

### TRIGGER-HAPPY

Trigger's intuitive GUI made setup a snap. The plug-in's graphic Wave Display dynamically shows the level of both input and sidechain signals in relation to the threshold level for triggering samples, and it flags any signal that triggered a sample.

The included sample library offered a wide range of excellent drum sounds, from tight and punchy to loose and open Led Zeppelin-style. My only complaint with the sample library was that toms were named inconsistently. A set of toms comprises between two and four drums. In some sets, Tom 2 is a rack tom, while in others it's a floor tom. For faster, more deliberate

selection of the desired toms, it would be better to name them *high rack, mid rack, low rack, and floor*.

Trigger sounded great when used on the inserts of mono drum tracks. But the plug-in really blew my mind when used on stereo auxes; in stereo, samples from the warehouse and NRG room mics lent incredible depth and character, and the powerful Leakage Suppression function gave me amazing control over triggering. I loved being able to drag Trigger from a mono to a stereo track, or vice versa, with all of my control settings retained.

Loading several Trigger snare drums at once (derived from both close and room mics), adding a dash of third-party



**Trigger's room and warehouse mics sounded so outrageously good, I turned off all my outboard reverbs for the snare track.**

EQ, and dialing in a bit of my original snare track with Trigger's Mix control yielded a phenomenal sound. Trigger's room and warehouse mics sounded so outrageously good, I turned off all my outboard reverbs for the snare track (see **Web Clip 1**). And the ability to save my complex edits of several combined instruments as a custom preset for recall on future projects is very useful. I was disappointed that Trigger didn't show the name of the current preset. Also, Trigger's color scheme for instruments selected for editing is subtle enough that I sometimes edited the wrong instrument by mistake. There are no Undo and Redo functions.

Applied on well-recorded drum tracks with few fills, Trigger's default settings often triggered samples so

reliably that setup required little more than bussing my drum track to the plug-in and loading the instruments I wanted. However, when used on a very dynamic snare track, I needed to either automate the Detail control or use Leakage Suppression to prevent tom bleed into the snare mic from triggering snare samples during some fills. Leakage Suppression was by far the easier and faster solution and was completely effective at preventing unintended triggering (see **Web Clips 2 and 3**).

### THE ENVELOPE, PLEASE

I was thrilled that I could adjust the ASR envelopes on Trigger's room and

warehouse mics to create outstanding gated-reverb effects (see **Fig. 3**). That said, Trigger doesn't allow numeric entry of parameter values but offers stepped controls with fairly large intervals so I couldn't set the sustain (gate) time exactly to the tempo of the song.

All of my criticisms of Trigger are minor. What's most important is that Trigger is easy to use, provides rock-solid triggering, and sounds fantastic. Trigger is one of the biggest upgrades to the drum sounds in my productions. \*

EM contributing editor Michael Cooper ([myspace.com/michaelcooperrecording](http://myspace.com/michaelcooperrecording)) is the owner of Michael Cooper Recording in Sisters, Ore.



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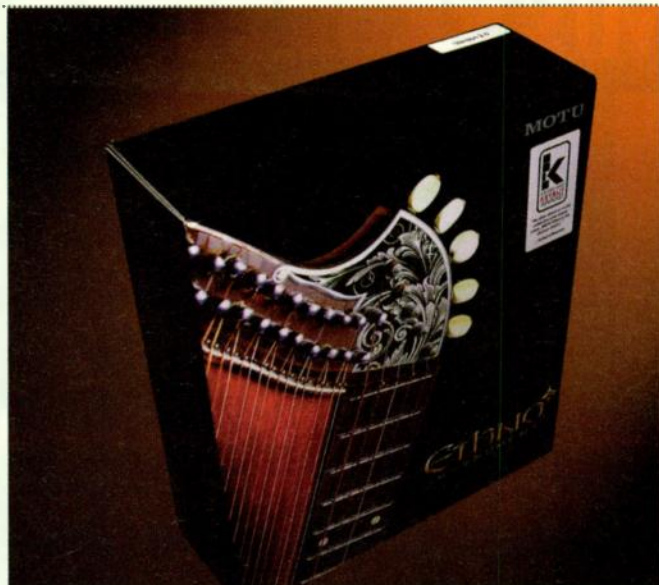
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# MOTU Ethno Instrument 2

Continuing the feverish hunt for new instruments to sample

By Jim Miller



## PRODUCT SUMMARY

### SOFTWARE INSTRUMENT

PRICE: \$375

**PROS:** Cutting-edge user interface for Mac and Windows. Remarkably complete collection of individual multisampled instruments, loops, and authentic phrases. Powerful audio engine. Amazingly easy to use. CPU-efficient convolution reverb. Superb documentation. Affordable.

**CONS:** Some signature instruments such as the Bagpipes simply don't make the grade.

<b>FEATURES:</b>	1	2	3	4	5
<b>EASE OF USE:</b>	1	2	3	4	5
<b>QUALITY OF SOUNDS:</b>	1	2	3	4	5
<b>VALUE:</b>	1	2	3	4	5

motu.com

When The Beatles added an Indian sitar to their recording of *Norwegian Wood*, it inspired an entire generation of musicians to be adventurous, to try something different—something besides the usual guitars, bass, and drums. Of course, The Beatles broke up well before technology caught up with their talent and innovation, but back in the 1980s, at a relatively early point in the evolution of digital sampling, someone decided to sample a Japanese shakuhachi, and the effect was much the same. Suddenly shakuhachis were everywhere, most notably in the intro to Peter Gabriel's hit single "Sledgehammer" and Tangerine Dream's U.S. score for Ridley Scott's 1985 film *Legend*. At that point, the fuse was lit and sound designers began a feverish hunt for new instruments to sample.

By the turn of the new millennium, a number of large sample houses were releasing collections of ethnic instruments. One of these was MOTU, with its critically acclaimed Ethno Instrument released in 2006 for both Mac and Windows. The virtual instrument shipped with a whopping 8GB of instruments from around the world (including the requisite shakuhachi). Unlike

some collections, Ethno wasn't just an assortment of individual multisamples looped and strung together: It included 4GB of loops and phrases (called *gestures* in some cultures), as well as a bank of useful synth-style accompaniment instruments. For the modest list price of \$299 (and available for less from most retailers), Ethno couldn't be beaten, and it sold quite well.

MOTU has just released its follow-up collection, Ethno Instrument 2, and this time around it's almost tripled in size to a whopping 21GB of multisamples, loops, and phrases. At its typical street price of \$375, it works out to less than \$18 per gigabyte. As someone who has personally recorded and released a plethora of world instrument samples over the years (as well as authoring the feature article "Sample the World" in the February 1997 issue of *EM*), I had a great interest in hearing exactly what the talented folks at MOTU had cooked up for us this time around.

### THE WORKING ENVIRONMENT

One of the most impressive things about Ethno 2 is the workspace (see Fig. 1). You couldn't cram more useful information into less space than MOTU did with

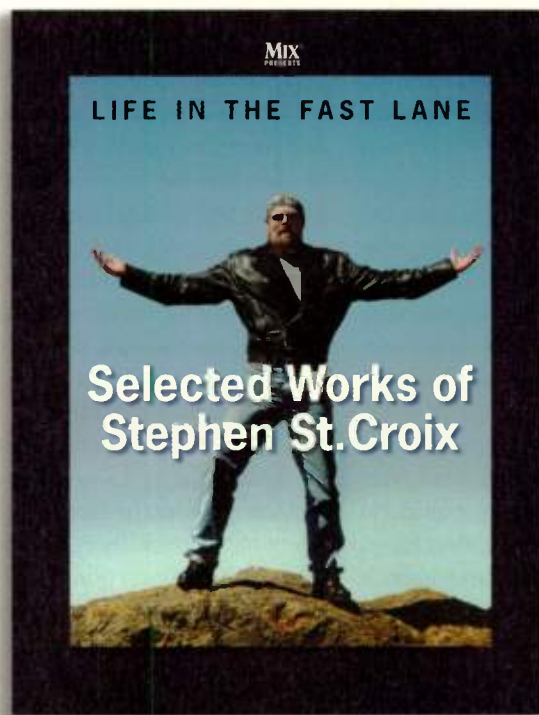


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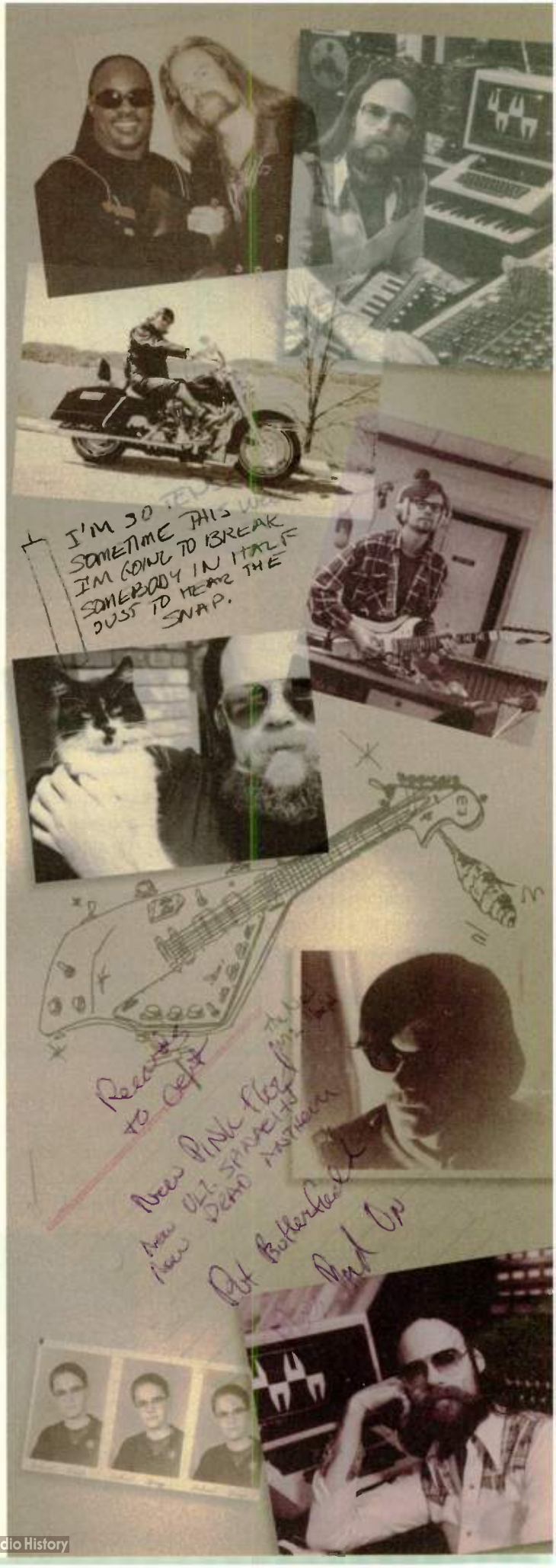
Stephen St.Croix inspired, provoked and educated *Mix* magazine's readers for 18 years in his one-of-a-kind column, "The Fast Lane." As an inventor, musician and engineer, St.Croix offered his audience a wealth of



knowledge and vision, as well as a Harley-riding rock-star attitude. Now, two years after his death, the editors of *Mix* have selected the best of St.Croix's columns, presented with never-before-seen photos, notes and drawings from his personal files. This book takes "The Fast Lane" beyond the pages of *Mix* and lends new insight into the life and mind of Stephen St.Croix.

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**MIXBOOKS**







**FIG. 1:** Almost any tweaking you might wish to do can be accomplished quickly and intuitively in the main window without the need to dig through additional submenus.

Ethno's user interface. What's more, it's quite simply a thing of beauty.

Both standalone and as a plug-in in all the major formats (VST, AU, RTAS, and MAS), Ethno 2 has all the features you'd want or need, such as unlimited parts, disk streaming, multiple audio outputs, and a convolution reverb that doesn't hog so much real estate that your system comes to a screeching halt the second you implement it (see **Fig. 2**).

Ethno 2 allows musicians working in different audio production platforms to effortlessly collaborate on projects. For example, if you use MOTU Digital Performer and your songwriting partner uses Apple Logic or Steinberg Cubase, it's not a problem. Save an Ethno 2 multi (which is MOTU's term for a preset with all of its settings) in one program and then open it up in another, and all of the settings are perfectly preserved. Ethno 2 displays all the important settings in one convenient window so you see everything without having to dig through layer after endless layer—a creativity killer of the highest order. LFO? Amplitude envelope? Filter settings? Velocity curves? Available right there for you to see at a glance. All of this is driven by MOTU's UVI Engine XT, which

is capable of delivering virtually unlimited polyphony (256 voices per preset), along with extremely low latency.

Don't feel like multi-tracking? No problem. Each instance of Ethno 2 (and there can be more than one) offers unlimited instruments, loops, and phrases; as many as 64 MIDI channels; and 17 separate audio output pairs (see **Fig. 3**). That means you can have as many as 64 instruments playing simultaneously.

You can easily create stacks by assigning two or more parts to the same MIDI channel. Instead of the already CPU-friendly convolution reverb, you can use one of the many digitally produced (and surprisingly clean) simple reverbs to further conserve power. But I loved using the sophisticated, lush-sounding convolution reverbs. These range from cathedrals and concert halls to caves and even forests. Great, great stuff.

Although Ethno 2 does everything you'd want without a hiccup, what probably matters more to you as a musician is the quality of the sounds. Regardless of just how powerful or user-friendly a particular user interface may be, any sample collection lives and dies by its sound quality and musical usefulness. Here's how Ethno 2 stacks up.

### THE SOUNDS

Simply listing all of the instruments included in the MOTU Ethno 2 library would use up the remainder of this story. In the Ethno 2 User Guide, it takes a



**FIG. 2:** By clicking on the Loops button, you can select from a phenomenal selection of ethnic instrument and percussion loops without having to close the basic UI window.

whopping 51 pages just to list the instruments, loops, and phrases, along with brief explanations of each instrument's appearance and traditional use. The sample sets range in size from a modest 160KB up to a massive 470MB. In some cases, instrument presets include an authentic tuning and a Western chromatically tuned version. Microtuning is also supported. There are so many instruments, loops, and phrases to explore that you will be busy listening for days—longer if you stop and play, as I do when I find something particularly interesting.

So how does it sound? Among the gold-standard presets are dozens of brilliantly performed, cleanly recorded, and accurately sampled instruments. I'll start with the individual instruments because these will get the most use. The multis are grouped by geographical region: Asia, Africa, Celtic, India, and so forth. Although I don't have the space to list them, keep in mind that each instrument typically includes several variations. Here are just some of my favorite individual multisampled instruments.

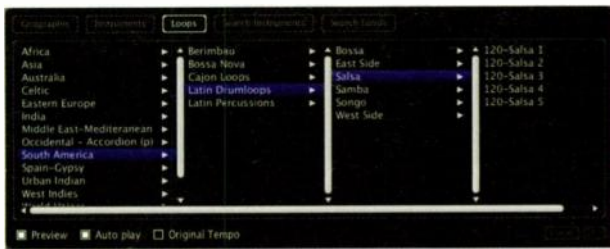
**Africa:** Flutes, Large Drums (spectacular), Balafon (imagine a primitive marimba), African Percussions, Kora, most of the Sanzas (Kalimba), and the Valiha (a dulcimer-like instrument).

**Asia:** Without a doubt the Gongs (which include dozens of sizes from 4.7 inches to a huge 26-inch Burmese gong), Koto, Pipa, Chinese Percussions, Taiko Drums (particularly the ones with reverb), Thai Drums, and Shakuhachi.

**Australia:** Aboriginal Percussions, Native Flute, and Oceanian Drums (though this one needs a bit of tweaking). I was greatly disappointed in the Didgeridoo and the Jaw Harps, and neither plays on the black keys.

**Celtic:** Fiddle, Harp, Pennywhistle, Celtic Percussion, Celtic Guitar, and Harmonicas. The collective Bagpipes left a great deal to be desired. (I could not find a single drone note anywhere, which is an important part of the overall sound.)





**FIG. 3:** Ethno Instrument 2's convolution reverbs are amazingly lush and highly detailed.

**Eastern Europe:** I liked the Balalaika Trems a lot. The other Balkan Instruments (Accordion, Double Bass, Sax, and Violins) are all highly usable, and I simply loved the Balkanish Voices, where a different traditional vocal performance is placed on each note from G0 to D7. The Cymbalum is versatile and beautifully resonant.

**India:** Dilruba, Electric Sitar, Harmonium, Indian Flutes, Indian Percussions and Percussions v2, Indian Violin (particularly the legato version), Santoor, Sarod, and Tambura. I was expecting more in this updated version of the Sitar, and still felt it didn't have enough of the characteristic bite and buzziness.

**Indonesia:** Lamellophone and Gamelan Drums and Gong.

**Middle East/Mediterranean:** Arabic and Persian Voices (both quite compelling), Baglamas, Bouzouki (including electric version), Maghreb Violin (with stunning layered multi with string section), Mandolin, Middle East Percussions, Santur, Saz, and Tzouras.

**Occidental (or domestic):** Acoustic Bass, Concertina (with wonderful key-clicks), Dobro (resonator guitar), and Jumbo Bottleneck Guitar.

**South America:** Ande(s) Flute, Equatorial Drum, Latin Panpipe, Latin Percussion, Electric Bass, Tango Accordion.

**Spanish/Gypsy:** Flamenco Guitar and Percussions, Gypsy Jazz Guitar.

**West Indies:** Requinto, West Indies bass. Sadly, the Steel Drums simply do not capture the signature raucous, metallic timbre of this family of instruments. There are additional bonus synths, percussion, and voices that range from good to outstanding.

In among the genuinely wonderful, truly addictive instrument presets in the Ethno 2 library, there are also some sounds that I found completely unusable. (In fairness to MOTU, I have to point out that I auditioned version 2.0.0 of Ethno 2, and odds are the company will make some changes by the time it releases its first upgrade.) One example is the Chinese Er Hu, an instrument capable of great expression, used brilliantly in the score for last year's blockbuster *Star Trek* in "Spock's Theme." (MOTU does call the multisampled, sustained version *Er Hu Noisy Vib.*) By contrast, the Er Hu phrases are performed and reproduced with a quite lovely timbre, and I found myself wishing there had been more of them. Check out **Web Clips 1** and **2** and judge for yourself.

### THE BOTTOM LINE

You should have a sense of just how truly vast this library is. It would be impossible to even start listing all the loops and phrases that made me smile (see **Web Clip 3**). I have to single out the Taiko Drum loops that thunderously shook my house (see **Web Clip 4**). Ethno Instrument 2 is a huge leap forward for MOTU, and despite my few criticisms it is a collection that every single musician interested in world, ethnic, and exotic instruments should invest in. I'm looking forward with great anticipation to hearing what future revisions of Ethno 2 may bring. ✱

*Jim Miller is a longtime contributor to EM and a freelance sound designer whose samples have appeared in instruments and libraries from most of the biggest names in the industry.*

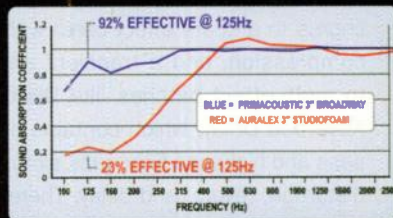
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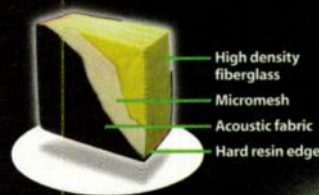


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# QUICK PICKS

## TOONTRACK \* EZMIX (MAC/WIN)

By Mike Levine

Instant gratification is hard to come by when mixing. But thanks to Toontrack, you can now get closer than you might expect. The EZmix (\$69, AU/VST/RTAS) plug-in, which was developed with Overloud, is essentially a mixer's toolbox. It comes with 200 presets that run the gamut from a simple reverb or chorus to a snare effect chain with EQ, compression, and a transient shaper to multi-effect patches like Distorted Reverbed Delay, which contains a low-pass and highpass filter, tape simulator, distortion, reverb, and delay. There is a particular emphasis on mix presets for individual drums, but there are plenty of settings for drum kits; bass, acoustic, and electric guitars; vocals; and more.

### IT'S SO EZ

Using EZmix is simple. Open an instance of it on the channel you want to process, pick the preset that fits your situation (you usually get several choices for each effect or instrument type), and away you go. Programmability is limited, however. Each preset has three sliders—on some only two are active—that allow some parameter tweaking. For example, you might get a reverb setting with a wet/dry control, a room size control, and a master level control. (All are automatable if your DAW supports it.) You can save presets to a Favorites menu, rename them, and save your effects tweaks with them. When you open the plug-in, it's set on a null setting so that you don't hear a random effect on your track before you choose what you want—neat.

You can sort the presets by name, effect type, or instrument type, which makes it easier to find what you want from the long effects list. There's also

a search box where you can type in keywords. Before I was familiar with the range of presets available, I found it a tad confusing at times because if you sort by instrument type, the individual drum effects are sorted under the name of the drum (snare, kick, hats, etc.), whereas the kit presets are listed under the category of Drums. As a result, the two groups don't show up consecutively.

### IN THE MUSIC

I tested EZmix on a variety of mixes in Apple Logic Pro and MOTU Digital Performer on my Apple Mac Pro, and also in Logic Pro on my three-year-old MacBook, and the plug-in proved versatile and powerful. On one song, with a MIDI drum part, I used one of the kit presets, and it made a pedestrian-sounding track come to life (see **Web Clip 1**). On another, with individual drums, I used snare, kick, and overhead, and drum bus presets with excellent results (see **Web Clip 2**). The bass presets beefed up my DI bass tracks, and the acoustic guitar presets made my tracks ringy and warm (see **Web Clip 3**). The reverbs were decent. The tape simulator, which can be dialed up alone or in some of the multi-effect presets, sounded quite good, as did the tape delay. There are even two mastering presets, which sounded good on the stereo bus. As an experiment, I tried one mix where the only plug-ins that I used (other than channel EQ) were instances of EZmix.



EZmix's presets range from single effects to multi-effects chains as shown in this acoustic guitar setting.

I expected it to sound inferior to the same song mixed with my favorite plug-ins, but other than the reverbs, it held its own and in some aspects was superior.



EMHOTPICK

EZmix is also easy on your CPU. I tried opening 20 instances of the plug-in, with a range of different presets chosen, and my Mac Pro's CPU usage topped out at 17 percent. A similar test on my much-less-powerful MacBook used only about 50 percent of the CPU.

### GETTING REAL

Overall, I'm quite impressed. EZmix offers plenty of good- to excellent-sounding presets that cover a range of mix situations. Yes, parameter tweaking is extremely limited, but to get this level of quality for only \$69, there's no reason not to have EZmix as an option. Don't let the "EZ" part scare you off: This is no beginner's toy. It delivers on its promise of making mixing easier and faster. \*

**Overall rating (1 through 5): 5**  
toontrack.com



I'm a longtime E-mu fan, going way back to the early days of the landmark Emulator II and SP-12 units. So this year, when E-mu announced it was re-entering the keyboard market, I was intrigued.

The new Longboard 61 (\$399) and Shortboard 49 (\$349) are 61-note or 49-note USB/MIDI controller keyboards, respectively, combining high-end sounds with 128-voice polyphony and onboard effects. Other than the number of keys, the Longboard and Shortboard are essentially identical. Either can be powered with a DC adapter, be bus-powered via USB, or run on six D-cell batteries.

Both also include E-mu's built-in Pipeline wireless stereo transceiver system that sends data to an optional \$99 receiver with analog or digital (48kHz S/PDIF) outputs. Setting up a solo performance on an empty stage, using the battery power and Pipeline, I brought out the Longboard and an X-stand and set them down, and the artist was playing 20 seconds later—no wires, no fuss. Pipeline sounded identical to a hardwire connection, and it operates in stereo—a slick trick on a wireless rig at any price.

Longboard's semiweighted keyboard doesn't quite have the wood-key feel of a Yamaha KX-88, but it's eminently playable and its velocity-sensitive action has aftertouch. Eight selectable velocity curves let users match their own playing styles. As a controller, it doesn't have the versatility of a Novation SL, but it handles basic studio functions, with MIDI I/O and USB interfacing and jacks for volume and sustain pedals.

In addition to the pitch and mod wheels, the Longboard has top-panel knobs (no searching through menus) to adjust the onboard chorus and reverb, but it also has fingertip access to the LFO Filter (with cutoff and resonance knobs) and Envelope (attack time and decay/release) controls. A single/split/



The 61-note E-mu Longboard combines high-end sounds with 128-voice polyphony and onboard effects.

layer pushbutton for layering two sounds or setting up custom splits (i.e., bass/piano) is available at any point on the keyboard. Octave (transpose) buttons operate globally or in Split mode, and only affect the selected part of the keyboard.

### THE SOUNDS

Longboard has 192 built-in sounds including a full General MIDI bank with drums. Accessing the first 32 is easy—the top panel has a matrix of 32 row/group switches, so just press the row you want and press the corresponding group switch, and you're there. The first bank is clearly marked and it's fast to get anything from this first bank, which includes pianos, organs, clavés, electric pianos, synths, and combo sounds. It's a good smattering of what will get you through 90 percent of most gigs. The eight synths present a sort of greatest-hits collection (such as Oberheim OB-Xa, Minimoog, Prophet, Roland Juno-60, Matrix, and Moog Rogue), and with the Filter and Envelope controls, these can be quickly customized to taste. Among my faves was the piano, a sweet, new sampling of a Steinway culled from a new Emulator X collection

(see **Web Clip 1**). I was also particularly impressed with the Hammond B-3 organ and Wurlitzer piano presets. MP3s of many Longboard sounds are available on E-mu's website.

Getting to the sounds beyond the 64 in the first bank is only slightly more complicated, requiring a press-and-hold of the other bank buttons for access. With no LCD data/preset display, you'll have to remember where your favorites are as the matrix switches are only labeled for the first 64. And there are 128 more sounds—synths, orchestral, organs, sound effects, percussion, and eight drum kits (acoustic and electric)—available under the hood. You might want to keep your manual handy for this. Eventually, you'll memorize where your favorites are, although I added a few notes on a piece of white tape on the top panel, a real throwback to the days of yore.

Overall, I liked the Longboard. For live performance, it delivers what it promises with some nice extras that sweeten the deal, especially at \$399. \*

**Overall rating (1 through 5): 4**  
emu.com

In a crowded field of equalization plug-ins, FabFilter Pro-Q (\$199) stands out by providing sky-high sound quality and an ocean-deep feature set. Mono, left-right (dual-mono or stereo), and mid-side (M-S) modes of operation are just the start. The plug-in uses analog modeling for its splurging 24 EQ bands, each of which can be assigned to either the left or right channel in left-right mode, or to the mid or side channel in M-S mode (or to both channels at once in either mode). Display ranges of 6dB/12dB/30dB accommodate both mixing and mastering duties. Four modes of linear-phase equalization provide a banquet of alternatives to zero-latency processing.

Pro-Q's 64-bit internal processing boasts virtually unlimited headroom. The cross-platform plug-in comes in AU, RTAS, VST, and VST3 formats. I tested the AU plug-in on MOTU's Digital Performer 6.02 using an 8-core 2.8GHz Mac Pro running Mac OS X 10.5.4.

Pro-Q is one of the best-sounding EQ plug-ins I've heard to date, especially when used on acoustic instruments.

### START A BAND

Pro-Q's filters come in five different flavors: bell, low/highpass, and low/high-shelf. When you click on a band's node in Pro-Q's equalization-curve display, the band's frequency, gain, Q, and bypass controls appear below the graph. These controls accompany facilities for choosing channel assignment (left, right, stereo, mid, side, or mid and side) and filter type, and deleting the band. Controls are shown for only one selected band at a time, but you can also mouse-drag nodes around on the displayed EQ curve to adjust parameter values.

At the top of the GUI are buttons for multiple undo/redo functions, A and B workspaces, preset management,

and online documentation. Controls along the bottom choose the channel mode (left-right or M-S), adjust output gain, pan (in left-right mode), processing bypass, real-time spectrum analyzer on/off, MIDI Learn assignment enabling for EQ parameters, and selection of zero-latency and four linear-phase operational modes.

Dual-mono setup is hastened by a button that creates separate instances of the currently selected band in each channel for further independent tweaking. Dual-mono and M-S modes each display a differently colored equalization curve for each channel.

Each linear-phase mode imposes a different amount of latency, which is proportional to the degree of low-frequency resolution achieved. But choosing the mode with the highest latency (the most accurate mode) can cause a phenomenon called *pre-echoes*—very subtle advance ringing—when EQ'ing bass frequencies with high Q values on percussive content. Pro-Q's various linear-phase modes let you fine-tune the degree of filter accuracy for use on different material.

### WHAT MATTERS MOST

Pro-Q is one of the best-sounding EQ plug-ins I've heard to date, especially when used on acoustic instruments. The sound is pristine and precise yet decidedly analog-like in its sweetness and dimension. The wide-ranging Q controls let me fashion classic overshoot responses, notch filters, and smooth tonal shaping alike. And its powerful dual-mono and M-S modes of operation place Pro-Q in an elite class of plug-ins that's particularly valuable in mastering circles. Also, its hit on CPU resources is surprisingly light.

While many users will appreciate Pro-Q's uncluttered GUI, I found it a hindrance that I couldn't view the frequency, gain, and Q values for all bands simulta-



FabFilter Pro-Q offers mono, dual-mono, stereo, and mid-side equalization in an uncluttered GUI.

neously. You have to hover your mouse over each control in turn to see its numerical readout. Alternatively, you can position your mouse over an EQ node to see all three parameter values at once.

Filters applied to the mid (side) channel in M-S mode are arbitrarily applied to the left (right) channel when switching to left-right mode, almost always causing unintended results. The output pan control for left-right mode also retains its setting when switching to M-S mode, where it serves to adjust the balance between mid and side channels—again rendering unintended results. Ideally, all of these controls should have independent settings for each mode. A workaround is to dedicate, for example, workspace A for making adjustments in left-right mode and workspace B for mid-side mode, switching modes by alternately recalling workspaces.

I also wish Pro-Q's GUI included I/O meters for mastering purposes. When applying EQ to only one side of a stereo mix, it's important to see how the result affects L/R balance. But despite my complaints about its interface, I still give Pro-Q a 4 rating because of its superb sound quality and all-bases-covered feature set, and the price tag is reasonable. Better yet, you can bundle Pro-Q with the excellent FabFilter Pro-C (reviewed in the May 2010 *EM*, available at [emusician.com](http://emusician.com)) for \$309. You'll be glad you did. \*

**Overall rating (1 through 5): 4**  
fabfilter.com



The newest small-diaphragm condenser mic from beyerdynamic is the supercardioid MC 950 (\$599). Like the other mics in the MC 900 line (the cardioid MC 930 and omni MC 910), the MC950 is intended for both spot and main miking of piano, choir, orchestra, guitar, and any source where natural sound is the goal.

All three mics employ the same capsule, -15dB pad and 6dB/octave LF roll-off fixed at 250Hz. The only difference between the models is the fixed pickup patterns of each model. (The capsules cannot be swapped.) The design of the MC 900 line allows the capsule to be fitted right at the edge of the body, eliminating some of the reflections that occur in other microphones where the capsule is recessed in the chassis.

amount of lift in the 9kHz to 14kHz area. The result is actually flattering on most sources without sounding unnatural. I received a matched set of MC 950s for review that showed a slight 1dB difference around 6kHz, although in practice they sounded identical.

I recorded acoustic guitar, upright piano, and vocals, and the key for me was finding the sweet spot, which seemed to be 6 inches to 12 inches away from the source. If the mic is much closer than that, the proximity effect of the supercardioid pattern really kicks in, although employing the LF rolloff helped somewhat. Moving back beyond three feet on a source resulted in a quick fall-off of both the high and low end, resulting in a thinner, nasal midrange quality. I would imagine the MC 930 cardioid

Some sources can get a little raspy. I noticed that my Taylor acoustic guitar was not immediately as pleasing on the top end as my Tacoma acoustic. However, as I adjusted my left to right position and experimented with moving in and out, I found a position that ultimately sounded great on the Taylor using the pair of MC 950s.

If you don't mind showing a little patience and finding the right spot for the MC 950, the results are excellent and competitive with microphones three times the price. \*

#### Overall Rating (1 through 5): 3

beyerdynamic.com



The MC 950 is an end-address supercardioid condenser intended for miking piano, choirs, orchestras, and drum overheads.

Home studios with less-than-flattering room acoustics would benefit from the MC 950's rear-rejection characteristics while close-miking instruments and vocals.

An optional windscreen is available for outdoor use.

The pronounced sense of rear rejection in the supercardioid pattern is well suited for minimizing the amount of other sources getting picked up, particularly in a live situation. The MC 950's rear rejection is quite good and quickly falls off further from the source, although a certain amount of low-end content can enter from the back side when used close to a loud instrument with a lot of low end. When used close up and on-axis, the mic provides a fullness and toughness to the low midrange, and as you move in closer, the low bottom end blossoms nicely. The pad allows close placement on high-SPL sources such as a guitar cabinet or Leslie.

Each mic comes with a mic clip, a carry bag, and its own frequency chart, which displays a subtle 2dB to 3dB dip in the 4kHz to 8kHz range and an equal

and the MC 910 omni would be better suited for miking over greater distances while the MC 950 is at its best as a spot mic or in live settings. Home studios with less-than-flattering room acoustics would benefit from the MC 950's rear-rejection characteristics while close-miking instruments and vocals.

When you do find the sweet spot, the MC 950 opens up and sounds huge. I really liked my upright piano with the MC 950s about 18 inches away underneath the player side, and my voice sounded very natural at 6 inches to 8 inches away with no LF rolloff. The subtle dip and boost characteristics of the MC 950 may not be for everyone, but it helps minimize sibilance and adds a little air to the signal that might be the right amount of finish for many tracks, especially on a crowded live date with a multitude of instruments and microphones.

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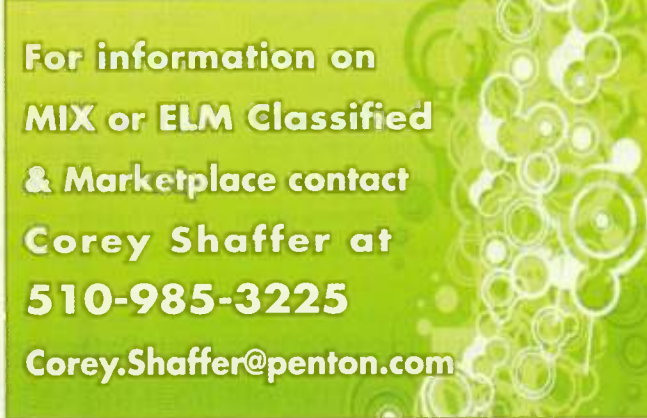
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MC Control v2



## Euphonix Artist Series High-end console technology

Together, MC Transport, MC Mix, and the new MC Control v2 give you access to almost every facet of your Digital Performer 7 project for an unprecedented "hands-on" editing and mixing experience. In-depth, custom-programmed support for the EuCon protocol brings Euphonix' high-end console technology to your MOTU desktop studio in a compact design that fits perfectly in front of your MacBook.

## MOTU UltraLite-mk3 Hybrid The world's first hybrid FireWire•USB2 I/O

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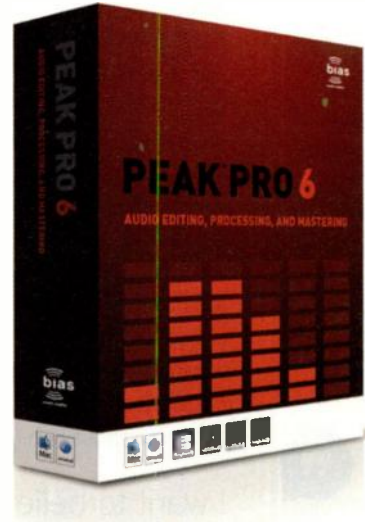


## McDSP Retro Pack Vintage-styled plug-in bundle

Legendary McDSP processing is now AU and Digital Performer compatible! The Retro Pack plug-in bundle delivers vintage vibe and flavor with three plug-ins: the 4020 Retro EQ, the 4030 Retro Compressor, and the 4040 Retro Limiter — all with a new output stage topology designed to eliminate digital clipping and deliver a smoother distortion characteristic. McDSP processing is the new must-have for your DP studio.

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Whether you're a musician, a sound designer, an audio editor, a multimedia producer, or a mastering engineer, Peak Pro 6 offers more creative potential than ever before. Used side-by-side or launched directly from within DP7, Peak Pro 6 streamlines your workflow with industry-renowned sonic quality and precision. For additional mastering, restoration, and DDP 2.0 delivery power, step up to Peak Pro XT 6.



## Miktek CV4 Large-diaphragm tube condenser microphone

The heart of the Miktek CV4's sound comes from its AMI BT4 transformer and original NOS Telefunken EF800 tube — producing a classic sound you'd expect from the earliest vintage tube microphones. The CV4 delivers that artist-pleasing, producer-pleasing "big sound." The bottom end is warm, tight, and big, complete with present and even mids. And the highs? Sweet and airy, indistinguishable from the most expensive mics in its class.



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## Genelec 8040A Active bi-amplified studio monitor

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



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## Too Much Information

There's a story I have heard about the-artist-formerly-known-as-and-now-once-again-known-as-Prince. It suggests that during the past 30 years, he has commissioned several documentaries about his life and work from major filmmakers. Each one has been filmed and edited at great expense, only to be consigned to Prince's vault for his own viewing pleasure, a glorified home movie if you will. Whether this is true or not, it still chimes well with what we know about Prince—very little. Prince is still a largely mysterious figure, in the great tradition of rock enigmas, and so apart from reflecting on the few things we think we know about him (he's mad, he likes

that grew up around artists like Led Zeppelin and David Bowie in the '70s, and wonder if this wasn't a contributing factor to the immense power of the music. When I first started to buy records in the early '80s, the only means I had to find anything out about the music and musicians I liked was whatever I could glean from the credits on the sleeve, or perhaps an interview in a music paper like *Melody Maker* or *NME*. These little scraps of information only increased my sense of awe at the magic of the music. David Bowie is a bisexual alien? I'll buy that. Jimmy Page sold his soul to the devil? That makes total sense!

In contrast, these days I'm only a few clicks on the Internet away from the minute details of the lives of any number of pop and rock stars on Twitter (handy if you want to know what they had for breakfast), a webcam link into their studio as they write their new album, or a blog discussing their personal and business problems. Of course, there is something to be said for this. Musicians are just regular people; the rock star thing

was just a pretense anyway, so aren't things more honest now? Yes, more honest, but hellishly more dull too. I am writing this in a magazine designed to demystify the process of how music is made (and as I write this perhaps I'm even demystifying myself), but I'm not really talking about the technical considerations of making music; I'm talking about the human aspect. I want to believe that the music I love

I want to believe that the music I love was created by superhumans who spent their time dreaming up music that would somehow perfectly encapsulate the human condition.

purple, he's quite short, etc.), we tend to simply listen to his music and work and conclude that the guy really is a pop genius. Now compare Prince to those two other '80s pop icons, Madonna and Michael Jackson. Isn't it true that we know too much about these people? And isn't it also true that it's almost impossible to hear the music of either of them without being weighed down with knowledge of their private lives, scandals, family feuds, ex-marriages, and court cases?

I say all this because it seems to me we have now passed out of the era of the pop enigma and are now firmly entrenched in the era of reality. But when was great pop music ever about reality? I think of the mystery and aura

was created by superhumans who, when they were not space traveling, hanging out with supermodels, and finding religion, spent their time dreaming up music that would somehow perfectly encapsulate the human condition in a way that only a divinely gifted being could. Because they are not like you and me. Okay, I exaggerate a little, but you take my point.

Shows such as *American Idol* may put the whole pop-star charade up on the screen and lead us to believe that somehow it's all fake anyway, but I don't believe that. Or at least I don't want to believe it. Just like I don't want to know how a magician does all of his tricks, because to know that would render the whole experience banal. And it's for these reasons that when I listen to classic Black Sabbath, I still try to picture Ozzy as an Odinist visionary in league with Satan, not as Ozzy the cuddly buffoon falling off of his chair. \*

Steven Wilson is the lead vocalist, guitarist, and founding member of the band Porcupine Tree. His most recent solo album, *Insurgentes*, was released in 2008. Go to [swhq.co.uk](http://swhq.co.uk) for more info.



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