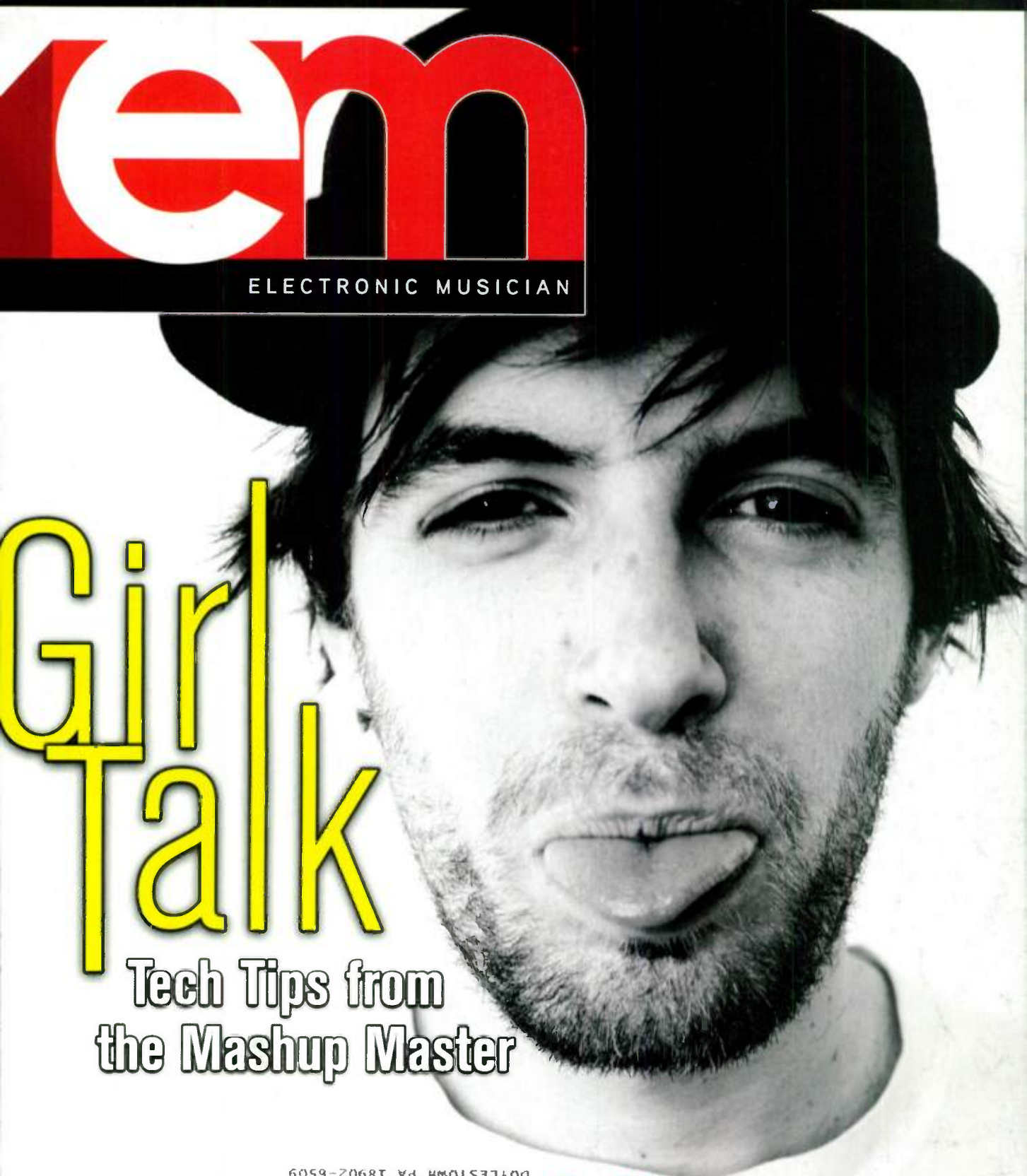
ABLETON LIVE MASTERCLASS

em

ELECTRONIC MUSICIAN

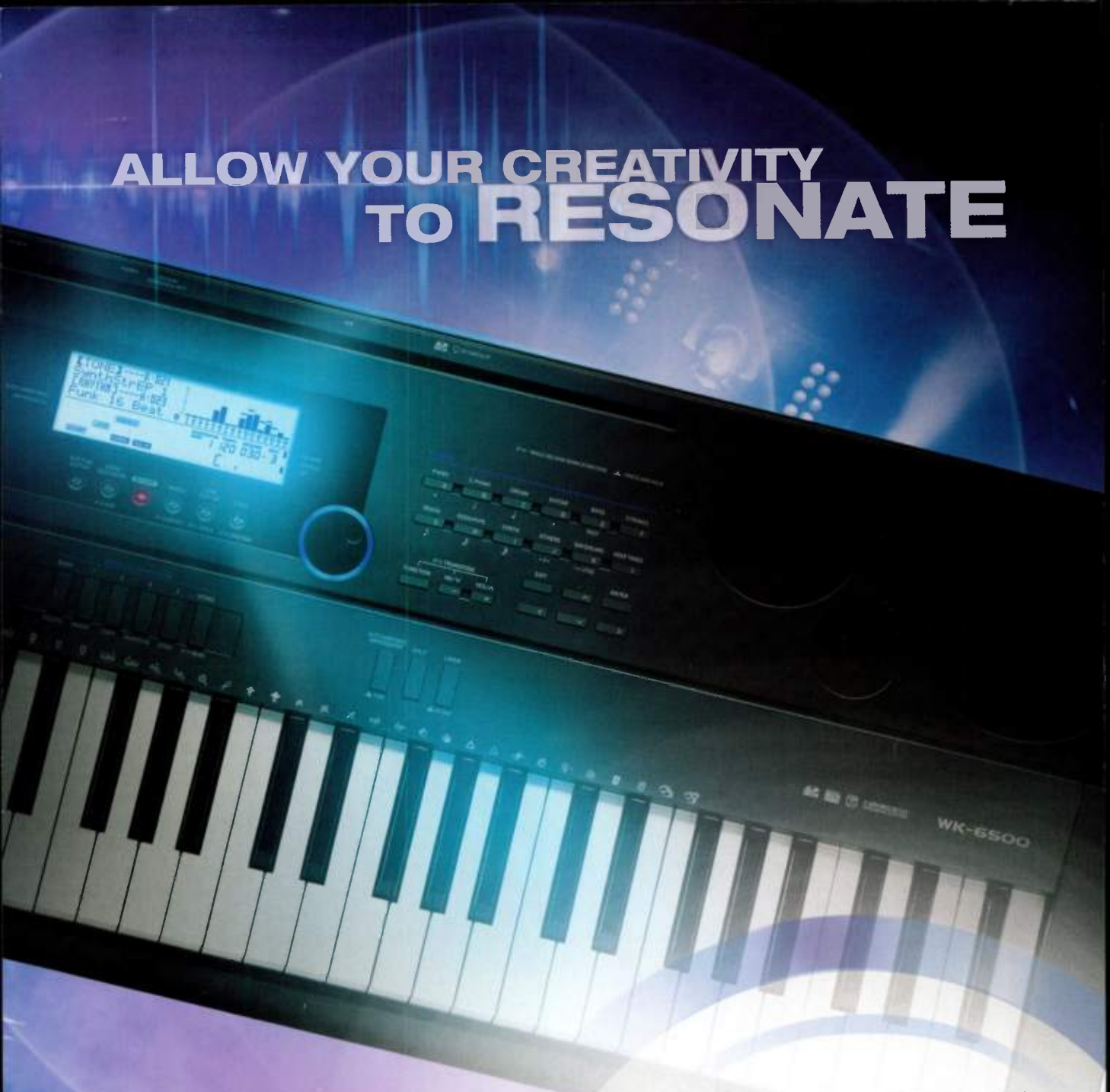


Girl Talk

Tech Tips from the Mashup Master

Inside a Film Scoring Session

ALLOW YOUR CREATIVITY TO RESONATE



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*Note that plug-ins pictured above are sold separately and are not included with MASCHINE.

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APRIL 2011 VOL. 27 NO.4

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EMILY STEWART

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This app may look challenging at first glance, but it offers a powerful set of tools that will unlock your creativity.

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EM (ISSN 0884-4720) is published monthly by NewBay Media, LLC 1111 Bayhill Drive, Suite 125, San Bruno, CA 94066. EM is a trademark of NewBay Media.

Canada Post: Publications Mail Agreement #40612608. Canada Returns to be sent to Bleuchip International, P.O. Box 25542, London, ON N6C 6B2. Periodicals Postage Paid at San Bruno, CA, and at additional mailing offices.

EDITOR'S NOTE

You Say Goodbye, I Say Hello

Next month, *Electronic Musician* gets a major makeover as *EQ* magazine joins forces with *EM* to create what will be the ultimate magazine for musicians, producers, and engineers.

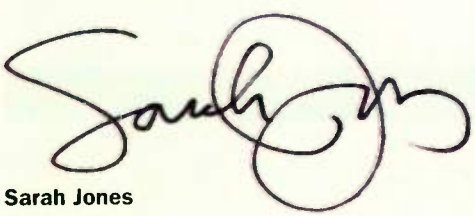
It makes total sense: Being a successful musician today means mastering a broad range of skills, from writing the perfect hook to recording the perfect vocal take to cultivating a thriving fan base. To that end, we are combining the best of the *EQ* and *EM* worlds, and we're expanding the content beyond recording to address performance, songwriting, and career issues.

There's something very "stars aligned" about this merger. I joined *EQ* after serving as the Editor of *Mix* magazine, and synced immediately with Craig Anderton, who has been *EQ*'s Executive Editor for the past five years. And although Craig has been very successful in focusing the magazine's vision and improving the content, we both knew that we had more to offer. We spent hours talking about where we wanted to take the magazine, and how we could better serve our readers, but kept hitting this wall of, "That would be so cool, but it's not *strictly* about recording..." And now, we can.

In a way, things have come full circle for Craig: He was the one who coined the term "electronic musician," pitched the magazine's concept back in the mid-'80s, and served as editor for *EM*'s first five years. Since then, *EM* has had a succession of talented people at the helm; I'd like to give special props to Mike Levine, a talented writer (and great musician!) who was instrumental in elevating the *EM* voice throughout his tenure as Editor, and is leaving us with a magazine that has a devoted following and the industry's respect. It's a true honor to succeed him.

Our goal for the new *Electronic Musician* is to give you all the tools you need to make better music, from production to performance. We'll offer more tips and techniques, more gear reviews, and more insights from today's top artists. And we're expanding our community features to give you, the reader, more of a voice.

So while we say goodbye to *EQ* and the "classic" *EM*, we say hello to a new vision of *Electronic Musician* that will re-define what a music magazine is all about. Stay tuned!



Sarah Jones
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em ELECTRONIC MUSICIAN

Vol. 22 No. 04, April 2011

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Please direct all subscription orders, inquiries, and address changes to:
800-289-9919, outside the U.S. 978-667-0364,
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FRONT PANEL

DOWNLOAD OF THE MONTH

SONIC CHARGE BITSPEEK

By Len Sasso

Sonic Charge (soniccharge.com), the folks responsible for the retro drum machine µTonic and the genetically engineered Synplant, are back with Bitspeek (Mac/Win, $29, AU and VST, download). Designed to resemble a children's speech toy like Texas Instruments Speak & Spell, Bitspeek applies voice-compression technology to audio passing through it—typically speech or singing. It then gives you controls for manipulating the processes. The results are as diverse as turning speech into song; lo-fi chorusing, doubling, and vocoder-like processing; and stuttering of captured syllables in sync with your DAW's tempo (see Web Clip 1).

Although intended primarily for vocals, Bitspeek can make its mark on any of your tracks. With just eight controls, it's easy to experiment, and you'll almost always find something useful (see Web Clip 2). Use the Pitch knob for transposing, or turn the Tracking knob all the way down to remove all pitch tracking and use incoming MIDI to control the pitch. The Detune knob lets you add an upper voice at any interval up to an octave. The Noise knob is for enhancing speech intelligibility, but you can also use it to add fricatives to bass, lead, and percussion.

The Frame Rate knob is one of the most useful; it lets you determine how closely Bitspeek follows changes in the incoming audio. Pull it all the way down, and you lock Bitspeek to what's currently in the buffer. Alternatively, turn Sync on and set the frame rate to a note division to capture chunks in sync with tempo. Bitspeek is great fun, and even if you use it only occasionally, it's well worth the price.

OPTION-CLICK

Fig. 1: The Saw III digital voice recorder costs just $1.85 each in bulk — including batteries — and makes some wonderfully crunchy sounds. Try two for stereo.

A SURPLUS OF CREATIVITY

Get Sonic Horror from a $2 Toy

Whoever decided to base a toy recorder on a sadistic movie character grossly overestimated the market; AllElectronics.com sells a seemingly endless supply for $2 a pop (see Fig. 1). The Saw III digital recorder cap-

SOUNDTRACK: REWIND

We're taking a look back at our favorite releases from the past year.

Cobblestone Jazz: The Modern Deep Left Quartet (!K7)
Using old analog drum machines and modular synths, and playing tunes that span a range of electronic styles, the band—now expanded to a quartet—developed the material on this album through jamming, experimentation, and real-time, manual effects processing during mixdown.

Stanton Moore: Groove Alchemy (Telarc)
Galactic drummer and New Orleans groove master Stanton Moore traces the roots of funk drumming on this new CD, which pays homage to such greats as Clyde Stubblefield, Jabo Starks, and Zigaboo Modeliste. Drummers take note: An accompanying instructional book and DVD are also available.

Stick Men: Soup (Stick Men Records)
Ex-King Crimson member Tony Levin teamed up with fellow Chapman Stick virtuoso Michael Bernier and current Crimson drummer Pat Mastelotto. Not surprisingly, minor keys, odd time signatures, dissonant riffs, and flashy playing ensued. A prog-rock feast.

Clothesline Revival: They Came From Somewhere (Paleo Music)
Conrad Praetzel and Robert Powell return with a mélange of roots music—slide guitar, pedal steel, acoustic guitar, Charlie Musselwhite on harmonica, and more—mixed with processed beats and Praetzel's ethereal production. Cool stuff!

Brandt Brauer Frick: You Make Me Real (!K7)
This Berlin-based trio plays techno grooves with acoustic instruments (piano, bass, and drums), and the result is a strikingly original sound. They've added a larger ensemble for their live work, but the album is just the trio.

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.

tures 30 seconds of sound through its mic and plays it back with entertaining distortion. It's a great effect for drum loops and whispers. But the sound gets even more interesting when you simultaneously record into two Saw IIIs and then separate them for playback. Press the Play buttons at slightly different times for echo effects. Whirl Saw on a string to simulate a Leslie speaker.

Visit GetLoFi.com/?p=1152 for directions on adding input and output jacks, a pitch-bend knob, a loop switch, and a remote trigger. Hackers have wired up everything from model-train sound effects to grungy Mellotrons.
—DAVID BATTINO, BATMOSPHERE.COM

THIS MONTH ON EMUSICIAN.COM

ALL NEW//EMBOOKS
The all-new *EMBooks* give you in-depth tutorial tips and techniques for any recording project. Now available: **Synth Programming** and **Laptop Production** at mixbooks.com.

BLOG//ROBAIR REPORT
Our intrepid former editor blogs about all issues relating to music technology and offers periodic updates as he rebuilds his studio from the ground up.

READ//More Girl Talk!
Don't miss our exclsusive Web interview.

READ//DANNY ELFMAN
Check out the extended version of this classic EM interview.

WHAT'S NEW

By Gino Robair

EVENTIDE

SPACE

CLASSIC ROOMS UNDERFOOT

Eventide (eventide.com) has expanded its effects pedal line with Space ($579 MSRP; $499 street), which offers 12 types of reverb based on algorithms from the company's Eclipse V4 and H8000FW hardware processors. The presets, which range from spring and hall programs to ModEchoVerb and Shimer, include spatial and delay effects. The stomp box has stereo 1/4-inch I/O and is controllable via an expression pedal or MIDI (including MIDI sync). A USB 2.0 port is included for installing upgrades.

BLUE MICROPHONES

YETI PRO

BIG FEATURES. SMALL FOOTPRINT.

The Blue Microphones (bluemic.com) Yeti Pro (Mac/Win; $249 MSRP) sets the bar high for USB mics by combing professional features with 24-bit, 192 kHz direct-to-computer recording. The mic's triple-array capsule offers four pickup patterns—cardioid, figure-8, omnidirectional, and stereo. Zero-latency monitoring is available from the headphone jack, and the onboard controls include gain, output level, and mute. The Yeti Pro, which comes with a stereo XLR connector and breakout cable, can also be mounted on a conventional mic stand.

ELECTRO-VOICE

RE320

DUAL-VOICE DYNAMIC

Styled after the classic RE20, the Electro-Voice (electro-voice.com) RE320 ($499.95 MSRP) dynamic mic was created for vocals as well as amplified and acoustic instruments. The company's Variable D technology keeps the frequency response of the cardioid element uniform when sources are off-axis. Although its nominal frequency response is 45Hz to 18kHz, the RE320 has a switchable EQ curve designed for kick drums that extends the low end to 30Hz.

TASCAM/ANTARES

TA-1VP

AUTO-TUNE FOR STAGE AND STUDIO

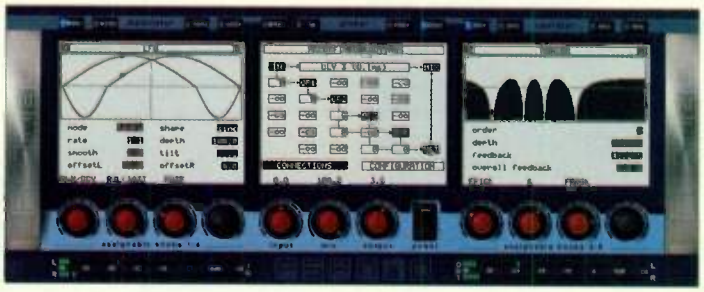
Tascam (tascam.com) and Antares Audio Technologies (antarestech.com) have collaborated on the TA-1VP ($449.99 MSRP), a hardware-based vocal processor that combines a microphone preamp, a compressor, a 2-band EQ, and a de-esser with real-time pitch correction and doubling in one rack space. The device features the Evo version of Auto-Tune as well as Antares' mic and tube modeling. The TA-1VP has a front-panel XLR input, as well as balanced 1/4-inch analog I/O and MIDI and S/PDIF connections on the back panel.

PIGTRONIX

KEYMASTER

ALL THE INS AND OUTS

Leave it to Pigtronix (pigtronix.com) to come up with the most sought-after device of the year. Keymaster ($299 MSRP) begins with a pair of true-bypass effects loops, which you can run parallel and crossfade between manually or with a pedal. Add to that an active A/B/Y box and the ability to handle DI and reamping chores, and you're set for stage or studio. The I/O is on XLR and balanced 1/4-inch jacks.



PSP AUDIOWARE

PSP N20

INTO THE MODULATION MATRIX

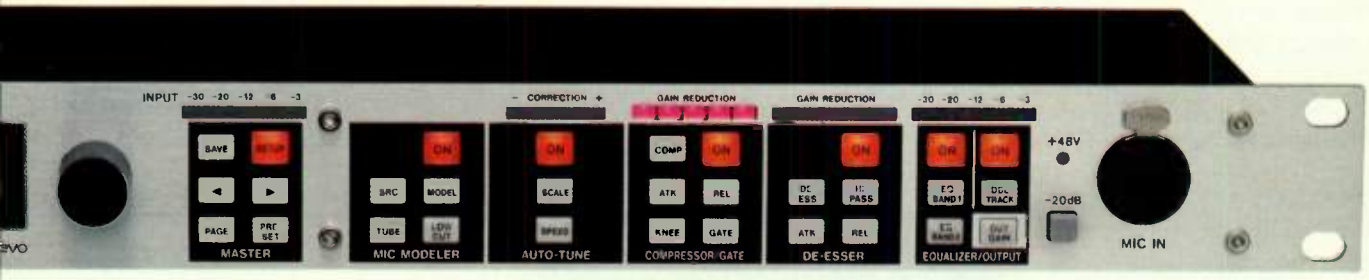
Going a step further than Nitro, the PSP Audioware (pspaudioware.com) PSP N20 (Mac/Win; $149, $99 upgrade) is a semi-modular multi-effects plug-in (RTAS/AU/VST) that includes a 16-row modulation matrix and 8 assignable controls. There are three types of filters—SVF, Biquad, and Moog, a virtual 4-pole lowpass filter—and a number of new effects, including pitch shifter, stereo delay, stereo enhancement, and formant filter. Other enhancements include latency-matching delay for the dry signal and a sidechain input.

DOEPFER

DARK TIME

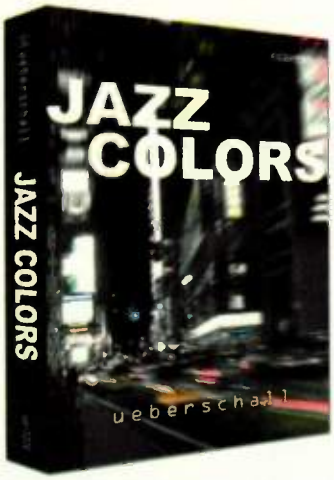
STEP SEQUENCING FOR THE DESKTOP

Doepfer (Doepfer.com) designed the Dark Time ($675 red LEDS; $700 blue LEDS) 16-step analog sequencer to accompany its monophonic synth module, Dark Energy. It can run as two parallel 8-step sequencers—forward, backward, or randomized—with skip and jump settings for each step. Dark Time has three octave ranges and can be clocked internally or via MIDI or voltages. Standard MIDI I/O and a USB port are included. CV and gate connections are on 3.5mm jacks, making Dark Time compatible with Eurorack modular systems.



SOUND ADVICE

By Len Sasso



UEBERSCHALL/
BIG FISH AUDIO
JAZZ COLORS

Jazz Colors ($99 from bigfishaudio.com) is a 3.8GB collection of 20 jazz constructions kits for Ueberschall Elastik Player 2 (free and included). Producers Uwe Kinast and Hakan Türközü assembled a team of professional jazz musicians to record these sessions, which cover a variety of jazz idioms including swing, bebop, Latin, and fusion. Each kit contains four folders: Intro & Outro, A (main theme), B (alternative phrases), and C (variation on the main theme). Instrumentation includes drums (with separate kit-piece loops), electric and acoustic bass, guitar, piano, Fender Rhodes, Hammond B3, sax, trumpet, and flute (see Web Clip 1). The kits range from 50 bpm to 150 bpm in a variety of major and minor keys.

Elastik Player 2 is a significant upgrade by developer Zplane Technologies. It features graphic XY control of parameter pairs such as volume and pan, pitch and formant, and filter cutoff and resonance. You can also adjust individual parameters graphically on a per-slice basis. The loops are tasty, and creative loop-munging is great fun with this collection.

TONEHAMMER
MONTCLARION HALL PIANO

At an undisclosed location in the Montclair district of Oakland, California, a half-century-old A-frame chapel is home to an equally mysterious grand piano. The folks at Tonehammer (tonehammer.com) describe this piano a "nothing special" but a perfect match for the remarkable acoustics of the room. They further note, "If you're looking for a clinical, tame, or perfectly clean piano, we're sorry."

Montclarion Hall Piano ($99, download) is a sampler library for Native Instruments Kontakt 3.5 or later. It starts with three versions of the basic piano (light, medium, and high memory), miked from three perspectives: close, mid, and far. These instruments are augmented by six custom versions featuring damping, scraping, and sliding string techniques; hand percussion on the body of the instrument; and sound effects such as bench creaks, lid opening, sheet-music shuffling, and so on (see Web Clip 2). Seven additional presets use effects processing and convolution reverb. Custom scripted panel controls let you further sculpt the sounds to suit your project. The basic piano is charming, and the variety of sounds available from the preparations and effects is astounding.

LOOPMASTERS
MINIMAL TECH VOX
5PIN PROGRESSIVE TECH BEATS

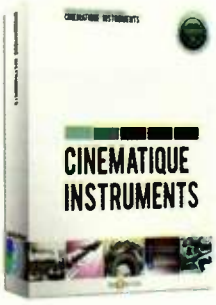
Minimal Tech Vox ($48) and 5Pin Progressive Tech Beats ($32) are extensive collections of dance and techno-oriented loops and one-shots. Although sold separately, they complement each other nicely (see Web Clip 3). Both are available as downloads from Loopmasters (loopmasters.com).

Minimal Tech Vox delivers 337 female, male, and mixed vocal loops, 67 of which are heavily processed. Most major and minor keys are represented and tempos range from 126 to 128 bpm. Beyond that you'll find 401 vocal hits along with 121 bass, percussion, and synth loops. The 850MB collection includes eight sampler patches in Kontakt, Halion, NNXT, EXS24, and SFZ formats. An Apple Loops library is available separately.

Progressive Tech Beats is the first in 5Pin Media's MIDI Focus series. It starts with 10 drum kits in Live Drum Rack, Kontakt, Battery, EXS24, Halion, SFZ, and MPC formats. Those are accompanied by MIDI loops broken down by song section—intros, verses, choruses, fills, and percussion. All loops come in full and no-kick versions. Being GM-Standard MIDI, the loops accommodate a wide range of tempos, are easy to customize, and fit all standard drum kits.

CINEMATIQUE INSTRUMENTS
BOXED VERSION

Cinematique Instruments (cinematique-instruments.com) specializes in sampling weird, odd, and rare instruments. The Boxed Version ($228) includes all their offerings through early 2010. It is available from Best Service (bestservice.de), and it includes their proprietary sample player, Engine, developed by Yellow Tools. Unlike many free players, Engine gives you extensive freedom in editing and layering sounds.



The 2GB Boxed Version library comprises 16 collections. Stringed instruments include a 36-string.

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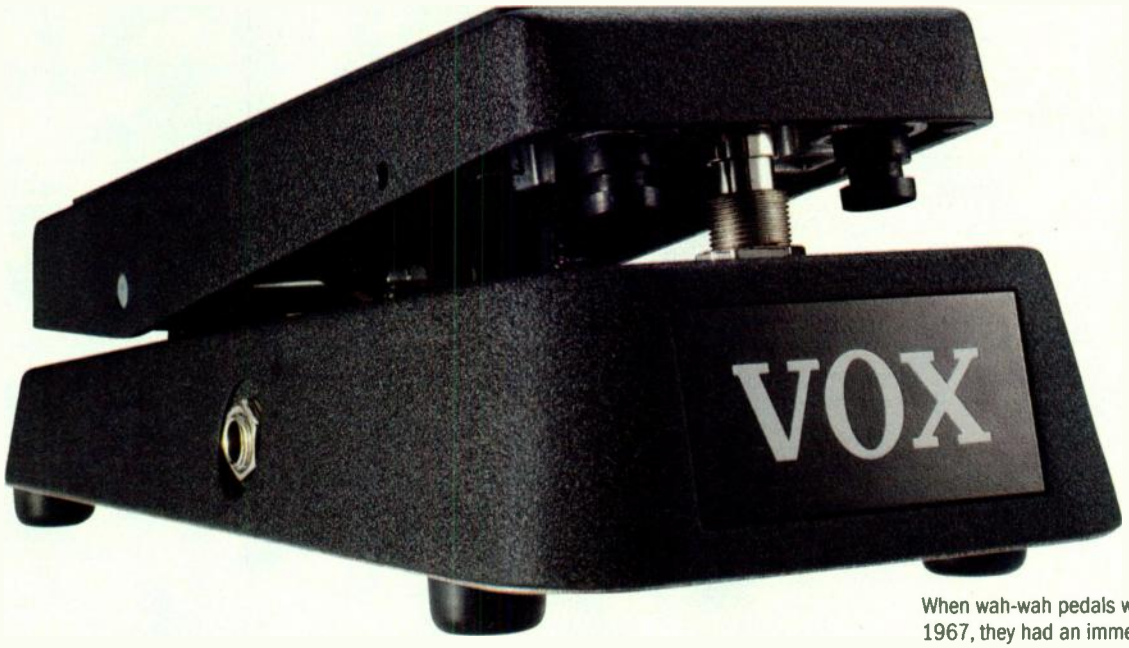
KORG.COM/KAOSS

KORG

By Geary Yelton



When wah-wah pedals were introduced in 1967, they had an immediate and lasting effect on the sound of popular music.

Wah-Wah Pedals

They're not just for guitarists anymore (and never were).

Of all the effects available to musicians, wah-wah is probably the most distinctive and most easily identified by nonmusicians. It's usually associated with electric guitar—many classic Jimi Hendrix and Eric Clapton solos would be very different without it—but it's frequently used for electric violin, bass guitar, electric piano, and Clavinet, and occasionally, even brass and wind instruments. In the right hands (or should I say feet?), wah-wah can be one of the most expressive and evocative effects that technology provides.

Mothers of Invention

Several companies experimented with tone-shifting effects in the '60s, and the innovative Thomas Organ Company, which first imported Vox amps and instruments to the U.S., developed and patented the wah-wah pedal. In late 1966, Thomas engineer Brad Plunkett mounted a transistorized mid-range boost circuit whose frequency was controlled by a potentiometer in the housing of a Vox Continental organ's volume pedal. One of his coworkers played a guitar through it, and *voilà*, wah-wah was born. The company's CEO decided that marketing efforts should target sax and trumpet players rather than guitarists, however. Vox's original 1967 wah-wah had an image of big-band trumpet player Clyde McCoy—famous for a 1930s pop song on which he used a "high-hat" mute for a similar effect—printed on the bottom plate.

Fortunately, others within the company recognized its potential as a guitar effect, and Plunkett continued tweaking it for electric guitar. Someone at Thomas Organ apparently thought the effect sounded like a baby crying and came up with the brand name Cry Baby. No one bothered to trademark the name, however, and Cry Baby pedals from a variety of manufacturers followed. Rock guitarists popularized the sound, and soon wah-wahs were being made by Vox, Foxx, Maestro, Morley, DeArmond, Dunlop, Boss, Budda, Fulltone, and most major guitar and amp manufacturers.

Wah's Happening

Wah-wah pedals work by manually sweeping a bandpass or lowpass filter's resonant peak, dynamically changing the signal's spectral content. You create the classic wah-wah sound by rocking the treadle either rhythmically or synchronized with picking your guitar strings for a sound that resembles vocal phrasing. You can also achieve a vowel-like tone by positioning the treadle somewhere in the middle of its range to simulate a formant by emphasizing a particular frequency band. Strumming muted guitar strings while pumping the treadle has driven the hook of many a funk track, too.

Although wah-wah pedals are ideal for sweeping synth sounds with your foot, you could achieve a similar effect by assigning a MIDI expression pedal to control a resonant filter's frequency. Most guitar-amp-modeling plug-ins for DAWs include a wah-wah in their arsenal of virtual stompboxes. Wah aficionados insist that different makes have their own personalities, and indeed, an assortment of design types yield different but similar effects. On stage or in the studio, as with any kind of vintage instruments or effects, purists insist that nothing beats the real thing.

This is the final installment of "Gear Geek." Synthesist, bassist, composer, and former EM senior editor Geary Yelton lives in Asheville, North Carolina.

PowerPre™
100% discreet mic preamp with a transformer coupled output. Three position voicing switch lets you add breath for added clarity, clinical purity when needed or extra beef when the track has to stand out.

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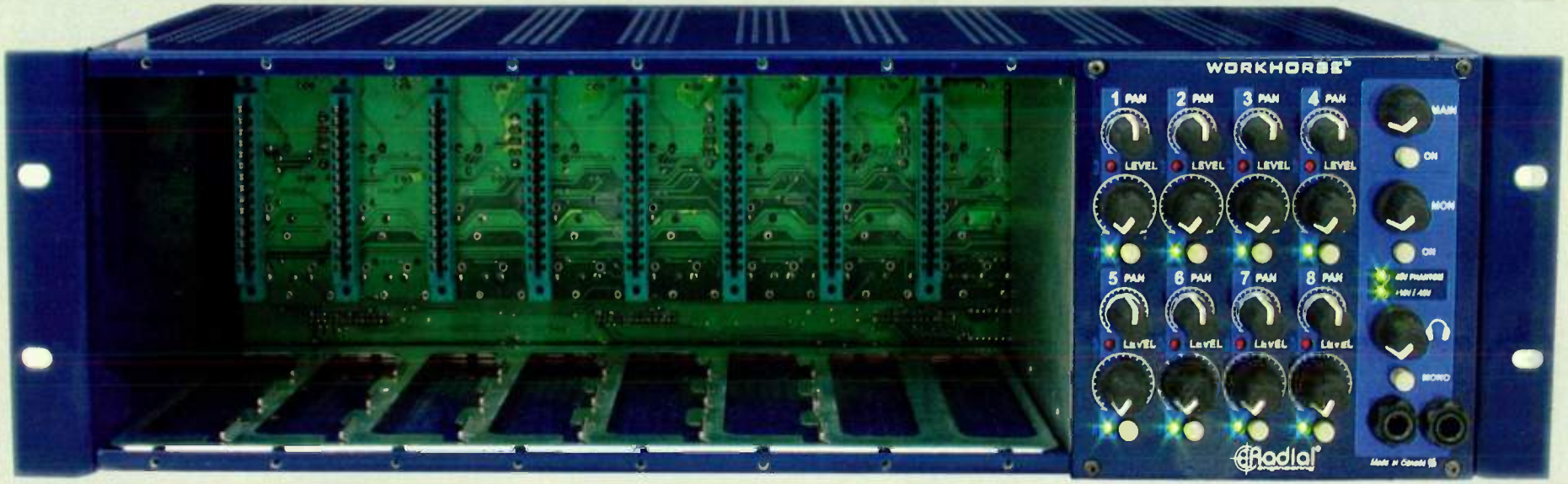
The Komit combines old school diode bridge limiting with the very latest in VCA compression. Auto tracking for slow, medium and fast transient response makes getting great compression easy.

PhazeQ™
Like adjusting the focus on a pair of binoculars, the PhazeQ lets you combine any two tracks and bring them into sonic phase. Think of it as moving your mics around the room by simply turning a dial.

Lunch Well Served...



The Radial Workhorse™ revolutionizes high performance analog recording by combining a 'plug & play' platform for Lunchbox® modules with a built-in mixer for incredible flexibility.

Equipped to handle up to eight modules, the Workhorse lets you mix and match preamps, EQs and compressors to create the ultimate channel strip. Modules may be accessed on the rear panel following the traditional API Lunchbox® format or be bussed to a master section for left or right signal panning, level control and muting. To add spice to your recordings, a unique 'feed' function allows you to configure the Workhorse modules to feed each other in series to create the channel strip of your dreams! Odd and even card slots may also be linked together in stereo by simply toggling a rear-panel switch.

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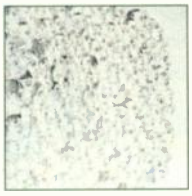
By Diane Gershuny



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If By Yes improvise performances and gear techniques to find their collective voice

Taking its name from an e.e. cummings verse, If By Yes echoes its namesake's poetic pop and avant-garde style. Its substance and style are the sum of its parts: vocalist Petra Haden (who has lent her voice and violin to sessions with Beck, Bill Frisell, Foo Fighters, Green Day, and The Decemberists, among many others), along with multi-instrumentalist Yuka Honda, who co-founded Cibo Matto. The duo grew into a quartet with the addition of drummer Yuko Araki and guitarist Hirotaka "Shimmy" Shimizu.

The band's debut album, *Salt On Sea Glass* (Chimera Music), began in Honda's home studio in New York City's East Village, where it was written and recorded over the space of nearly a decade, whenever Haden and Honda could meet up. Songs would take shape with Honda producing—using her Pro Tools HD setup to improvise structural and sonic ideas—and Haden riffing on complementary vocal melodies. Also contributing were friends and family, including David Byrne, who added vocals to "Eliza," and Haden's triplet sister, Tanya, who contributed to writing "Imagino" and illustrated the album cover. Keigo Oyamada, aka Cornelius, produced "Still Breathing" and did a remix of "You Feel Right."

"These recordings are a lush mélange of overdubs," recalls Honda. "On this recording, I built most of my tracks using simple drum sounds on a Korg Triton [keyboard workstation] and [then] added on from there. For 'You Are Something Else,' I wrote a sketch using my favorite Roland DJ-70 sampler. Michael Leonhart, who plays trumpet with Steely Dan, created a one-man horn section, which I captured using a Blue Dragonfly mic. Thomas Bartlett played a Wurlitzer through a Z Vex Seek Wah [effects pedal] and an Ibanez analog delay pedal, and Shahzad Ismaily created an 'indie-rock' guitar part for the chorus. When Petra and I got together, we listened to the horn loops and were immersed in the sensations they triggered.

"It's fun to write with Petra, as she's one of the few people who gets off on sounds as much as I do," Honda continues. "She came up with vocal ideas fast, which I recorded into Pro Tools using a Shure KSM44 mic through a Neve mic pre. I tinkered with the sketch/demo for a few months until we saw each other again, adding overdubs with friends."

The quartet recorded "Three As Four" live at Chimera Music's studio in upstate New York. "I wanted to write a song with kick drum on every beat, so the music could turn around in both '4' and '3,'" Honda explains. "Our main engineer, Scott Hollingsworth, used a Pro Tools HD 8 system with an Apogee Rosetta 800 interface and Big Ben master clock. To record drums, he used an AKG D 112 mic into a Neve 1083 on kick, an SM57 mic into the Neve 1083 on snare, an AKG 414 mic with a -20db pad cardioid pattern into API 512 mic pre's. For overheads, we used a Coles 4038, one of my favorite mics, into an Avalon 737 using the compressor and some subtle EQ to add high-end. Shimmy played a Fender Strat through his 1950s Fender Deluxe amp, miked with a Shure SM57 mic into a Neve 1083 preamp. Yuko started to play this groovy beat on drums and I added the bass part on a Fender Rhodes, miked with two Coles 4038 mics into an Avalon 737 preamp.

"Scott was on-point and got the importance of the sound of the kick being earthy and soulful," Honda adds. "He triggered a noise-gate with the kick to open the overheads. Getting those sounds quickly during the recording was important because it directly influenced the way we played."

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By Sarah Benzuly

Filling the Darkness With Music

Sean Murray Commands Moody Themes for Top-Selling Games

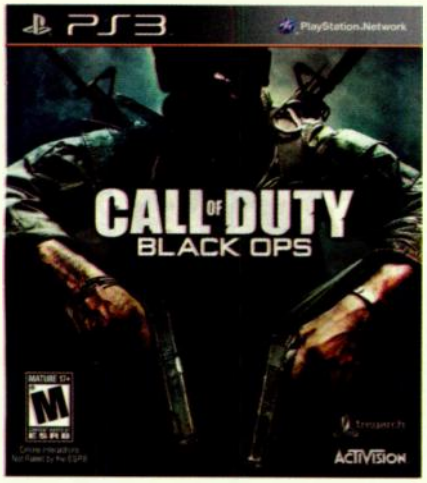
When composer Sean Murray's father, actor/director Don Murray, came home one day after working with composer Brad Fiedel on the film *Damien's Island*, Sean was taken in by the sounds coming from the Moog synthesizer on the score mock-ups. With those audio clips reverberating in his head, Sean Murray started to learn all of the themes on the piano. "That made me much more interested in the role of the score in movies," Murray says, "and I decided that I wanted to be a film composer." Working out of his 360-square-foot personal studio, Murray has attacked the scores for such films as *Junkyard Dog*, *Kill Speed*, and *Hidden Camera*; TV series such as *Buffy the Vampire Slayer* and *Knots Landing*; as well as videogames, including his latest, *Call of Duty: Black Ops*.

How does your approach to composing music change when working on different types of media?

You definitely have more time working on a videogame than a film. A feature-length film will give you anywhere from 10 days to two months to write an entire score. Videogames take a couple of years for a studio to produce. That being the case if you get involved early, as I did on both *Call of Duty: World at War* and *Call of Duty: Black Ops*—you can work at a somewhat slower pace, giving you more time to experiment and get inside the essence of the project. On both games I worked for almost a year on them, so I knew the material pretty well.

What are you recording to?

I'm using Cakewalk's SONAR X1 for all of my MIDI, audio recording and production. SONAR X1 hosts my extensive plug-in array with programs like Kontakt 4, Play, and Reason. I use three more dedicated PCs running Giga Studio. My outboard synths that I use extensively are



Korg M1; Roland D-50, JV1080, and R-8 M; Emulator II; Yamaha TX802; Kurzweil K2500 and K2000; Akai S6000; Kawai K5m and an Oberheim DPX1. Yes, I love my synths!

My mixing board is a Mackie D8B digital console using Mackie and TC Electronics reverbs. I run my mixes analog out to my Pro Tools rig for master mixing and stem delivery. The Pro Tools rig is the only Mac computer in my system.

I use Mackie monitors in a 5.1 surround setup. I've been mixing most of my scores in 5.1 since 2000.

You just completed *Call of Duty: Black Ops*. How did you get this gig?

I did my first game, *True Crime: Streets of L.A.*, back in 2003. My brother in-law was a lead artist on the project and he introduced me to the producers. Although they liked my music and my film and TV credits, I still had to audition for the job. I scored a couple of cut scenes, along with a few other composers, and then the entire Luxoflux (one of the Activision developers) studio voted for the composer they liked the best. It was very democratic. Luckily, I got the votes.

From there, I met audio designer Brian Tuey, who went on to become audio director at Luxoflux for the second *True Crime: New York*. Brian and I developed a great working relationship on that game, so when he became audio director of Treyarch on the *Call of Duty* franchise, he invited me in to change the direction and sound of the music for *Call of Duty: World at War*. *World at War*'s score was very popular with the fans, so when *Black Ops* was ready for music, Treyarch invited me back to score it.

In terms of overall sound design, were you looking to continue musical themes from previous *Call of Duty* games, or were you charged with creating a new soundscape?

We wanted *Black Ops* to be a distinctly different score with some threads back to the recurring character Victor Reznof (Gary Oldman), who was the main Russian character in *World at War*.

World at War had two distinct theaters we were trying to depict. The Pacific Campaign was all about translating, musically, the horror and alien world of a new kind of brutal jungle enemy. The Americans had never met an enemy as ruthless and formidable as the Japanese, and they were scared to death. We needed to capture that fear.

The Russian Campaign needed to depict the harsh and brutally vicious character of both the Stalinists and the Nazis. I used neo-Stalinist themes for the Russians and cold orchestral electronica to capture the essence of the Reich.

Black Ops needed to capture the paranoia and brinkmanship of the Cold War. I listened to Cold War Hungarian composers Ligeti and Kurtag for inspiration and stylistic attitudes. The music had to be robust and yet personal to the main characters, Alex Mason and Victor Reznof. *World at War* used distinct enemies to define the music. *Black Ops* used the two distinct characters' psychological states to drive the themes. We were wide open to follow the multitude of physical locations as well, from South East Asia to Siberia and Hong Kong and more.

For this game, you brought in an 80-piece orchestra. Is this your preferred way of working, or do you normally rely on sound libraries and the like?

A large orchestra was needed for both *Call of Duty* scores to give the music the gravity the franchise demands. Typically, though, it all depends on the scope of the project and the budget. Films with personal stories and emotional themes are sometime best done on a small scale with maybe a few solo instrumental players. I love a good simple, delicate score, as well as the full-throttle music of *Call of Duty*.

Tell me about your creative thought process when working on this game?

Early on, I gained insight into the project from the gritty and disturbing concept art and PowerPoint presentations. From these and early story outlines, I knew the music needed to be dark, stealthy and sometimes abusive.

When I started working [on this game], it was on early levels of gameplay. I would receive a video and start composing to picture just as I would with a film, but without as much specific punctuation. When a big change in action occurs, I would start a new piece that usually transitions up the level of intensity. I also would keep tempo and key maps of all the cues so that changes and transitions could be mixed and matched as the game developed. I was further inspired when I received scenes with the voice-over work of Gary Oldman, Ed Harris, and Sam Worthington. There is nothing better than composing to fine acting, whether it is live action or animation.

What is the most challenging aspect of your work?

A major challenge is balancing the creative process with a deadline. Each day I have to set a goal of writing and recording one-and-a-half to three minutes of music with confidence that it will be great. I always thrive on the deadline and feel a competition with it. I find it very easy to stay focused and creative when I get into my studio.

What's next for you?

I have two films in pre-production—*Taxidermist* and *The Hard Ride*—as well as a new videogame that I will announce as soon as the studio makes its press announcement.

By Jason Feehan and Randy Chertkow


Feehan


Chertkow

Finding Out What People Think About Your Music

Using sites, services, and statistics to find out who's playing your music and what they think of it

Less than a decade ago, when musicians would create music and release it into the world, the only feedback they'd get was from album reviews in the press, concert numbers, and sales figures. They were always one step removed from the actual fan. Now that the internet has connected us, those days are over. Use the methods below to find out what people are already saying about your music.

One way to find out who's listening to you is to visit Last.FM and search on your name. You may already have an artist page with a list of people from all over the world who have listened to your music. This information can give you new ideas of where to tour or where to concentrate your next PR campaign. Be sure to sign up as a "label" to claim your artist page. This allows you to tie it to your blog, get more stats on your "plays", and lets you friend listeners to ask them what they think. Plus, you can upload more music and receive royalties (more here). Since Last.FM uses the ID3 tags to record the song plays of each of its users, make sure you tag your MP3s properly.

Last.fm is not the only way to find out when you're being played, though. Sign up for Next Big Sound, and get a regular notifications via email whenever someone is listening, friending, or talking about you in sites such as Facebook, Twitter, Last.FM, MySpace, iLike, and YouTube.

Want to know what music listeners *really* think of your music? Try SoundOut.com. This service creates an instant focus group by presenting your music to fans of your music genre. They are asked to listen to the song, rate it on a 10-point scale, and write a review explaining their opinion. The next day the reviews are consolidated into a detailed report with information about what they thought of your music, age and gender information, and quality ratings for the reviewers themselves so you know who's opinion to give more weight to. The report also tells you where your song rates as compared to other songs reviewed in your genre. If you upload multiple songs to the service, stagger them over a few days to get different reviewers, and use the report as an objective way to decide which song should be the first track on your album or used in a radio campaign.

To find out who's talking about you on the web *when* it happens, set up a free Google Alerts account, enter search terms such as your name and your album titles, and get selecto to receive an email whenever you're mentioned anywhere on the web. You may be surprised at how many sites might already be talking about or reviewing your music. Do you use Twitter? Sign up for a free account at SocialOomph.com and it will notify you via email every time your Twitter account is mentioned. Like Google Alerts, you can add search terms for your band name, albums, or other keywords you want to track. Even if you don't have a Twitter account, use Twitter's advanced search page to find who's mentioning your music in their Twitter feeds.

Since these mentions quickly disappear, don't forget to save them so you can use it later in your press kit, press releases, or PR campaigns. One helpful tool that can save these locally on your computer is the Scrapbook add-on for Firefox's browser.

If you're not using these sites, services, and tools, you may be missing out on what they're saying about you. It's worth your time to find out, and to reach out to the fans that you might not even know you have.

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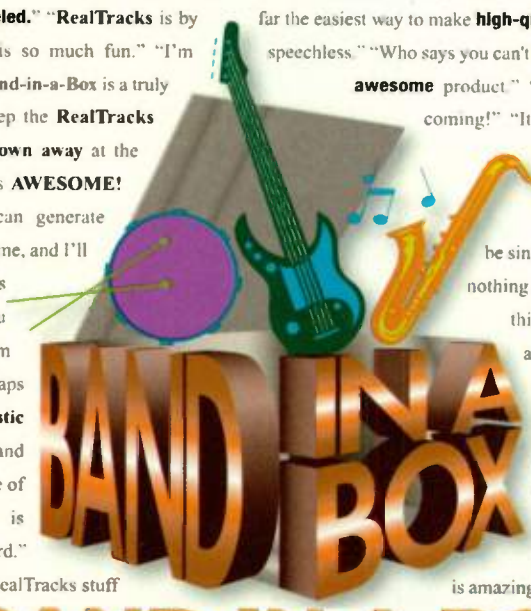
"The ease and quickness in producing **quality** backing tracks is **unparalleled.**" "**RealTracks** is by far the easiest way to make **high-quality** background tracks." "**Band-in-a-Box** is the **holy grail** for accompaniment software." "This is so much fun." "I'm speechless." "Who says you can't buy happiness." "This is absolutely a must-have item." "I will be telling my **Mac friends** to get it." "**Band-in-a-Box** is a truly **awesome** product." "**Band-in-a-Box** is now on a whole other level of sophistication." "A giant leap forward" "Keep the **RealTracks** coming!" "It blows my mind." "**RealTracks** add a whole new dimension of realism." "I was absolutely **blown away** at the quality of **Band-in-a-Box**." "Your **Band-in-a-Box** program is **extraordinary!**" "Your product is **AWESOME!** **THANKS**" "A fantastic leap forward." "Un. Believable" "I can't believe how fast I can generate **RealTracks** and renders with the new version." "They've **outdone themselves** this time, and I'll be singing the praises of **Band-in-a-Box** every chance I get." "This new musical concept you have created is nothing short of evolutionary. If it were a living creature, it would be a whole new species." "Just when you think **Band-in-a-Box** is as cools as it can be, you guys take it to a new level." **"Brilliant!"** "I'm awestruck." "All of the new instruments are just **smashing.**" "I must say, the pedal steel is perhaps the greatest accomplishment in the history of this brilliant program." "The RealTracks are **fantastic** and provide **great inspiration** for creativity." "This is a great gift to jazz musicians, educators, and singers." "Oh, wow. **This changes everything.**" "It's **stunning.**" "Thanks for a superbly useful piece of software." "I tried with many audio files and the chord detection is **amazingly accurate!**" "This is absolutely a must-have item." "Wow, I'm learning tunes fast with help of your Audio Chord Wizard." "It finds the exact chords to the song... perfectly." "Wow!" **"I am blown away!** The jazz/swing RealTracks stuff is amazing." **"Awesome."** "Is this cool or what!" "I'm in seventh heaven" "You won't regret it (and if you do, there's the **30 day money back guarantee**)." "I never thought I'd see the day this was possible." "I know it's been said before, but you guys are **incredible**." "This is **gonna set the world on fire!**" "I'm so stoked about how good everything sounds I can hardly stand it." "This is just killer." "Amazing, simply amazing." "[RealDrums] is really awesome sounding. Good work!" "Many kudos all around." "You never cease to **amaze** me. You got it." **"Wow and Double Wow."** "The **RealTracks** and **RealDrums** sound awesome." "Long live PG Music!" "Mind bending." "I am frankly amazed at most of the styles." "I am absolutely delighted with this new BIAB 2009 for Mac. ***Kudos*** to you and your team!" "First time I did a song with **Band-in-a-Box**, I **couldn't believe it!**" "I use it in the classroom and also in creating music in my studio. It is a fantastic piece of music software to own. I am greatly impressed." "I use **Band-in-a-Box** regularly. It has improved my musical talents by far and I enjoy it very much. Thanks to all who have helped make this program so **fantastic!!!**" "I am very impressed with your fantastic ***improvisational*** program." "It's a great ***educational tool.***" "This is the most powerful, cost effective, user friendly music software I have seen." "BIAB is my best **learning tool.**" "J'ai la premiere version de **Band-in-a-Box** et ***j'aime beaucoup.***" "A truly **great product!**" "It's just incredible! I am a practicing jazz musician and was **absolutely dazzled** by your soloist feature." "Band-in-a-Box is an **awesome** tool for getting projects done NOW!" "The soloist feature is **phenomenal!**" "Excellent quality is a PG Music standard." "I use your program with my saxophone students. They love to play with a "real" band in the back!" "Who knew what Coltrane would sound like soloing over country music—**LOVE IT!!!**" **"Awesome software at a fantastic price!" "Band-in-a-Box, well, it's just a great program!"**



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By Mike Levine

DOUG LASSTEWART

Girl Talk Talks Tech

The master of mashups reveals his production techniques.

With the ease in which digital technology allows for the manipulation of audio, it's no wonder that the mashup, which combines elements of multiple songs together to form a new piece, has developed into an art form. While some might quibble with producers who use samples of others' work as their entire musical palette, when you listen to the music of Gregg Gillis, aka Girl Talk, and hear him discuss his production process, there's no question that he is an artist of the highest order.

Girl Talk's latest, *All Day* (Illegal Arts), is his fifth full album since 2002, and contains his usual high-energy juxtapositions of hip-hop, pop, and classic rock songs. Due in large part to his high-energy live show, and the attention that brings to his meticulously crafted mashups, Gillis's popularity has been growing steadily. I

had a chance to talk to Gillis recently about his production process, software, background, and a lot more.

How did you get into doing mashups in the first place?
I guess it kind of goes back to the first bands I was in. Like the first things I started doing were more experimental, more electronic music, like when I was 15. And I just kind of really dove into the noise and avant-garde scenes, and was just really interested in seeing how far out music could get. So back then, I was in a lot of bands and projects; [the music was] just very abrasive, not melodic or accessible. But it was all electronic; it went from synthesizers and children's toys, and also a lot of sampling—just like cutting up. And that wasn't always computer based. Oftentimes it was like playing with skipping CDs or just appropriating chunks from the radio, or cutting up physical cassettes.

Who were you listening to back then?
People like John Oswald, Negativeland, and Kid 606. And also, I'd always been a big hip-hop fan. So I think, when I got my first laptop, I decided it would be interesting to do a project, kind of like Negativeland, where the conceptual focus would be in the direction of appropriating pop-culture-based things. But I wanted it to be focused on radio music. And I think the stuff I was doing on my earliest records, I don't know if anyone would even call those mashups, even though it was entirely sample based; it was just a lot more based around the process thing, and kind of tearing new songs up. And again, it was a lot more experimental, and over time the projects evolved and started to embrace more mashup-based sounds.

What is the primary software that you use for producing your mashups?
I've been using the same software for about 10 years now. The primary tools are just kind of two pieces of software. One is Adobe Audition, just for cutting things up and editing. And I do a lot of stuff by hand in there: quantizing samples and cutting up beats using a calculator to just kind of come up with the rhythmic arrangements. And then I use a program [by Sonic Fritter] called AudioMulch (see **Fig. 1**) to do the arrangements that I perform live. That program allows me basically to have a bunch of loops and samples and makes it easy for me to try out different combinations of material together. And in the live setting, I actually have that open and trigger the samples in real time.

Have you ever tried Ableton Live for that?
I have, and I've started to fiddle with it a bit. I bought a copy a year ago, and it's really powerful, and I really like it, and I don't know if I'd ever transfer over to it for the live setting, because I'm so familiar with AudioMulch, and it kind of feels like my instrument.

Is AudioMulch the program you do your time-stretching in?
Yeah. For almost everything on the record, I'll do some time-stretching in Ableton if I want to do adjustments without affecting the pitch, sometimes I'll do that in Ableton and then use those loops in AudioMulch. But in AudioMulch with the loop-based setup that automatically time-stretches and pitc-adjusts—if you're going to make something faster it's going to be a higher pitch. I like that aspect; it doesn't lose any quality. I like to mess with it so everything's not the original pitch, so a lot of things are tweaked up or tweaked down, just to give it a little bit more character.

Talk about how you put your mashups together. Do you know in advance which songs you're going to combine or is it a more of a trial-and-error-based process?
It is very trial-and-error based. It's not very intuitive. I'm always hearing songs that I want to sample, and things jump out at me, just isolated parts. But I rarely hear a song and say, "Oh, that would be perfect with that other thing." I just usually hear something and say, "That would go well with something." I would say over half the material I sample and cut up does not see the light of day, not in the live set or on the album. There are a lot more failures than there are successes. A lot of times I'll have a hip-hop verse or something, and I'll try it out with a hundred different things at that tempo. Maybe half of them sound okay, and maybe five of them are really interesting to me. Then out of those five, maybe two are more conceptually strong. So it kind of always goes that way.

When you find song combinations that work well together, what do you do next?
When I get an idea that sticks, I try to incorporate it in the live show if possible. And then from there, I start to build it and understand it as far as where it should fall, and what it should tran-

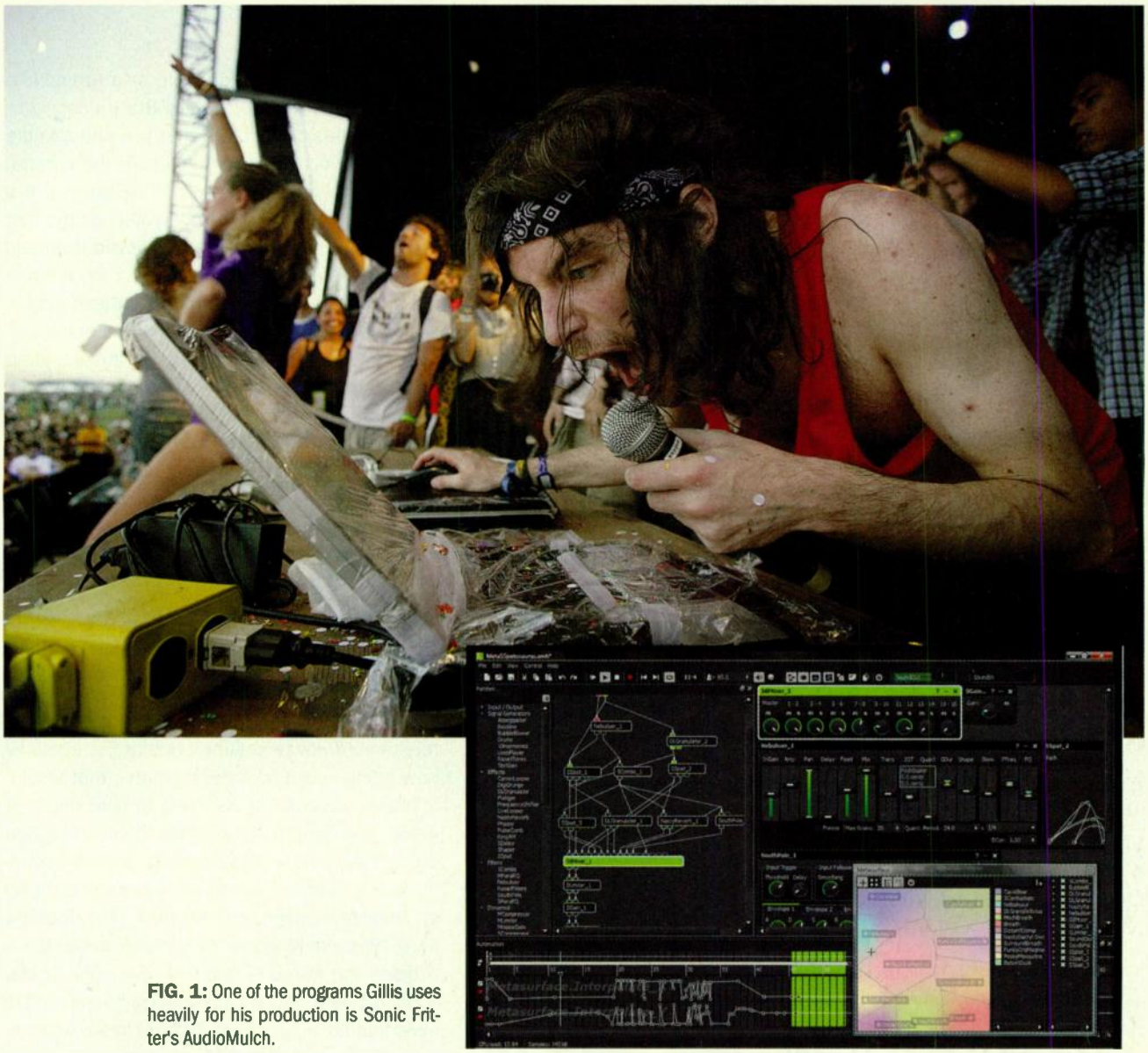
sition in and out of. So by the time I get it into an album, it's after two or more years of experimenting with it live, so I have a really strong idea of kind of where the album is going to begin and kind of most of the pieces in between.

So you basically develop the material live, so by the time you get to putting it together in the studio you already kind of know what's going to work.

Yeah. I would say that at least half the pieces are there when I sit down to start the record, you know, in studio, in my house, when I'm just getting ready to get going. Most of the material, for fans who come out to the shows, I think they hear it as well. I think a lot of people who've been out to any show in the last two years prior to the new album release probably could have guessed there'd be a moment with Ludacris and Black Sabbath, the thing that kicks off the record [a mashup of "Move Bitch" and "War Pigs]. That's something that I'd played a most shows prior to the record. I think in the live show I have to be a bit more blunt about it. The focus is creating a fun atmosphere, and it is a party, whereas on record, that's not the main focus for me. I want it to be fun, and it's cool that people can play it at a party, but ultimately, I want it to be what's most fun and musically engaging.

Is your studio just your laptop and some monitors?

That's basically it. I've gone through various mixers, no real preference there, and monitors. A lot of times I'm on the road and I get things done



DOVE SHORE

FIG. 1: One of the programs Gillis uses heavily for his production is Sonic Fritter's AudioMulch.

on headphones, and I get to try it out on a real sound system, during sound checks and things like that. That's been a big advantage for me, all the time when I'm fooling with mixes and trying out different things. A lot of the time, right when I make something, I'll probably have a show within three days. So when I go there and there's a giant booming P.A., I can get on there and play loops of it and just sit back and check it out, and compare that EQ to the way it sounded on my headphones in my room, or on my studio monitors at home, or anything like that.

On your recordings, at any given moment in time, how many samples are typically playing simultaneously?

I think that the number of layers has increased on each album. So for example, the new album versus the album *Night Ripper* (Illegal Arts) from 2006. On that album, basically, what you're able to identify was all there was. So at any given moment, maybe four samples, maybe three, just the percussion, vocals, and melody. Whereas, I think on the new record, there's a lot more tiny things happening. I got a bit more detail-oriented, and just over the years was interested in making production more full. A lot of times I've got two samples and it sounds good and you put the drums on it and it could sound okay, and then it's really just adding those little bits of percussion and little bits of vocal samples, and hi-hats that are sampled from the '60s from the Rolling Stones. It's hard to replicate things like that. There's a lot of points in the record where it may seem like three samples happening, but there might be 20. Tiny little things. That's even some-

thing that, in the structure of the music, that's always changing, but I want it to be cohesive.

When you want to sample something like a percussion element or a hi-hat, it's not that easy; you've got to find a place where it's in the clear on the album. That's got to be tedious.

Yeah, it's a constant hunt for many different elements. For me, a really big thing on the record that I think is easy to kind of gloss over are the transitional elements. Just tiny things that are used for five seconds: A drum fill, a vocal part. And now, when I'm listening to music or throwing on a CD or at a club, I'm always looking for that. Because those things are really valuable to this style of music I'm doing. Those little, literally three-second parts, whether it's like Janet Jackson screaming, or the industrial drum fill on a Nine Inch Nails song, I just collect those. I'm constantly just collecting bits and pieces. And on the computer, I came up with a cataloging system for keeping all these things together. But it's something where I literally cut up music almost every day.

Do you get percussion sounds from instruments as well?

A lot of times you can just sample a hi-hat from a sound bank or from a drum machine. But sometimes that quality from an older rock song or from whatever recording is just hard to match, and it gives it a lot of character. You can tell the difference: that that was produced in the studio or that it was recorded at a different time period. It's something that's just difficult to replicate.

I have to ask you about the issue of the copyrights of the material you sample. Somehow you've managed to do this without legal hassles. How do you explain that, and what has been the reaction from artists whose material you've sampled?

I haven't heard anything negative thus far. Everything I've heard from artists has generally been positive. And even beyond the artists, a lot of the labels and A&R people and managers have been reaching out more and more, even as this project has grown bigger. I've just been hearing from these people a lot more. It's hard to say why there hasn't been an issue with copyright. Theoretically, I'd like to believe that people hear my music and think it falls under Fair Use. They think it's transformative, and it's not negatively impacting the sales of the artists, and things like that. And that's where I think it should fit in.

Explain Fair Use.

Fair Use is not like a loophole or anything like that. It's a doctrine of United States copyright [law] that basically states that you can sample without permission, if it falls under the criteria. So yeah, theoretically it would be great if the labels and the artists and everyone just thought of it on that level, and really believed it should fall under Fair Use. But I really can't say if that's the case. But I also think many of these artists are used to this. I think any song that comes on the radio now, you can ump on You Tube or jump on a music blog and immediately there are hundreds of remixes of it. Or when a movie trailer comes out, someone's going to do a parody of it, or someone's going to animate it.

That's certainly true.

It's kind of like the age we live in now, where everyone likes to be interactive with the media they consume. And I don't think it's so radical anymore as it may have been 15 or 20 years ago, the idea of an unsolicited remix. I think a lot of the artists that I've sampled on the new album have been positive about it. I believe the reasonable way to look at it is that the music is now being heard by a demographic that wouldn't have necessarily listened to it in the first place. Like on the record, The Toadies reached out to me the day it was released, and were sending some Twitters out to me, and they put it up on their front page, and all that. [The Toadies song "Possum Kingdom" is sampled in Girl Talk's "This is the Remix."] And that was cool. That's a band that's had a long-running career and a band that I'm a fan of. But it's hard to say whether a lot of younger kids listening to my music had heard The Toadies and knew of them. I'm sure many people have, but not all of them. So I'm sure someone like that band can see it from that perspective, where it's like, "wow, there's a whole bunch of new people who now get to hear that song in a different context, and it may turn them on to that music." And that's the way I've been with just so many hip hop and soul samples during my whole life, just hearing that sample and trying to figure out where it's from. And looking into the original and liking the original on an entirely different level than I like the sample-based version. Now I think it's just very common in the world that we live in.

Mike Levine (mikelevine.com) is a New York-based music journalist, producer, and multi-instrumentalist, and is the former editor of EM.

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By Laura Escudé

Masterclass: Ableton Live

Demystifying the Session View

When I first launched Ableton Live, I immediately noticed the Session View—that page resembling an Excel spreadsheet (see **Fig. 1**). I quickly learned to avoid it by tabbing over to the Arrangement View (see **Fig. 2**) and composing and performing music there. It just made more sense to me, as I was coming from a Pro Tools and Cubase background. How else was there to approach music but from a linear standpoint?

I continued like this for several weeks until I tabbed back over and decided to confront my fear of the non-linear. Although it was strange at first, when the beauty of it finally clicked in, I was hooked on utilizing these clips for everything from production to live performance.

Here's what I learned: The Session View is the key to unlocking musical improvisation and creativity. If you've ever struggled to finish a song, the Session View is for you. If you can't stand cutting and pasting an arrangement, it's for you. If you've ever wanted to perform your music in a more improvisational way, it's definitely for you.

Navigating the Spreadsheet

Think of when you're creating a spreadsheet and you have the header at the top of the column, with all of the data below it. All of the data in the column is related to one another. It's the same with the Session View. Each column is a track or part of a song, and most people tend to group files that are similar on one track. For instance, if you are using vocals in your song, you might have a track labeled Vocals with different vocal takes for different parts of the tune. If you have a MIDI track with a virtual synthesizer, then all of the clips or segments that fill in these boxes will have the same timbre and sound because they will be playing the same MIDI instrument.

Each of these tracks corresponds to the tracks on the Arrangement View when you tab over. If you change the volume of one track in the Session View, then it also changes the volume in the Arrangement View. The Session View gives you the visual mixer to look at, but all of these properties can be changed on the Arrangement side as well. Try triggering some clips: Each of the clips have their own Play button, can be triggered independently of one another, and can be stopped by either pressing the Master Track's Stop button, the last square on the track, or by pressing any of the available squares on the track itself.

Tracks contain independent clips of either audio or MIDI, and there are also horizontal rows called Scenes. On the Master Track you'll see numbers with arrows next to them. When these arrows are pressed, all of the clips on the horizontal row will be triggered. For instance, if you have several tracks of audio and MIDI with clips inside them—such as Vocals, Drums, Bass, Synth—and you want them all to play at the same time, then you could place them all in one horizontal row and trigger them with a Scene.

Foolproof Triggering

The way that clips and Scenes are triggered is unique to Ableton Live. You might notice that when you trigger a clip or Scene it doesn't play right away. This is because of an ingenious concept called Global Quantization. To the right of the timeline on the top of the screen you'll see a box with a drop down menu that defaults to 1 Bar. It means that anytime you trigger a clip or Scene within a bar's time, the sound won't play until the downbeat of the next bar. This is critical, especially while arranging a song or in live performance when you probably have more interesting things to think about, like automation or tweaking effects.

To fully understand this concept, change the Global Quantization to None. Now when you press a clip or Scene, it will play instantly. Next, try to trigger it directly on the downbeat. You might be successful, but notice how much effort it takes to make it happen exactly in time with the rest of your clips. It's much easier to keep it at 1 Bar and leave nothing to chance.

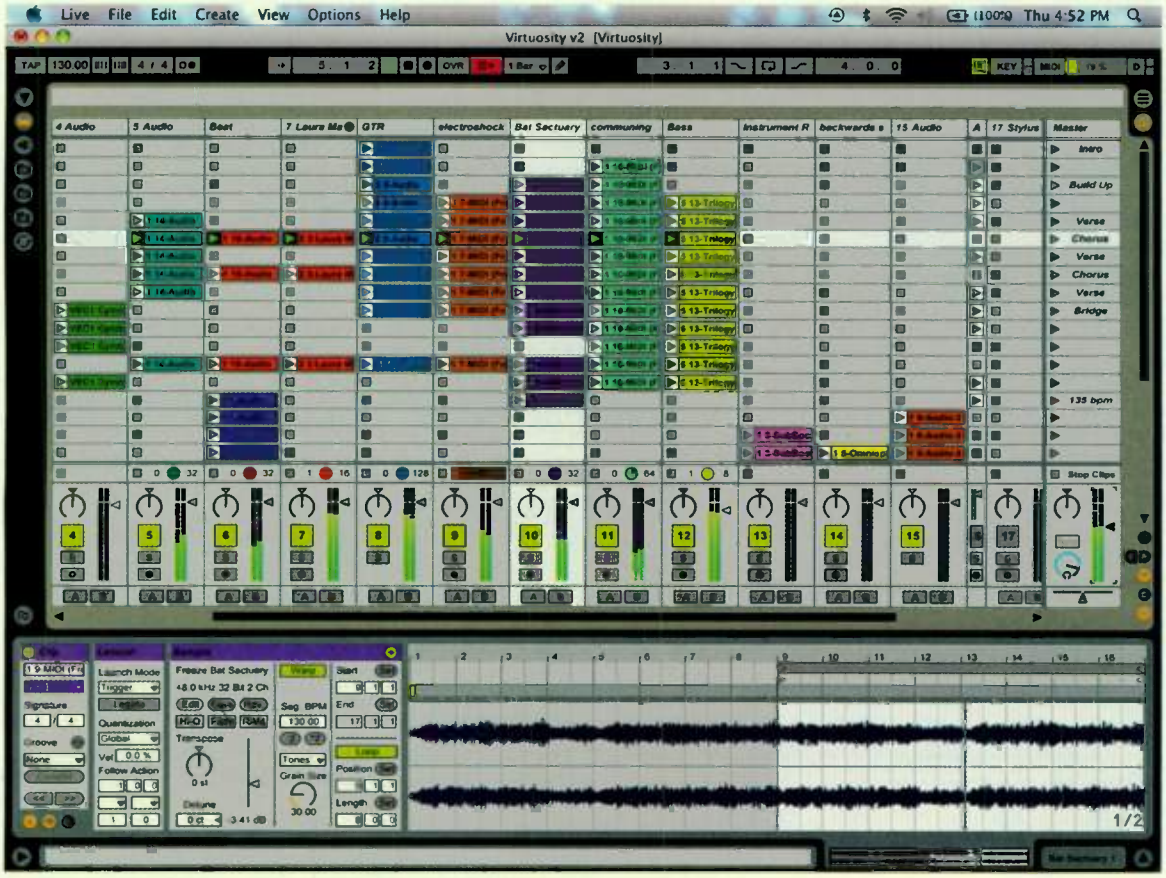


FIG. 1: In this Session View, notice how I've named the Scenes in the right-hand column.

3-2-1, Launch!

Each individual clip can have it's own quantization as well. If you double-click inside the clip and make sure that the circle with the L inside it is activated (at the bottom of the screen in the Clip View window), then you'll see a section under Launch called Quantization. By default it's set to Global, meaning the clip will trigger at whatever you have the main quantization set to. However, you can change the clip to be something different. Having a clip quantization of None can make sense if you have one-shot samples or effects that you want to sound when you trigger them with, perhaps, a pad, if you're using a MIDI controller.

Also in the Launch section are choices for different Launch modes. These also add to the fun in the Session View and can create game-like challenges. Just as each clip can have it's own quantization, the way that it behaves when you trigger it via mouse, MIDI, or keyboard can be altered, as well. The default mode, Trigger, means that when you trigger the clip, it continues to play until you stop it (see **Fig. 3**). Gate starts the clip and triggering the clip again stops it. Toggle starts the clip and, once triggered again, it will stop on the next downbeat. Repeat means that if you hold down the arrow, then the clip is repeatedly triggered at the clip quantization rate.

Each of these Launch modes can be useful in different situations. Perhaps you have a clip that you want to be able to repeat on the fly, using little or no quantization to create a sort of glitch effect—use Repeat. Perhaps you want to be able to stop a clip by simply pressing it again instead of navigating to the Stop button—select Gate.

What if you have a longer clip that, over time, you want to play with different parts? You can copy the clip to the following scenes and use Legato mode. If activated, Legato mode means that when the clip is triggered, it won't start playing from the beginning of the clip, but will start where the last clip left off. So if the last clip ended with bar 2, the next will start with bar 3. Another cool way to use Legato mode is to have several different clips of similar content and discover different sequences of content that flow well together.

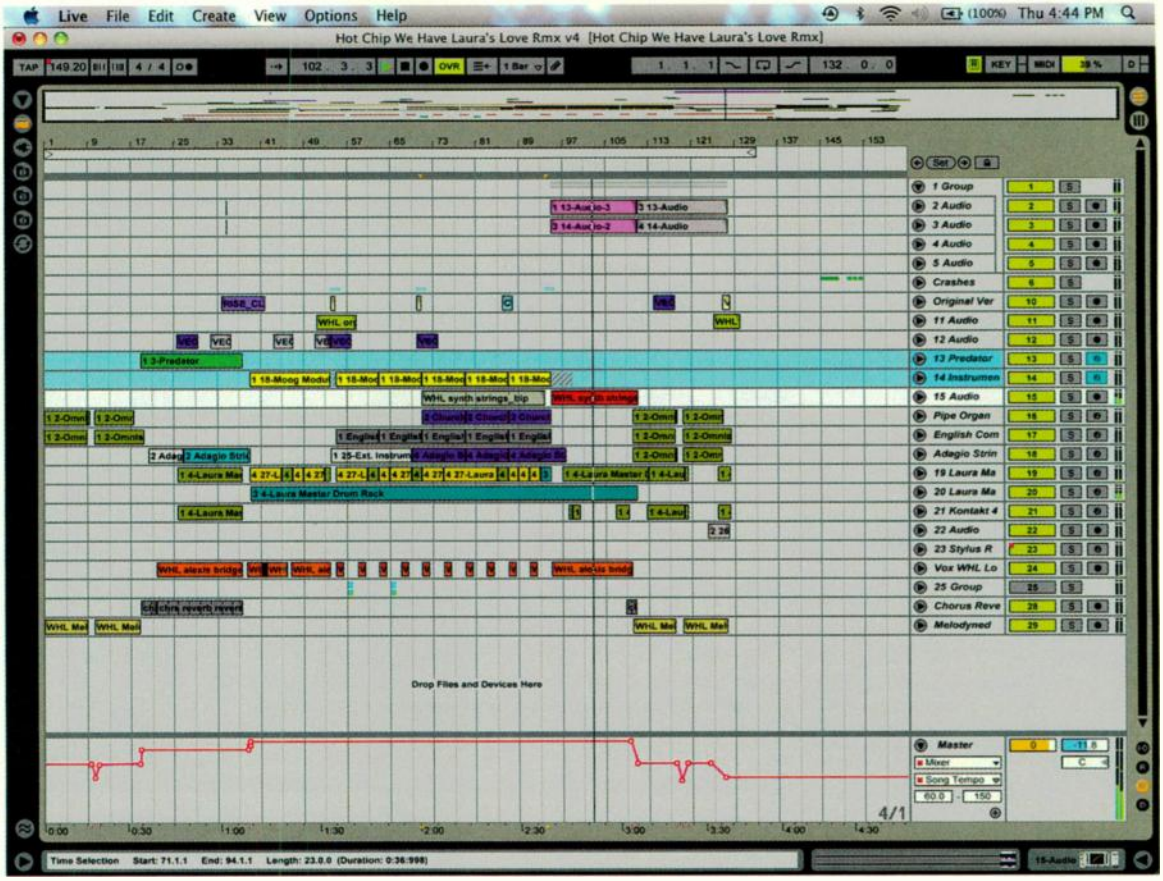


FIG. 2: The Arrangement View's linear timeline.

Follow Me, Follow You

Both utilitarian and creative, Follow Actions are an often overlooked section of the Session View—a math nerd's dream or an improvisational game. You can program a clip to automatically trigger another clip in a continuous section. For example, sometimes during a live performance I'll be playing violin and not have any hands free to trigger a new clip. I can simply double-click in the clip and set my bar amount to, say, 4, and then choose to trigger the next clip in the track. Then, after the clip plays for 4 bars, then next clip down will play.

Taking the practicality a step into more creative territory, Follow Actions can be great for improvisational production and performance techniques. By making use of the second Follow Action and Chance choosers, you can make your music creation into a game of probability. Now you can tell the clip to either play the next clip or play *any* clip in the continuous section *and* you can set a probability of the likelihood of each Follow Action occurring using a ratio. For an equal opportunity, put the same numbers on either side. For a stronger possibility on one side, put a higher number there. A 1:10 ratio means that the first choice will occur one time for each 10 triggers.

Follow Actions are independent of global quantization but not clip quantization. Combining different clip quantizations and different Follow Actions can make for some happy accidents in both your productions and performances. Try setting small clip quantizations and Follow Actions with a section of similar drum loops and record the outcome by busing the output to another track using the I/O section.

Putting it All Together

By now you should have a better idea of what these different parts of the Session View actually do. The fun part is putting it all together.

There are new MIDI controllers popping up every day that are suited for triggering clips in the Session View. A few of my favorites are the Akai APC40 and APC20, the Novation Launchpad, and Livid Instruments Ohm64. These premapped grid controllers are excellent both in the studio and onstage. Instead of clicking with the mouse you can press buttons on a controller, which allows you to really improvise and perform your music. In addition, the knobs and faders on

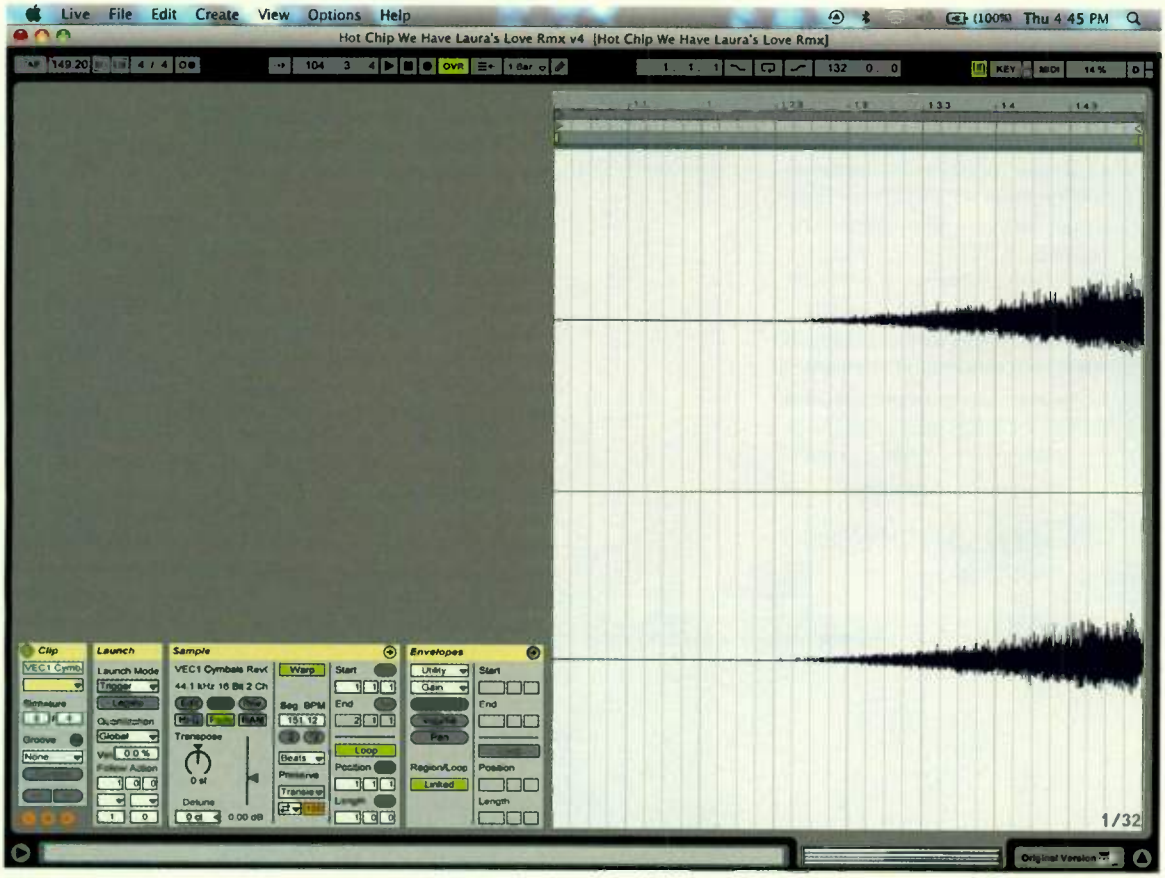


FIG. 3: Setting up the Launch mode parameters.

these controllers can correspond to effects parameters in your session, allowing you to change, for example, a filter cutoff in real time or raise a delay's feedback amount.

I think of each Scene as a section of a song, like a chorus or verse. All of the parts that I want to hear during that section I'll place horizontally on their respective tracks. The first Scene represents the intro of the song and I build the song moving down to the next section, which might be a verse, chorus, or the like. At times when I'm composing and arranging, I'll change the Global Quantization to 8 Bars. This means that the Scenes will sound after 8 Bars, which is a good start for most song structures.

Each Scene can be renamed. By right clicking on a Scene and choosing Rename (or command + R) you can label the Scene (e.g., Chorus) as well as add tempo and time-signature changes. For instance, if you want the section to change to 133 bpm and switch to 6/8, then you would simply name the scene "Chorus 133 bpm 6/8." Then, when you trigger the Scene, the session will automatically change to these parameters of your choosing.

If there is a clip that you want to continue playing through different sections, you can either copy the clip to the next slot down or right-click on a clip and choose Remove Stop Button (or command + E). This allows the clip to continue to play until another clip or a Stop button is triggered.

This method is interchangeable for performing live as well. The beauty of the Session View for me is that instead of traditionally sequencing a song by copying and pasting it, I can simply jam on the parts to come up with my arrangement, whether I am in the studio or playing live. This has helped me finish far more songs than I did in the past because it is much more fun to perform my song and then clean up the recording afterwards than spend time cutting and pasting in a linear fashion.

Back to Arrangement

To record your song into an Arrangement, simply press the Global Record button at the top of the application on the timeline and start triggering sounds and tweaking effects (see **Fig. 4**). Once you are finished, tab over to the Arrangement View and check out your song. Now you can clean up your automation and arrangement, but most of the difficult work is done. This is also a great

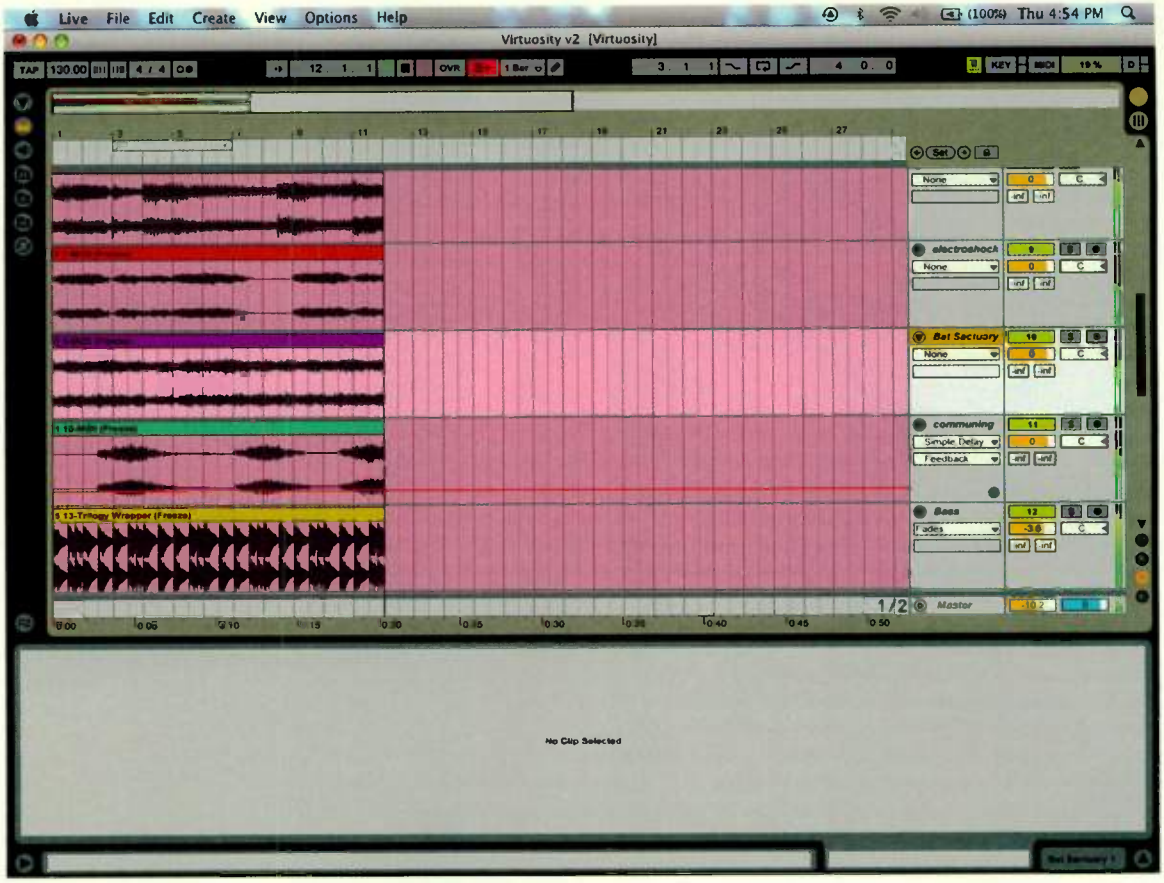


FIG. 4: Recording a song into the Arrangement View.

way to record your live performances.

Once you have recorded to the Arrangement View, you'll notice that the red button on the timeline at the top of the screen switches to grey. This is called the Back to Arrangement button, and it is always a source of confusion for new Live users. When the button is grey, it means that you will only hear the audio and MIDI in the Arrangement View.

Once you have material in the Arrangement View and trigger something in the Session View, the button turns red. Now you'll hear a combination of the Arrangement and Session Views. Notice how the tracks correspond to one another and the track is now greyed out on the Arrangement side because the sound from that track is playing from the Session View. This is a great way to audition a new beat or sound in your arrangement without committing to it.

If you want to only hear the Session View after you have material in the Arrangement View, there are two ways to go about this. You can trigger a Scene in the Session View, overriding all of the tracks in the Arrangement View, or you can press the Stop Clips button in the Master Track on the Session View. Both achieve the same goal of only hearing the Session View.

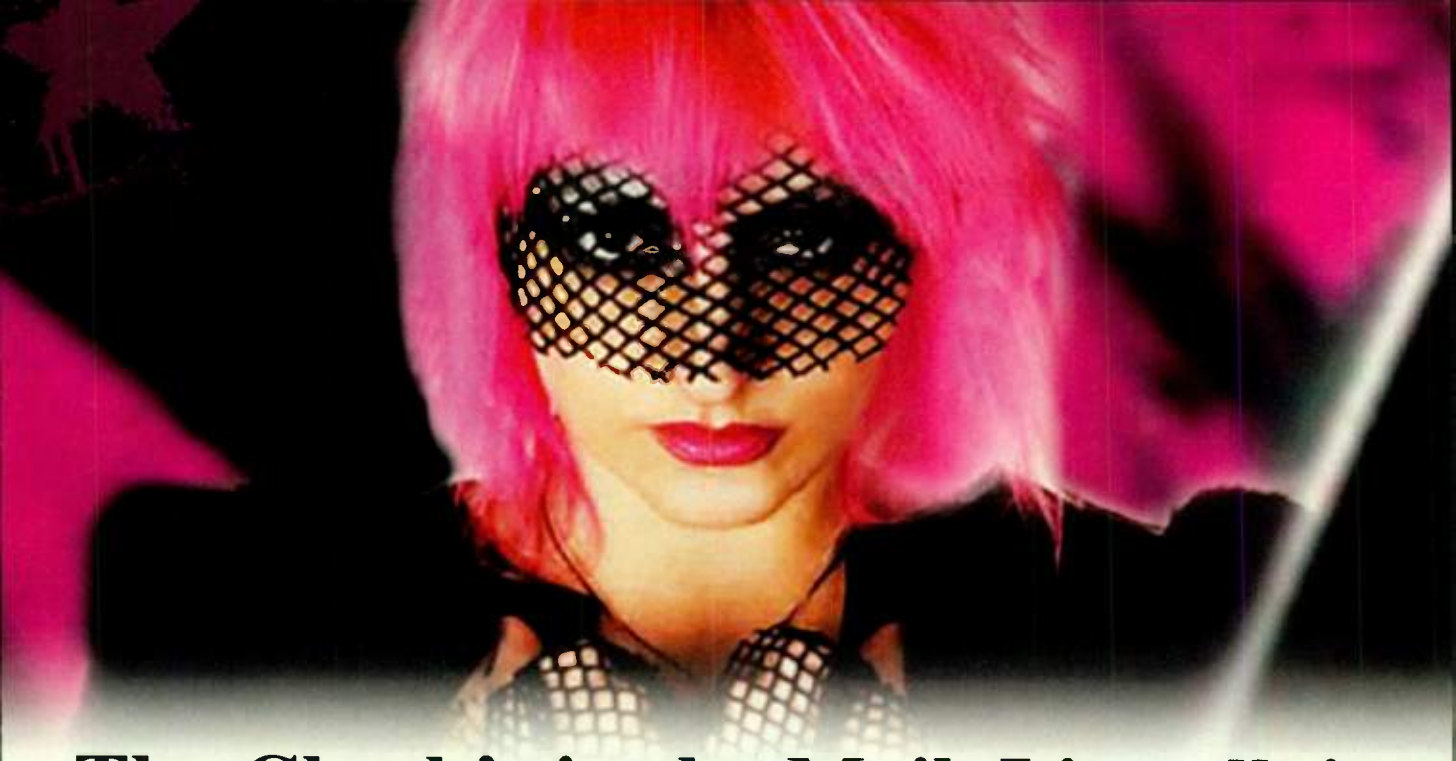
What's the Best Solution?

My company, Electronic Creatives, focuses on solving specific and complex technical issues for artists and productions. After assessing the client's needs, I carefully determine whether or not the Session View is the proper choice for their production. If a client needs to loop a segment of a song, go back to a certain section in order to keep the show flowing gracefully, or improvise and perform with a grid controller, then the Session View should be used.

Music editing is dramatically easier in the Arrangement View, so if a client suddenly wants to take out a verse, it's easier to do so there. Lots of times I build a show in the Arrangement View and then once the show is set, I'll transfer it to the Session View. Arrangement View is also necessary if you're scoring to picture.

However, once you learn to make music in a nonlinear way using the Session View, the process will accelerate your art to the next level.

Laura Escudé is an acclaimed violinist, composer, sound designer, and Ableton Certified Trainer.



The Check's in the Mail–Literally!

Jacqueline Van Bierk – TAXI Member
www.jacquelinevanbierk.com

I love color, especially pink ;-) I love writing music and performing with my band. I love to do the things people say are impossible, and I never take "No." for an answer. I'm a dreamer, a believer and I am most *definitely* stubborn. I never really bought into the "struggling musician" mentality. I knew there had to be a way to turn my talent into a full-time career.

I've been writing music for a very long time, and had tons of songs sitting on my computer with no purpose; they just didn't fit my band's style. A friend told me about TAXI and brought me to their free, members-only convention, the Road Rally. Like many musicians, I was skeptical but thought, "Well, I've been asking for a sign, so I'd better go."

The wealth of information there just blew me away. Everything that previously seemed so "far out of reach," was now within my grasp. I signed up with TAXI and started writing for specific music industry requests. All of the sudden I had a purpose, became very focused, and was finishing a lot more songs and tracks because I had targets and deadlines.

Getting Paid to Do What You Love

I've become a much better musician and songwriter, and I've made friends with talented and established collaborators I've met through TAXI. Now I'm signed to two major music libraries, and my music is on two huge daytime TV shows, and several more.

There's nothing more gratifying and inspiring than getting checks in the mail for doing what you love. Seriously, I never thought I would be writing for the TV shows I now write for. I'm so grateful my friend encouraged me to join TAXI. If I hadn't, I'd probably still have a computer filled with "brilliant little orphans" that might have never been heard.

I Spent More on Coffee!

There are so many opportunities right in front of us that sometimes we don't *see* them. I was spending more on coffee than what a TAXI membership costs. I used every excuse possible to delay joining. Ironically, I wouldn't be where I am today if it weren't for TAXI and all the great friends I've made on its Forum and at the Road Rally. And this is just the *beginning*.

If our purpose in life is to do what we truly love, then I'm living my dream. What's stopping you? Call TAXI now!

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By James Sizemore

The Big Score

Preparing for a film-music recording session

For many film composers, nothing is more exhilarating than standing in front of an orchestra and hearing one's music come alive. However, recording the live orchestras heard in today's blockbuster releases is no easy feat. It requires both a good crew and reliable gear. This article takes a look at the people and technology that go into preparing for a Hollywood scoring session.

See it in Black & White

For much of the film-scoring process, the composer is working on a computer, but during the weeks of recording, much of the focus is given to traditional music notation. Although computers are an excellent way to create music, nothing is more satisfying, efficient, or creates better results than recording live acoustic instruments playing music off the page. Of course, to get the music onto the page, there are a number of technical steps that need to be addressed.

If the music was written in a computer sequencer, the composer or music programmer will export a MIDI file and send the file to a copyist or orchestrator along with an MP3 of the mockup (a demo of the music using sampled instruments). The copyist will import the MIDI file into his or her notation program of choice and begin to stylize the layout of the score page while cleaning up the raw MIDI musical data.

To assist in the cleanup process, notation programs will quantize the MIDI on import, which reduces the note's rhythmic value to a set length, such as 8^{th} notes or 16^{th} notes (see **Fig. 1**). The Sibelius notation program allows copyists to set up a "house style" with all of the composer's score preferences. This helps the copyist quickly conform the MIDI into the composer's preferred score layout. After cleaning up the MIDI in the notation program, the composer or orchestrator can add written expressive elements such as dynamics or techniques. Depending on the preferences of the composer, files can go back and forth between the composer and the copyist, with the composer making updates or orchestration changes to the score by hand.

There are a few elements specific to film scores that are useful to incorporate into the notated score. Unlike a concert score, it is helpful for a film score to have an action staff at the top of the score that indicates hit points—places in the film that need to be highlighted with accents or other musical hits (see **Fig. 2**). These are very useful for the composer and the conductor in shaping the music and orchestration.

Hit points are usually created when composing in a sequencer such as MOTU Digital Performer, which uses these hit points to calculate tempo and meter changes. In the pre-digital days, a music editor would often have to calculate tempos using a stopwatch, but these days the software can determine tempos for you.

When the MIDI file is imported into the notation program, the hit points are also imported and incorporated onto the action line at the

top of the score. Sibelius imports these hit points directly, whereas Finale requires the inexpensive plug-in TGTools. The hit points will later be imported into Avid Pro Tools when these same MIDI files are used to create the recording templates.

Because creating tight synchronization with the visuals often means changing the number of beats in each measure, or speeding up or slowing down some sections, film music can often have a lot of tempo and meter changes. To assist the conductor in sight-reading the written score, it is often helpful to have large meter changes (see **Fig. 3**). Finale and Sibelius default to small time signatures, but with some tweaking, one can create custom layouts of time signatures to allow for quick reference of meter changes. To also assist in quick reference, it is very helpful to have measure numbers listed on every measure of every score and part.

It is useful to include each cue's start time on the written score as well. Starts get changed often due to picture edits during the scoring process, and if the start is clearly stated on the written score, the technical staff can all be sure that their equipment is set to start at the right time.

After the scores have been created in Finale or Sibelius, the digital files are sent to a music librarian at the recording session who will supervise the printing, binding, organization, and delivery of the music to the musicians. The librarian is often hired by the music contractor, who also hires all the musicians for the recordings.

It's About Time

The film scoring process often feels as if it's devoted to the management and wrangling of time: there is the start time of the musical cue in the film measured in SMPTE timecode (hours, minutes, seconds, frames); the running time of the cue; the bars, beats, and tempo of the music; the sample rate and frame rate of the audio and video; not to mention the short deadlines for finishing the work.

The music editor has a central role in managing all of these timing details. The role of the music editor can vary widely depending on the film and the composer, but there are a few responsibilities which most music editors share. The first is the spotting of the film, at which point the music editor, composer, director, and sometimes the producer, review the film and decide on basic start and stop times for each scene, as well as a general character and feel for the score.

Once the general start times have been determined, the music editor can begin the temp music, which is the process of placing existing music cues into the soundtrack to create a temporary score. This is increasingly common on many films, as the movie studios often want to screen the film to select test audiences before recording the score, and music is needed to sell the emotion of each scene. As the music editor assembles the spotting notes and temp music, he or she begins to compile a list of the start times for the music cues. This list is often called a *SMPTE start-time sheet* and lists important technical information about each cue such as

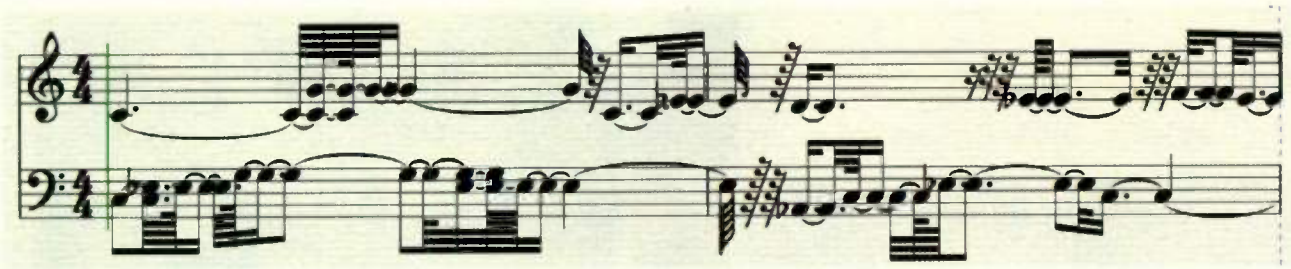

FIG. 1a: Sibelius MIDI file before quantization.

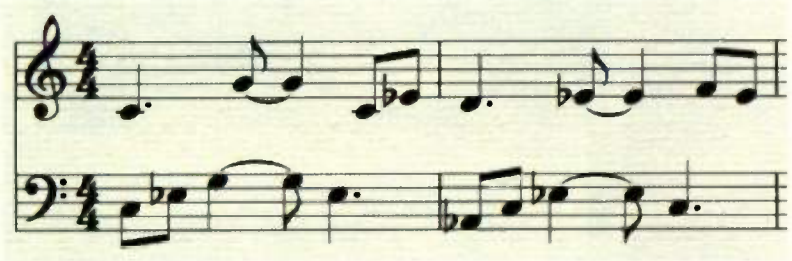

FIG. 1b: After quantization.

the title, video reel, name, length, and the start time (see **Fig. 4**). As the film is edited, this list must constantly be updated to ensure the start time of the music is correct with each new picture version. In addition, many music editors are also asked to conform the music to fit new picture edits by cutting sections out, changing meters or tempos, or requesting that the composer add new sections of music to go under added footage.

As the week of the recording session gets closer, the music editor will start to prep recording templates for Pro Tools. Although much of the composing process is done in Digital Performer, Logic, or a variety of other sequencers, the majority of top-notch, film-music recording studios work with Pro Tools. These templates can be made in Pro Tools LE as well as HD. The Pro Tools session templates need to have the proper frame rate and start time, the tempo and meter map, and any guide tracks such as mock-ups or other pre-records.

Frame Rates and Session Start

Each cue in the film will have it's own Pro Tools session. Pro Tools sessions should be created using the film standard of a 48kHz or, more commonly, 96kHz sample rate, 24-bit resolution, and Broadcast WAV (BWF) file formats. BWF files place a timestamp on the audio files, so that when files are later imported into new sessions at the mix, the file will automatically synchronize to the correct start. Once the session is created, the editor adds in the Session Start Time and the picture frame rate. This is done in the Setup > Session Menu (see **Fig. 5**).

The session start time is determined by the reel of video that is being used. Each video reel will start on an hour marking. For example, Reel 1 will start at 1:00:00:00 (1 hour, 0 minutes, 0 seconds, and 0 frames), Reel 2 at 2:00:00:00, and so on.

Next, the music editor will set the time-code rate. Most projects shot on HD video these days use the 23.976 frame rate, which has the 24 frames per second (fps) look of film, but accommodates the 29.97 specification for US television using a technique known as a 3:2 pull-down. While the film rate of 24fps is often used for projects shot entirely on film, the final mix, or dub, is often at 23.976fps. In these cases, the score recording, or more often the layback of the final mixes, will be done using a pull-down (see **Fig. 6**). This pull-down process will slightly slow down the audio to make it compatible with the different frame rate being used at the dub. If the score is recorded and mixed at the wrong frame rate, the dub stage can accommodate this mistake using sample rate conversion at the final mix, but this is not as desirable.

Cue Start Time and Tempo/Meter Maps

Once the session start time has been created for the reel, the music editor needs to set the cue's start time and import the tempo/meter map. Because film music is usually recorded to a click track to ensure sync, the bar numbers in Pro Tools have


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World Radio History

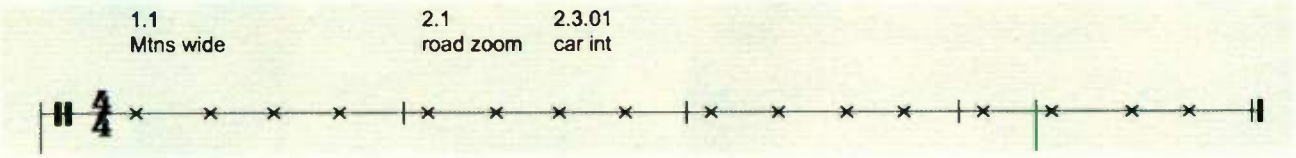

FIG. 2: The action line on a film score.

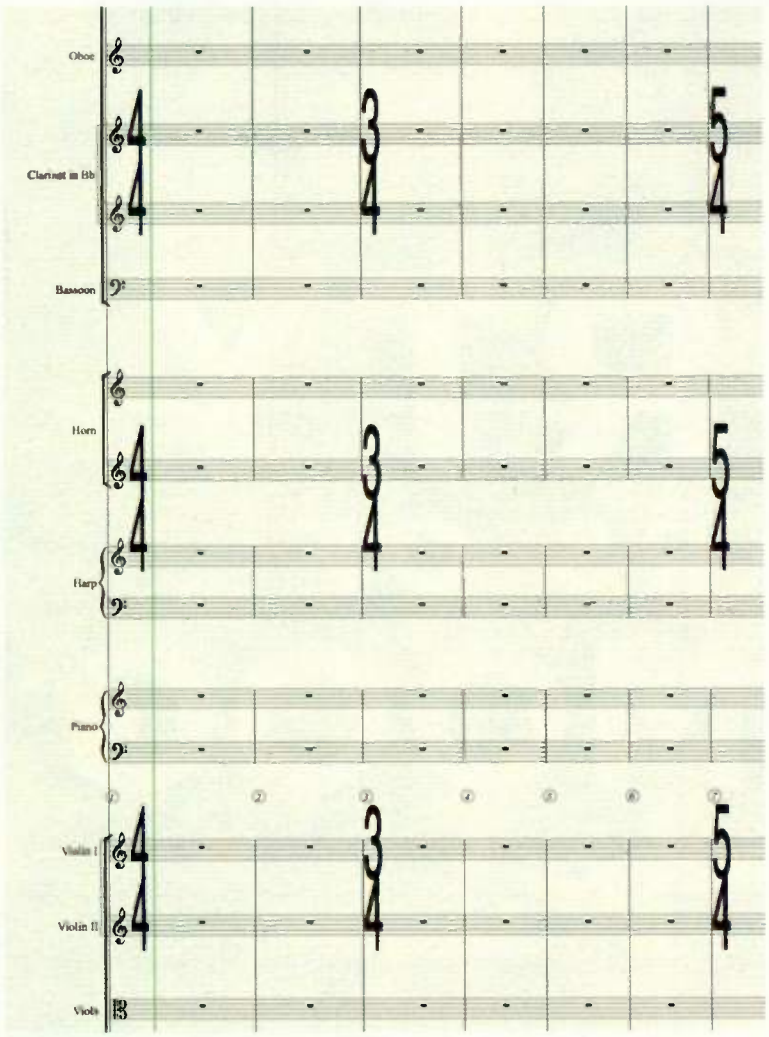

FIG. 3: Big time signatures are important for conductors who are sight-reading a score.

to align with the bars in the score. This also allows the composer to do "pick-ups" at the recording session by starting a recording in the middle of a take.

The easiest way to set the tempo and meter changes in the Pro Tools templates is to import a MIDI file either from the music programmer or composer. Import the MIDI file and set it to the SMPTE start time for the cue. This will place all of the meter and tempo changes directly into the Pro Tools file. With any technical process, it is usually a good idea to check the tempo and meter in Pro Tools against the written score to make sure no mistakes were made in the MIDI file import.

Once the template sessions have been created they can be delivered to the Pro Tools operator for the recording session, who will import the templates into his or her recording layout template, using File > Import Session Data.

Conductor Comforts

Conducting is a skill that requires not only a great ear and deep musical knowledge, but also a lot of coordination. Cueing orchestra members, coaxing an emotional performance, listening for mistakes, and counting the beat of the music is a difficult task. Film composers not only have to accomplish this, but they also have to synchronize the music to the film at the same time. To assist in this task, many conductors use visual cues such as punches and streamers.

Since the early days of film music, punches and streamers have been used to assist the conductor. Music editors in the pre-digital days would literally punch a whole in the film at designated lengths to flash the downbeat, providing a visual metronome. Using this method, a bright flash would appear over the film that would keep the conductor in time. For important musical hits, a vertical line, called a streamer, would slowly progress across the screen to indicate the entrance of the next musical section. This was accomplished by marking a diagonal scratch across the film stock. When the film was played back, this would manifest itself as a moving line across the screen.

In these modern days of video, these early film techniques have been long abandoned, and now computers provide these important visual cues for the conductor. One of the more beloved systems used by established film composers is the Auricle Time Processor. This is a DOS 3.0-based computer system that was developed by Richard Grant in 1983, who would later go on to receive an Academy Award in 1987 for his creation. This computer chases (or generates) SMPTE timecode created by the master recording computer, and generates MIDI messages that create the visual punches and streamers at designated times.

Like much in the film music recording process, proper Auricle setup relies on having the

tempo/meter maps from MIDI files, the start times, and the frame rate settings. The Auricle operator converts the MIDI file into an Auricle file for each cue, and sets the start time and the frame rate. Based on the composer's or conductor's preferences, streamers, punches, flutters, and other visual indications are added in the Auricle program. During the recordings, an NTSC QuickTime video is played out of Pro Tools via Firewire and through a digital-to-analog converter, such as a Canopus ADVC, and then to the Auricle system. When the Auricle receives the start time in the SMPTE timecode, it starts generating the proper visual indications, all while following the tempo and meter of the MIDI file. The conductor can then watch the movie after it has passed through the Auricle with all of the proper visual overlays.

MOTU Digital Performer has also been implementing visual streamers and punches into their software and can output these visuals right onto the QuickTime movie. Figure|53 (figure53.com) also makes a software solution for visual cues called Streamers.

Music Programming

Although the technology for creating mockups has been available since the 1960s, delivering mockups has only been common practice for the past 10 to 15 years. Composers used to play demos on solo piano to illustrate the musical themes, or they'd use small instrumental ensembles. These days emulations of entire orchestras can be convincingly created using a computer. In addition, many composers now compose using a sequencer, and use the mockup as a composition tool in the process.

As the quality of mockups has improved over the past few years with the advances in sampling technology and sequencer proficiency, many film scores include the pre-recorded electronic elements in conjunction with the live orchestra to make a fuller, more modern sounding score. These elements are often called sweeteners and can be used in a variety of ways during the final mix. Low-frequency elements can be used to add impact to bass drum and percussion sounds heard in the LFE (Low Frequency Effects) channel of 5.1 playback, while electronic or synth textures can be added as an additional texture or ambience to the live orchestra. On projects with smaller budgets, it is not uncommon to use sampled instruments for some of the orchestra, combined with a few live players.

The mix engineers will often request these sweeteners, or pre-records, before the start of the recording session, and the composer or music programmer should take some time to make sure that the electronic elements are properly prepared so as to not slow down the recording or mix sessions.

Composers and music programmers will spend most of their time

SCENE		TITLE	CURRENT REEL	CURRENT PT SESSION	SMPTE START	LENGTH	EDIT / CONFORM	Notes
R1 825								
sc5	2	Main Title	R1_0629	sh5_0816	1:02:58:13.90	2:45		Add low notes on 1 de
sc10	10-12	Arrival	R1_0629	sh10_0809	1:04:50:07.11	3:15	cut last beat before reveal	
sc24	24	In the Shadows	R1_0707	sh24_0822	1:10:50:14.00	0:45	conform to fit r1_0707	remove [illegible] section
sc28-38	27-30, 34, 38, SA/36	Rescue	R1_0707	sh_0816	1:14:51:28.21	5:16	conform to fit r1_0707	add perc to hits

FIG. 4: A typical SMPTE start-time sheet.

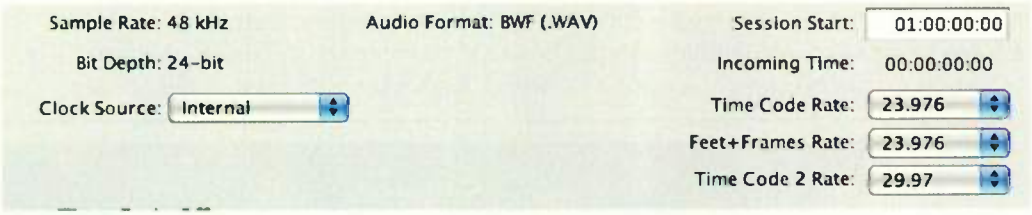

FIG. 5: Setting the session start time and frame rates in Pro Tools.

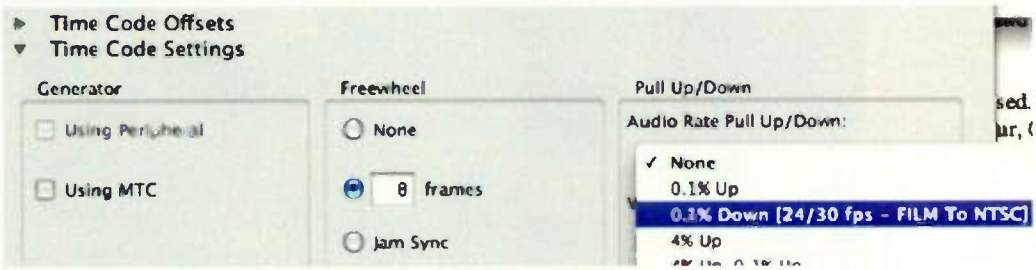

FIG. 6: The Audio Rate pull-up/down menu in Pro Tools.

working in the MIDI domain, but once the arrangement is completed, the electronic instruments should be rendered as multitrack audio files. Before the MIDI is converted to audio, the music programmer will want to confirm that the orchestra is tuning to A440 (many European orchestras prefer to tune to A442 or even A444). Almost all modern software samplers allow the user to pitch up or down the samples a few cents to match the live orchestra.

When recording the MIDI into audio tracks in the sequencer, it's helpful to give the mix engineer as many options as possible. Some music programmers provide the multitrack stems based on the orchestral section—strings, percussion, brass, synths, guitars, and so on. If the stems can be broken down further into instrument sections (violin I, violin II, horns, trumpets, etc.), it provides the recording engineer with greater control over the mix. How the samples are routed to the audio tracks depends on the music programmers's setup, and will be determined by what samplers are used, whether it is a host-based sampler such as Native Instruments Kontakt, an inter-application sampler running over Rewire or Vienna Ensemble Pro, or an external sampler running on another computer.

Recording engineers usually prefer to have the samples printed dry, without any effects processing. If the processing is a key element to the sound, such as an amp simulator, pattern generator, or audio mangler, then the samples should be printed *after* passing through the effects plug-in. If desired, the music programmer can also create separate audio tracks of only the reverb.

One-Stop Shop

There are a growing number of European studios and orchestras that tailor to film music recording and provide all of the technical and music services required for a film music recording. One such orchestra, known as the F.A.M.E.S orchestra based in Macedonia, provide a large orchestra with conductor, recording and mix engineers, and music preparation services.

With the use of remote recording technology such as Source Elements' Source Connect audio plug-in, the composer can even attend the recording sessions from his or her own studio by listening to the live playback in MP3 quality over the Web. With the addition of a talkback microphone, the composer can lead the recording sessions just as if he or she were in the actual control room.

James Sizemore is a professional composer and producer in NY, and has been the Scoring Technical Director for recent films The Twilight Saga: Eclipse *and* The Edge of Darkness.

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Sequence and arrange music
Perform music live with video effects
Connect as a VST in other DAWs or through ReWire
Lifetime **Free Updates**

Introducing:

Pitcher : real-time pitch correction

The most powerful **Piano roll** ever

Connector : Create plugin & FX chains

Multi-track audio & MIDI recording

Newtone : pitch correction and time manipulation editor

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By Len Sasso

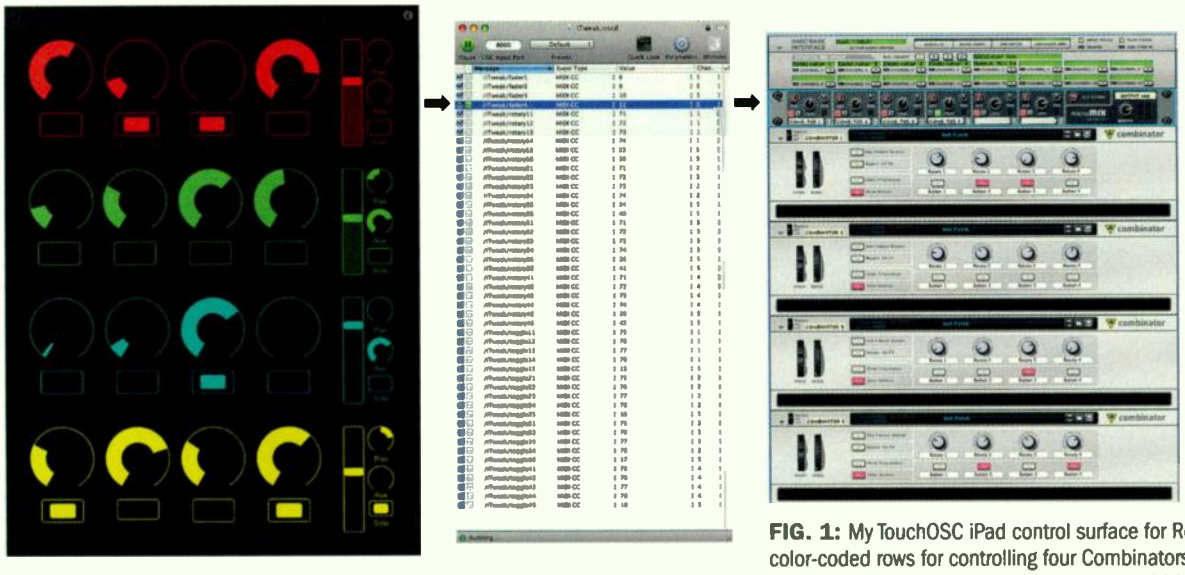

FIG. 1: My TouchOSC iPad control surface for Reason has color-coded rows for controlling four Combinators. The OSCulator document in the middle converts TouchOSC's OSC messages to MIDI messages that match Reason's default remote settings. Reason's Hardware Interface module uses MIDI channels to route these messages to the target device.

iTweak

Use your iOS device as a MIDI control surface

If you don't want to wait for a commercial iOS-device control surface for your favorite DAW or virtual instrument, and you're willing to forgo some advanced features (two-way communication, for example), designing your own is much easier than you might think. You'll want to use OpenSound Control (OSC) because it is designed for network communication, and if you're not targeting an application that supports OSC, you'll need to convert the OSC messages to MIDI.

Hexler TouchOSC ($4.99 from the iTunes store) is an iOS application that hosts OSC control surfaces and handles WiFi communication with your computer. The free downloadable companion program TouchOSC Editor lets you design the control-surface GUI on your computer (Mac, Win, or Linux) and upload it to your iOS device. OSCulator ($39, Mac, osculator.net) lets you easily map OSC messages to MIDI messages and provides a MIDI port for routing these messages to your MIDI applications. The process for Windows is a bit more involved; it is documented on the Hexler website (hexler.net). Here are the details for a control panel that I use frequently with Propellerhead Reason.

Combinators Ready

TouchOSC Editor offers graphic elements for use as buttons, faders, knobs, labels, and LEDs. You can get as device specific as you like in your design, but you'll save lots of time and probably build a more useful control surface if you keep it generic. One way to do that with Reason is to target the Combinator module. That lets you control any Reason device by wrapping it in a Combinator and mapping its controls to the Combinator's.

Figure 1 shows the layout I use on my iPad. It controls as many as four Combinators along with four mixer channels into which the Combinators are routed. I've avoided labeling any of the iPad elements for the Combinators, relying instead on the labels on the Combinator to remind me of their function. I can use this iPad control surface with any Reason song that has a Combinator in it, ignoring any unused Combinator and mixer controls.

Once you design a control surface and upload it to your iOS device, launch OSCulator and ensure the iOS device's TouchOSC outgoing port matches OSCulator's input port (8000 by default). Touch the iOS device graphic controls one at a time and each will appear as a separate message line in the OSCulator window. These lines are ordered alphabetically by control name, so if you rename the controls in a logical fashion as you create them in TouchOSC Editor, you'll be able to easily identify the line corresponding to each control. (Edit only the part of the name after the last slash and limit yourself to lowercase letters and numerals.)

The next step is to set the MIDI event type, number, and channel for each line. Then lock the OSCulator document (Command + L) and save it. You'll need to open this document each time you use the TouchOSC control surface.

You can use your target's MIDI-learn function to map OSCulator's MIDI output to the desired controls, but in Reason, it's easier to set up OSCulator as an Advanced MIDI input and use Reason's built-in MIDI routings. Use a different MIDI channel for the mixer and each set of Combinator controls, and use Reason's Hardware Interface panel to route the controls by channel to the corresponding Reason devices.

Len Sasso *is a freelance writer and frequent EM contributor. For an earful, visit his website, swiftkick.com.*

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By Aaron "Ming" Albano

"Technology has turned music production into an egalitarian society, allowing small labels to get some attention and establish a following. Simultaneously, this democratization of music has contributed to a diminished consumer appetite for the LP."

The Single is the New LP (Again)

Digital technology has changed almost every aspect of my musical life. I produce, market, distribute, watch videos and listen to music on my computer or via the Internet. In the past 20 years, advances in music production and recording have increased exponentially, streamlining the production process to the point where high-quality recordings can be produced in smaller project and home studios. Another result of music industry "technonomics"? Almost anyone with a computer and a few production programs can make a track and put it online: The amount of music available to consumers is daunting.

The music download age has given the control of the playlist directly to music fans themselves. They are listening to music in a way that reminds me of the early days of the music business, when music sales were all about the single. Not 'the single' that leads to an album, the single that was released as a 45. That single was the goal itself.

Rewind 15 years. The age of downloading digital music was beginning to unfold, but it was nothing compared to the sale of the physical CD. Most major label records were still being cut in professional studios and the consumer was hungry for great albums such as Nirvana's "Nevermind". The single or EP was used to entice new audiences into purchasing the full-length album and to service radio stations that helped break new acts, and market to a larger listening audience. You watched videos on MTV or VH1 and bands' websites were just starting to become the center for all information related to that artist.

If you were shopping a demo, it meant that you were looking to do a full-length album. The demo consisted of three to five songs, which were just a taste of what you planned on delivering to an audience.

Come back to 2011: the age of mass broadband, blogging and "stay at home" beat makers. Technology has turned music production into an egalitarian society, allowing small labels to get some attention and establish a following. Simultaneously, this democratization of music has contributed to a diminished consumer appetite for the LP. Listeners are creating their own playlists and podcasts, and digesting music at a much different pace. Understanding this shift in consumption is vital to the survival of a modern record producer.

Most bands or artists do a fair amount of marketing through social media. On the web, we get instant access to feedback and are able to see how music and art are trending. But all too often I come across acts that are so con-

cerned with releasing a full-length album that they forget the ultimate goal of social marketing in the first place: Social media is the best source of real-time feedback. Facebook, Twitter, Ping, etc. help create a dialog with fans, humanizing the consumption/promotion process. Fans appreciate the opportunity to interact with a favorite band, get involved via remixes, contests, or just plain old blogging.

The math is simple. Making a full-length record requires a good amount of time. Most artists take 20 years to make their first record and then need to follow up with an LP every two to four years. But the average fan is consuming at such a high rate that a band can make itself obsolete before ever releasing its first album.

As a producer, I'm pushing more and more artists to focus on the single and to think of the EP as the album. I encourage creating music in small batches, such as two or three songs at a time, then releasing and promoting those tunes. Tour against those songs, get back into the studio and repeat that process over and over until the social media, record release, and live show attendance circle creates a positive feedback loop.

In the time it takes to complete a seriously good full-length album, an artist could easily release two solid, three-song EPs, or a number of singles with remixes that help reach and audience that may never have heard your band. A great single release will get good blog coverage, is ripe for a low budget video, and perfect for the podcaster. If it's a flop, then no worries; on to single number two without breaking the bank and losing too much time. Conversely, if you release a full-length album and it flops, well, you wasted all that time without any fan feedback, which would have let you know that people weren't feeling your tunes in the first place.

Yes, making music is an art, but we need to be pragmatic about the business end. Just because you can make an album doesn't mean anyone wants to listen to it. This of course is fine if you are making an ambient album to play to your daughter while she sleeps, or that noise core record to torture your parents. But for most musicians, we want to reach as many fans as possible. Unless there's already a huge fan base waiting for the next release, it's a bit naive to think your album is gong to get listened to by anyone new, unless you've been planting seeds. Go slow and steady (or really fast and steady) through each successive single, remix, EP, tour, podcast, radio show and interview. You'll get the feedback you that tells you when—and if—it's time to make that full-length masterpiece that's been brewing ever since you stole The Who's *Tommy* from your father...or maybe even your grandfather.

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)

By Marty Cutler

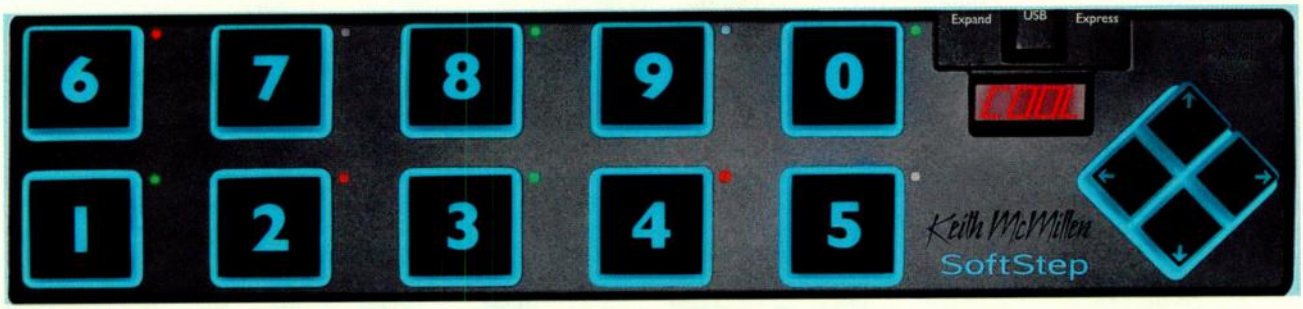


FIG. 1: KMI Softstep's bank of ten Keys can send independent streams MIDI or OSC data from each pedal.

Keith McMillen Instruments SoftStep

A universal MultiTouch USB/MIDI foot controller.

With the limited number of appendages and digits which we can dedicate to playing our instruments, wringing expression from modern electronic gear through MIDI commands usually requires a bit of finessing. Lots of pedals, desktop controllers, and the like try to enable as much control as possible, but unless you are an octopus with fingers, it's difficult (or downright impossible) to take that level of control to the stage.

When it comes to the parameters that animate different electronic devices, one size rarely fits all; so inevitably, there are different parameters for each gadget. Enter Keith McMillen (KMI) SoftStep, a hardware foot controller.

PRODUCT SUMMARY

CONTROLLER PEDAL
$289.95; SoftStep MIDI Expander: $49.95; SoftStep with Expander Bundle: $339.90

PROS: Sturdy Construction, Informative display, versatile application, highly adaptable to hardware and software use, pedals have independent multiple functionality. Deep modulation capabilities.
CONS: Deep programming capabilities require deep learning curve.

Features	5
Ease of Use	3.5
Documentation	3
Value	5

keithmcmillen.com

Beer Down

Don't be misled by SoftStep's seemingly modest construction. Although the unit is surprisingly compact (it can easily slip into a pocket in a backpack or laptop case) and light (weighing in at about a pound), it is remarkably sturdy, and although I was unwilling to test the company's claim that it was beer-proof, it wouldn't surprise me. Softstep's work surface divides into three main areas: a bank of 10 pedals (or Keys, in KMI-speak), the four-character LED display, and the four-quadrant Nav Pad at the right of the board.

The controls for each key are multidimensional and multidirectional; each of the controller's ten pedals (Keys) enables pressure, clockwise, counter-clockwise, and X-and-Y-axis maneuvers (see **Fig 1**).

The rear of the unit furnishes two USB connectors: a standard-size jack for an expression pedal, and a mini-USB connector. The mini connector joins with the optional KMI MIDI expander for deploying SoftStep with external MIDI hardware. The standard USB connector (which also supplies power to the unit) connects to your computer to control plug-ins, automate recording and playback within your DAW, and enable programming of the SoftStep from the unit's app, and that's the tip of the iceberg. With the optional MIDI expander, SoftStep can control hardware MIDI devices without the use of a computer.

First Steps

The application download furnishes a batch of presets and the most recent firmware update. KMI recommends the SNoize Sysex Librarian to transmit the update to the pedal, but I had no luck with instantiating the program. Instead, I loaded the file into a MIDI track in MOTU Digital Performer 7.22, directed the track output to the proper port in SoftStep, and hit the play button. SoftStep updated flawlessly. Any program

that can load and play back .SYX files will do the trick.

SoftStep's programming app mirrors the floor unit's layout, and a touch on any key lights up its equivalent indicator light in the software. Each key's onscreen panel hosts an increment/decrement tab to scroll through presets, a button to open each key's modulation matrix, and a Save and Copy button. Copying any key's parameters automatically creates Paste buttons on the other keys: a nice touch.

Do The Math

The Modulation panel is a piece of work; for starters, you can instantly see the numerical values of any activity on that key. That eliminates a good deal of guesswork; because you can instantly scale values with a table, add offsets, and more.

Unless you're Fred Astaire, getting more precise control of foot-operated controls can be awkward; accordingly, you can simply use gain to multiply the strength of a modulation value, use slew to change the overall density of data, define minimum and maximum values, and much more. A nice feature is the ability to program "Dead Zones." If you've ever accidentally sent data out with a light touch, you'll appreciate that this weights the amount of force you'll need to send data on its way.

It bears repeating that each key can produce up to six different and independent modulation messages. For example, you could use pressure to modulate Aftertouch, rotation to send patch changes, the X-axis to send MIDI Volume, and the Y-axis to control Pan position. Alternately to using a key's pressure sensitivity, you can use Key on and Key off to toggle sustain pedal commands. These are only examples; MIDI Machine Control, Mackie HUI emulation, Pitch Bend, Open Sound Control (OSC), and even MIDI notes are a few more of the possible destinations for a SoftStep gesture.

Parameters on Parade

A SoftStep patch is called a Scene, and patches are grouped into Set Lists, Where you can customize and organize your favorite control setups. You can scroll through a Set List and select a patch with the left and right quadrants of the Nav Pad. You can display the data stream in the LED panel (for example, values of 0 to 127). I found this useful for training my foot to work with more sensitivity: a daunting prospect. Another good reason to work in hosted mode whenever possible is the ability to observe the results of your footwork in the software as it happens. Click on the blue Sensor View panel, and a more graphic display of your actions appears, detailing the response of each key to your maneuvers in real time.

SoftStep is happy to work with or without a computer. Hosted mode works in conjunction with the SoftStep app, and uses the first of two ports for communication. Standalone can work or without a computer and is the mode of choice for working with hardware systems. I preferred to work in hosted, mode owing to the scarcity of external devices in my setup, and I always appreciated the visual feedback provided by the software. Of course, if your hardware is connected to your computer, you can always route SoftStep through your DAW software in Hosted mode.

Putting My Foot Down

I am the happy owner of an Axon AX-50 MIDI guitar controller, which is long on built-in modulation options, but somewhat short-sighted in a couple of areas: Save for MIDI ports, there is no input for a sustain pedal, and there's no support for Aftertouch, which I use frequently. Although I can send modulation from the guitar's knobs, that means that I stop playing momentarily. Fortunately KMI supplied me with the optional MIDI Expander, and it was a simple task to set up a couple of keys to perform sustain, Aftertouch, and Modulation.

Software Synths were an especially easy target for SoftStep; any synth with MIDI Learn features is fair game. I used the Pressure Live preset (in which each successive key sends out a different Control Change) to modulate Camel Audio Alchemy and Spectrasonics Atmosphere till the cows come home. My favorite trick was to modulate filter cutoff inversely to resonance for juicy filter effects. The Mackie Control emulation worked like a charm in Apple Logic Pro 9.1.3—a welcome handoff to the transport when you record with MIDI guitar.

On The Good Foot

KMI thoughtfully provides a handful of useful presets for Softstep, including looping tools, controls for Ableton Live, Apple Garage Band and Logic, Avid ElevenRack, and a couple of other hardware units. These make excellent jumping-off points for creating your own patches. That said, it should be noted that gaining facility over SoftStep's bounty of control will require a significant learning curve for many, and that is as it should be. KMI confers a tremendously sophisticated modulation matrix that can cook up practically any utilitarian or expressive scheme you can imagine for practically any piece of software or hardware that implements MIDI or OSC; that requires a bit of cogitation. KMI has taken great steps to make the task intuitive and accessible: It's the end user's job to understand the signal flow and the process.

I can't imagine any modern musician who wouldn't benefit from KMI Softstep. The company eagerly provides Firmware upgrades, and maintains an active support system and user forum.

Simply describing SoftStep as a pedal is like calling a gourmet meal a snack; the more you use it, the more KMI SoftStep will surprise you. Perhaps the biggest surprise about KMI SoftStep is that no one else has implemented a pedal in quite this way before. SoftStep gets my unreserved highest recommendation.

EM Contributing Editor Marty Cutler Co-authored one of the first books for MIDI guitar in the late '80s. MIDI guitar is way better now.

By Geary Yelton

FIG. 1: SoniVox Vocalizer is a one-of-a-kind plug-in that lets you musically manipulate the harmonic structure of any audio source using a MIDI controller.

SoniVox Vocalizer 1.0 (Mac/Win)

A novel approach to vocoder-like sounds and more

For as long as electronic musical instrument makers have been developing new products, you've repeatedly heard the phrase "limited only by your imagination." In virtually every situation, though, it's been an exaggerated claim. Nonetheless, new and previously unheard effects are entirely possible whenever someone invents a technique for achieving them. SoniVox Vocalizer is one of those rare plug-ins that actually lets you create effects you've never heard before. Only occasionally do I find something that lets me generate sounds that are genuinely unique, and Vocalizer is the latest. With Vocalizer, you can make any sound musical.

SoniVox calls Vocalizer an audio-input-based synthesizer. It looks very much like an instrument plug-in, but it doesn't quite work like one. You can't simply add an instrument track to your DAW project and start playing. Nor do you use a microphone to modulate sounds that it generates, as you might with a vocoder plug-in. Rather than producing sounds on its own, Vocalizer processes external audio signals, operating like a complex gated filter.

When you hear Vocalizer in action, your first impression is that it sounds like a vocoder. Vocoders usually work by modulating synthesizer sounds when someone speaks or sings into a microphone. Effects that use human speech as a modulator are nothing new. The vocoder and the Heil Talk Box are the best-known examples in recent years, but as far back as the 1940s, a device called (ironically enough) the Sonovox was used in films to make it appear as if musical instruments, barnyard animals, and airplanes could talk. But Vocalizer takes a different approach to audio modulation, and it does much more. It resynthesizes an audio signal's harmonics and lets you control those harmonics by playing a MIDI keyboard.

Vocalizer is a cross-platform plug-in that runs on VST, RTAS, and AU hosts. You insert it as you would any other effects plug-in on an audio track. Then you add a MIDI track and assign it to control Vocalizer. If you play the audio track without any MIDI data to control it, no signal passes through. The processed track comes to life only when you supply the MIDI notes that trigger events and control pitch.

PRODUCT SUMMARY

AUDIO PROCESSOR PLUG-IN
$99.99

PROS: Unique sounds and technology. Works with any kind of audio material. Makes any sound musical.
CONS: Somewhat unpredictable results. Sketchy documentation.

Features	4
Ease of Use	3
Quality of Sounds	3
Value	4

sonivox.com

UNDISCOVERED TERRITORY

At first glance, Vocalizer looks like a soft synth that has front-panel functions divided into sections and an 88-note onscreen keyboard with pitch-bend and modulation wheels (see Fig. 1). Look closely, though, and you'll realize it's missing some essential elements, such as oscillators and envelope generators. On the lower left is a filter section with its own LFO, and on the upper right are delay and chorus effects. Below the effects is a 4-band EQ providing fixed lowpass and highpass filters and two fully parametric bands you can tune to any audible frequency.

Above the controls are a stereo bar graph to monitor input level, a display that shows the current patch name, and a button to specify maximum polyphony—from four to 16 voices in one-voice increments. Three additional buttons let you load and save patches. All sections except the filter have blue onscreen LEDs you can click to disable that section and conserve computing power. You get sliders for audio input and output levels, and portamento that glides between MIDI notes. Portamento is monophonic, so when it's engaged, you should avoid playing chords if you want predictable results.

Where you'd expect to see the oscillator section are controls for two Harmonic Voices—the Primary Voice (PV)

FIG. 2: Dual left and right delays allow you to independently set their delay times and sync them to tempo by beat divisions.

and the Secondary Voice—each with its own Volume slider. Unlike oscillators, though, Harmonic Voices produce no sound without an audio track to process.

The Primary Voice's Spread knob controls the concentration of odd and even harmonics, and the MIDI notes being played determine the fundamental frequencies at any given moment. Turning the knob clockwise increases even-harmonic intensity, and turning it counterclockwise increases odd-harmonic intensity. The center position allows the signal to pass without boosting or cutting harmonics. The Scale knob shifts the pitch of the harmonics by octaves relative to the fundamental, and the Position knob shifts their pitch within the selected octave range. If Scale is set to zero, however, the pitch is an octave lower than when it's set for other ranges.

All three knobs—Spread, Scale, and Position—are duplicated in a second row, which either reinforces or weakens the harmonics determined by the first row. Setting the Spread knobs for both rows at either extreme will quickly cause a feedback overload and could damage your monitors; SoniVox should warn users about this risk.

The Secondary Voice has a more direct effect on pitch. Using its Coarse and Fine Tune knobs, you can raise or lower the fundamental frequency by as much as an octave.

The PV Filter affects only the Primary Voice. You can choose from five filter types: three lowpass, one highpass, and two disperse filters, which appear to be allpass filters that improve performance with pitched audio sources. Knobs control filter frequency, resonance, saturation, and velocity modulation depth. A dedicated LFO offers depth and rate controls. Because the LFO rate goes up to 20kHz, you could do some real damage applying frequency modulation with the LP-Synthy filter response. When I say damage, I mean that literally, so turn down the volume before you increase the LFO rate.

Delay and chorus parameters are straightforward and comprehensive. The dual-tap panning delay has its own separate lowpass and highpass filters, so you could set up bandpass and band-reject responses, if you like. You can independently set the delays to sync to tempo in multiples of a beat, from 1/64 notes to whole notes (see Fig. 2). The chorus effect has its own delay settings, too.

You adjust the onscreen knobs by clicking and dragging your mouse in a circular motion. Because I prefer dragging up and down to change parameter values, I wish you could toggle the knob response between circular and linear motion.

HARD LESSONS

Using Vocalizer is not terribly complicated, but it's difficult to predict how different settings will sound; it doesn't help that documentation is somewhat incomplete. Other than a Quick Start Guide that explains how to install, authorize, and set up the plug-in within most popular DAWs, no manual is available. Instead, you get a series of video clips, and most of those simply duplicate the information in the Quick Start Guide. The longest clip (about seven minutes) demonstrates exactly what you can do with Vocalizer. It's terrific for inspiring ideas, but only two brief clips tell you anything about how to use the controls. I can understand why Vocalizer is easier to explain visually than in text, but I still wanted some kind of reference manual to provide more details about certain functions—voice parameters and disperse filtering, in particular.

Vocalizer's documentation is regrettably incomplete, and many concepts will leave you scratching your head. As it is, you'll need to spend some time exploring and experimenting, which is probably the best approach to learning Vocalizer, anyway. Fortunately, SoniVox has pledged to update their online documentation by the time you read this.

A VOICE OF A DIFFERENT COLOR

Any audio works as source material, though voice and rhythm tracks usually yield the most immediately satisfying results (see Web Clip 1). Surprisingly, the best material for pitched music is unpitched audio such as white noise. In fact, the noisier the signal, the easier it is to turn unpitched recordings into melodies and harmonies (see Web Clip 2). That's because white noise contains all frequencies, and Vocalizer filters out any frequencies it doesn't need to play whatever pitches are left, in response to the MIDI notes you play.

One aspect of Vocalizer I especially enjoyed was being able to harmonize anything. You can control the pitch of any sound, whether it's a runaway train or a singing bird, and create multiple harmonies in real time simply by playing them on a MIDI keyboard (see Web Clip 3). The plug-in comes with several folders full of factory patches organized according to their suggested uses. I got reasonably good results processing entire mixes with Vocalizer, but the greatest versatility came from processing whispered vocals.

The most exciting aspect of the onscreen controls is that they all respond to DAW automation. That means you can tweak the knobs in real time and animate your sound in all kinds of ways. Just think what you could do if Vocalizer had envelope generators. Envelopes would not only serve their traditional function of controlling filter frequency, but they could also be used as control sources for automating other parameters in ways that would repeat with every MIDI note you played.

I could quite easily imagine Vocalizer forming the basis for some future hit song, perhaps even catapulting the plug-in into public consciousness (like Auto-Tune). Until or unless that happens, you have the opportunity to make Vocalizer your own secret weapon. Watch SoniVox's video demo and see if it gives you any bright ideas.

Former EM Senior Editor Geary Yelton is always looking for new ways to make noise.

By Marty Cutler

FIG. 1: BPM 1.5 manages to arrange all of its functionality within a click or two. Here, I am painting in buzz rolls for hi-hats.

MOTU BPM 1.5 (Mac/Win)

A solid update to an intuitive software groove creator.

My introduction to music production on the Mac came by way of MOTU Performer. Over the years, I've always found Performer's workflow compatible with my own. When I learned that MOTU was releasing a rhythm workstation, I was eager to find out if that same simpatico sense of workflow extended into the realm of groove and beat production. I got a chance to find out when I briefly covered BPM 1.01 in a rhythm programmer roundup (see the August '09 **EM**). However, version 1.5 enhances the experience while including a treasure trove of new sample content.

BPM ships with an iLok key and supports MAS, AU, RTAS, and VST plug-in formats. I tested it on a 2.8 GHz, Quad-Core Xeon Mac Pro and a 2.93 GHz Core 2 Duo Macbook Pro, using Mac OS X 10.6.5, and later, OS X 10.6.6.

Once you launch BPM 1.5, you're greeted with the familiar MPC drum machine-style topology (MOTU even included an MPC-style note-repeat button for drum rolls) with an easy-on-the-eye design and access to the instrument's deeper editing features all within easy reach (See **Fig. 1**). Significantly more than a drum machine, BPM 1.5 is capable of re-sampling its own output or capturing external audio with the included BPMSampler app. But that's just the tip of the iceberg, because once BPM captures audio one-shots or loops there are many ways to get unique, creative results.

Bank On It

BPM is designed to let you layer grooves pattern-by-pattern, beat-by-beat. The lower left-hand area lets you switch between banks, which harbor drum kits and patterns. Just below the Bank buttons are Rack buttons, which load multisampled instruments and slice loops. To the right of each bank and instrument is an SP button, which emulates characteristics of the E-mu SP1200 drum machine. To my ear, this feature adds mid-range harmonic distortion and some presence and punch, along with a taste of 8-bit-style aliasing. There's no control over the amount; it's either on or off. But the effect is never overbearing, and BPM provides plenty of ways to "break" sounds, if you need to.

Directly to the right is the familiar set

PRODUCT SUMMARY

SOFTWARE GROOVE MACHINE
$295
Upgrade from earlier versions: $79

PROS: Intuitive interface. Feature rich. Terrific sound library. Works synergistically with MOTU Ethno 2 and other Universal Sound Bank instruments. Easy drag-and-drop audio files. Built-in drum synthesizer.
CONS: Limited Undo. No Redo.

Features	4
Ease of Use	4
Quality of Sounds	4
Value	4

motu.com

FIG. 2: In Live Mode, pads trigger entire scenes rather than individual notes.

FIG. 3: A BPM 1.5 Rack can hold as many instruments and loops as your computer can handle.

of drum-machine trigger pads. These serve multiple purposes depending on context. Besides triggering sounds, clicking on the pads while editing can select the samples or synthesized sounds assigned to that pad, or select events created by that pad for tweaking. Pads can also be used to trigger Scenes, which are composite structures of patterns and sequences.

Modus Operandi

Two buttons sitting below the banks and instruments switch between modes of operation that determine BPM's overall playback scheme. Live mode takes a more improvisational approach, supporting selection of Parts and Scenes on the fly. Accordingly, the pads become buttons for Scene selection, and the pad labels change from kit pieces to Scene numbers (See **Fig. 2**).

Song mode compiles Scenes into song form. Sound-wise, a Scene comprises four Banks of percussion sounds and triggered loops and two Racks of multisampled instruments and slice loops. Don't let the two Racks fool you, though: By default, each Rack opens to reveal several slots, or "parts," which can hold both instruments and slice loops. You can add as many parts as your computer's RAM can handle (see **Fig. 3**).

Each Scene can hold one of 16 patterns for each pad bank or rack slot. Each pattern for the Rack instruments can be up to 32 bars in length. I'm not sure why one component uses steps and the other uses bars; the difference in nomenclature can become confusing when you try to map out song strategies.

You can work with patterns in several ways, freely jumping from one workflow to the other, if that suits you. BPM harbors a ton of stylistically arranged patterns. If you want to go beyond basic looping, these are excellent jumping-off points. You can load patterns with kits, swap out kits or individual pads, load new patterns using different kits, or even drop MIDI files from the desktop. BPM is very flexible that way, thanks to an easy-to-navigate Browser on the far right of the instrument.

Begin by loading a drum kit or an instrument. BPM provides 19GB of sounds, including Beat Box Anthology, which harbors an absurd number of classic drum-machine sounds. If you want to use your own sounds, just drag samples from the desktop and drop them onto pads; BPM supports WAV, AIFF, and REX formats. Conversely, you can create audio tracks by dragging patterns from BPM to your host program's audio tracks. Once you have selected a kit or a Rack instrument, you are ready to sequence patterns.

A large, orange window dominates the BPM interface. The window harbors work areas for sequencing and pattern edits, sound design, effects processing, mixing, Scene building, and song-form arranging. Switching between tasks is as easy as clicking on the buttons to the right of the window.

Graphic Violins

The sequence editor for the drum banks takes a step-edit approach, whereas the instrument racks rely on a piano-roll editor. If you click on the SEQ button while sequencing a drum bank, a familiar drum-editing grid displays events across a left-to-right timeline and a top-to-bottom axis of drum-kit pieces. You can set the number of steps and resolution of the pattern at the top of the display and zoom in or

out. The trick to tweaking drum events lies in the Graph window, which you access from a button on the upper left of the edit display. There, you can edit Velocity, create buzz rolls, draw modulation curves for filter cutoff, move start times, pan, and tune each event individually.

The Graphical Editor for Rack-instrument parts is a greatly simplified version of the one in Digital Performer. You get a marquee tool, a pencil tool, and an eraser. You can snap notes to a grid, change the grid to reflect different timing values, and freely drag notes to alter duration, pitch, or time. Graphs let you "paint" complex modulations quickly, with pinpoint accuracy, though I wish that the editing of Velocity and timing shared the simplicity of the Rack's Piano-Roll window; it's much easier to just grab an event and move it where you want it. Shift-clicking on an event and dragging up or down to edit its Velocity is easier than going to a Graph window, selecting the kit piece from a pull-down tab, finding the occurrence you wish to change, and dragging a bar up or down to change its Velocity. One word of caution: the Undo function in BPM 1.5 is barebones—it only applies to recording. You can't undo most edits, nor is there a Redo button. So, save early and often.

Clicking on the Edit button lets you access basic, but important sound-shaping features. For example, you can select a sample by clicking on its pad or with a MIDI note. A waveform display lets you set start and end points for a selected sample, adjust its amplitude, assign it to an exclusive group (as used in hi-hat programs), set its polyphony, and more. Control-clicking brings in reverse-sample playback, normalizing, among other things. The FX tab is where you can add reverb (with or without convolution), delay, modulated effects, bit crunching, and amp simulation. A very flexible routing scheme lets you situate effects as inserts for a sample, the entire part, or a bank, whether as aux sends or dedicated bank aux sends, or at the main outputs.

Bank pads and Rack instruments all have basic synthesizer parameters attached, such as LFO and modulation assignments, as well as overall transposition, pan, glide, and more. Sample playback isn't the only sonic option BPM offers; you can design any and all kit elements from BPM's drum synthesizer. Right-clicking on an empty pad loads a synthesizer oscillator, which offers a raft of excellent presets and starting points for various drum elements. Or you can shape your own from scratch. These sound terrific, and they go well beyond the typical 808- and 909-type sounds.

Beat Manifesto

There's plenty more in BPM 1.5, such as FlexLoops, which present the presets in multiple forms—kit with pattern; kit only; pattern only; and slice loops. This allows you to drill down into a loop and change any aspect of it, from an individual sample used on a pad to the bank effects. You also get plenty of real-time tweaking with easy MIDI-control assignment and compatibility with other MOTU and Universal Sound Bank products (see the sidebar **The Stylistics**). If you have the faintest notion of how an MPC or other groove engine works, you could probably build your entire song in a single, nonstop BPM session. Yet overall, MOTU's intuitive, easy-to-navigate design philosophy lets you find whatever you need with a minimum of fuss.

As a smart, great-sounding groove machine, BPM 1.5 is worth checking out if you're looking for a one-stop, nonstop virtual groove machine (especially if you're fond of the MOTU workflow or a musician transitioning from an MPC-style groove sequencer). And the expanded library alone is worth the upgrade from earlier versions of BPM. I recommend it enthusiastically.

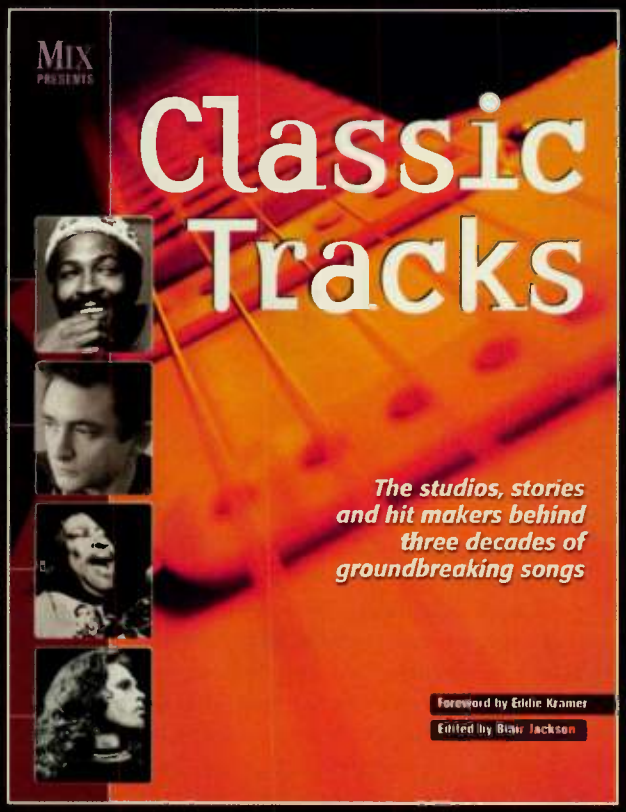
The Stylistics

BPM 1.5 ups its content formidably over earlier versions with more than 19GB of sample content. To accommodate the new material, the pattern library has also been expanded. You can load kits, patterns, or both simultaneously. The kits and patterns divide into 15 folders, grouped by musical style or sound, among which are Big Beat, Dancehall, Dirty South, Electro, Hiphop-RnB, Minimal, Ragga, and Vinylized.

The content derives from the original BPM library as well as Beatbox Anthology, which is a collection of classic drum-machine sounds ranging from the inevitable Roland TR-808 samples to the more recent sample-playback drum units from Yamaha and Alesis. Among my favorites were some of the Ragga and Vinylized kit-and-pattern sets (See **Web Clip 1**). BPM 1.5's library isn't long on unprocessed, realistic kits, but you can always use your own samples. If you own MOTU's MachFive sampler, you can import factory kit presets or your own drum-kit creations.

In addition to its sound Library and it's ability to import raw samples, BPM 1.5 can draw from just about any Universal Sound Bank-compatible product. Using MOTU Ethno2 in BPM is an unmitigated joy. After installation, Ethno automatically showed up in the BPM browser. The variety of sounds added drives BPM 1.5's potential through the roof, with percussion maps and loops, including Indian percussion and instruments, Kora performances and Griot singing, accordion loops, log drums, Taiko loops, and more: a seemingly inexhaustible supply of instruments gathered from all over the globe. You can sift through Ethno's offerings geographically or by instrument type.

Since version 1.05, BPM has added a highly configurable arpeggiator for its Rack instruments, and you can put this to great use with some of Ethno's tuned percussion. The log drums, sanza, and kora were particularly satisfying (if not ethnically accurate) when played through a variety of arpeggiator presets. Of course, you can configure your own patterns, as well (see **Web Clip 2**).



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QUICK PICKS * GLYPH * PORTAGIG 62 PORTABLE RAID SYSTEM

By Barry Rudolph

Glyph Production Technologies' PortaGig 62 is a portable RAID data storage system. This diminutive unit (123mm W X 92mm D X 43mm H) is the offspring of Glyph's larger desktop RAID, the GT 062E. The unit's all-metal case contains two 2.5-inch hard drives (made by either Seagate or Hitachi) and is available in a variety of speed/size configurations: 5,400 RPM in 1.2, 2, and 3TB sizes and 7,200 RPM in 320GB, 500GB, 640GB, and 1TB (tested here). All of these drive systems have transfer speeds of up to 177MB/second.

PortaGig 62 is cooled by a small internal fan and is bus-powered via FireWire 800. For FW 400 use, its bilingual 9-pin socket will accept an 800-to-400 adapter cable, or you can connect using either the USB 2.0 or eSATA ports. Also included are a wall-wart external power supply, FW 800 cable, and on/off switch.

PortaGig 62 ships with Glyph Manager software for configuring and monitoring the health of all connected and supported Glyph drives. If a problem arises, the blue activity LED on a drive's front panel will glow red and the GM icon will animate in the Mac's dock or generate an error balloon on Windows computers. While an updated version is in progress, GM works in 64-bit systems only if you connect drives using USB 2.0.

GM configures PortaGig to run in any of three modes: RAID 0, RAID 1, and Spanning. RAID 0 mode does block-level striping without parity or mirroring. RAID 0 improves drive performance but offers no redundancy. RAID 1, or "mirroring," allows data to be written identically to both internal drives for redundancy—i.e. real-time backup. As long as one drive is working, your data is safe. Spanning mode writes data sequentially across both drives—when the first one fills, the second one continues onward.

PortaGig 62 In The Studio

PortaGig worked fine as a Pro Tools session drive in any of the RAID modes. Right out of the box, I was able to record and play back large track counts just as I normally do using my internal SATA drive in my MacPro.

But I wanted to partition PortaGig 62 into two volumes for backing up my current Pro Tools session files and to save a "clone" of my system drive using Mac's Time Machine program.

Because I have the artist's and record company's assets on my Pro Tools drive(s), I am interested in safety through redundancy offered in RAID 1 mode, instead of opting for maximum space.

PortaGig 62 ships Mac-formatted and configured in RAID 0, so I used the intuitive Change Configuration window in Glyph Manager to reconfigure it in RAID 1. That means the total drive space of 1TB now becomes 500GB, but it also means all data is cleared—erased! I re-formatted the drive using the Mac's Disk Utility and partitioned it into two 250GB volumes.

GM boots up instantly and provides a fast system appraisal. Select any drive and GM drills deeper, indicating each drive's model, serial number, and status (fully-operational, initialized, degraded, or halted); volume name or names for each partition, connection configuration—Firewire, USB, or eSATA; and even the internal temperatures of the Oxford bridge chipset and the drives themselves. Even with the fan whirling, the PortaGig 62 runs quietly so fan's speed (1500 RPM) is displayed in case it dies, which could lead to the drives overheating.

In continuous everyday use, PortaGig 62 has been totally reliable. It's small enough to be tucked out of the way anywhere in my studio, but away from the heat flow of my computer's fan output. I also liked the convenient back-panel on/off switch.

Small Drive Scores Big

For me, the PortaGig 62 scores in three ways: Its small size makes it the perfect portable drive for "on the go" music production on a laptop. It makes an excellent archive drive for locating my precious files in an alternative, safe place. Or it just works great 24/7 as my main session drive.

The manufacturer's insurance policy is great, too. Like all Glyph drives, the PortaGig comes with a three-year warranty, a free two-year data recovery plan, and a one-year replacement guarantee. All good, indeed!

Overall Rating (1-5): 4
glyphtech.com

QUICK PICKS * M-AUDIO * AXIOM 61 VERSION 2

By Asher Fulero

The M-Audio Axiom USB MIDI controllers from Avid are some of the most successful on the market thanks to their straightforward setup, reliably accurate controls, and inexpensive price. Delivering what Avid calls a "workflow update," version 2 of the Axiom controllers have returned with gently improved hardware and software that

works exactly as intended, improving workflow while keeping things simple.

A Successful Facelift

The most noticeable physical change is the rearrangement of the front panel. Previous models had the LCD screen placed at the far left (next to a numeric pad that has been removed in lieu of numeric entry via the top keyboard octave). Version 2 of the Axiom has its readout at the center of the control panel, making it easy to see pertinent information. The outer case has been changed from grey to a stylish black and has been given strong rubberized sides. The angled top-panel gently slopes toward the player for improved ergonomic handling; previous models had been criticized for their flat surface. The angle and new color also help reduce glare, making the LCD display more visible under stage lighting.

Many of the mechanical elements have also been altered or improved. The wide, rubberized Pitch/Mod wheels have been replaced with more traditional plastic ones, though the rubberized octave buttons remain. The nine faders now reside on the left side of the panel and have been updated from thin sliders with breakable nubs to 40mm plastic faders that have a low, vertical profile. While this design makes them slightly less comfortable for use as organ drawbars, they're much more comfortable for nearly every other task. The nine circular, lighted buttons remain unchanged.

The eight rotary encoders have a smooth motion that feels great and makes it easier to gauge distances on long turns. They are brightly colored and easier to see on a dim stage than previous versions, and after the rearrangement of the front panel the knobs conveniently reside much closer to the eight drum pads for easier combined use. The pads themselves remain unchanged, as do the lighted Transport controls.

One useful new feature is Controller Mute, which attempts to end parameter-jumping by muting a controller's output until it passes through the current setting of the parameter; it's very useful in live settings and when switching control maps on-the-fly. Alternatively there is also a Snapshot function which sends the current physical settings of all controllers to your DAW, making it reflect the Axiom's actual knob/fader locations.

Though the keyboard specs are the same as the original (61 Velocity-sensitive, Aftertouch-enabled, semi-weighted keys), the actual shape and feel of the new keys has been tweaked gently. They are still much lighter than fully-weighted keys and a far cry from hammer-action, but playing version 2 of the Axiom definitely feels less like playing a synthesizer and more like playing a pro keyboard.

Control At Will

The other big news with the second generation Axiom line is the addition of DirectLink technology. Akin to Novation's Automap or Ableton's Device Mapping, DirectLink allows the Axiom to automatically re-assign its physical controls as you work. There are online instructions for using DirectLink with most DAWs at the M-Audio Web site, but for the most part the instructions aren't really necessary; DirectLink is designed to be plug-and-play easy. There is even a dedicated Instrument button that toggles the entire control panel between DAW controls and virtual-instrument controls (when in DirectLink mode) so you can turn your synth filter and then decrease it's associated track level, all without having to touch the computer to change modes.

What's even cooler are the Group Enable buttons. When disabled, each group is released from its DirectLink assignment, returning to its current Axiom patch setting (there are 20 available onboard patches). That way you can have your custom assignments and DirectLink running at the same time and manually switch back and forth; pretty smart. And although Axiom version 2 is just as simple to manually assign as its predecessor, there is always M-Audio's Enigma software for setting up custom patches from inside your Mac/Win computer.

Like the original Axiom, version 2 has four unique Zones for stacking or splitting on separate MIDI channels, each with a dedicated enable button. There are separate Velocity, Set Velocity, and Step Velocity Curves for the keybed and drum pads. And of course the rear panel has all the requisite USB, MIDI In/Out, and power connections.

Keep It Simple

I would recommend the new Axiom keyboard controller to just about anyone needing a new input device: MIDI controllers this powerful just don't get any easier to use. The new Axiom series retains the simplicity the line is known for, while delivering on Avid's goal of workflow improvement

Overall Rating (1-5) : 4
m-audio.com

QUICK PICKS * ULTIMATE EARS * IN-EAR REFERENCE MONITORS

By Mike Levine

In-ear monitors have been in heavy use in touring and broadcast systems for years, and Ultimate Ears, a leading manufacturer of such products, recently developed a version for the studio. Called the In-Ear Reference Monitors ($999), they're designed for mixing, offering both flat frequency response and excellent isolation. The company collaborated on the design with the engineering staff at Capitol Studios in Hollywood.

Head Space

Mixing on headphones, no matter how

The Ultimate Ears In-Ear Reference Monitors were designed in conjunction with Capitol Studios' engineering staff to offer flat frequency response for mixing.

flat their frequency response, is not the same as listening on speakers. Among other factors, you're hearing the sound inside your head, without any of the reflections that occur when listening in a room. Studio headphones are more typically used in the control room to check individual elements, or as an alternate way to hear a mix, rather than as the primary monitor. If you do mix on headphones, it's important to check the results on speakers, because certain elements are going to sound different.

The flip side of that equation is that unless you're listening in a room that's been well-treated, acoustically, you're not going to get a truly flat response from your speakers, due to the acoustics of the room—hence, the need to audition your mixes in the car, on a boombox, and so forth, to see how they translate.

Ultimate Ear's intent in designing the In-Ear Reference Monitors, which combine impressive isolation with a flat frequency response, was to help ameliorate the problem of listening in untreated rooms. The idea is to give engineers, producers, and musicians an extremely portable and trusted mixing solution to use in hotel rooms, tour buses, and anywhere with marginal acoustics.

Getting Fit

Because they're custom-fit, you don't immediately receive your product when you purchase the monitors from Ultimate Ears. First, you need to schedule an appointment with an audiologist for a fitting, which costs extra. Ultimate Ears has a network of affiliated audiologists, and they can recommend somebody in your area. The fitting is brief, and consists of foam being injected into your ear canal (it's totally painless, the only drag is that you have to keep your teeth from moving during the few minutes while the foam hardens into a mold. This requires biting down on a bite block, which causes you to drool—so ask for a bib).

Once the fitting is complete, the molds are sent to Ultimate Ears and your monitors are assembled with a woofer, mid-driver, and tweeter inside. They come in small hard-shell case with your name on it, and with an included cleaning tool and an 1/8-inch to 1/2-inch adapter. Although I've been using custom-fit earplugs for years, getting used to putting in the monitors took a little doing. The plugs come in an acrylic housing, which is quite hard, and can be uncomfortable when inserting into your ears. Once they're seated correctly, however, they feel fine.

Real World

In addition to offering excellent isolation (-26 dB), their sound is excellent. Their frequency range is 5Hz to 20kHz—so you can imagine that the bass response is very impressive. I was able to judge bass with them much more easily than with conventional headphones. Since they're designed for flat response, the high end is clear, but not hyped. The detail and clarity across the frequency spectrum is very good overall.

According to an Ultimate Ears spokesman, the optimal listening level is 90-95dB, which gives you the full bass response (and which is also too loud for extended safe listening).

I tried the headphones out over a period of a few weeks, and was able to successfully mix on them. When in my studio, I preferred to listen on speakers while switching occasionally to the Ultimate Ears for additional perspective. However, I can see how they'd be extremely useful in a travel situation.

There's no doubt that these are great-sounding monitors. Whether or not they'll be worth the money to you depends on whether you do a lot of production (and especially mixing) on the road or away from your studio. If so, I would recommend them highly. If you just want them for your home setup, you're probably better off putting that money into improving your acoustic treatment or studio monitors.

Overall Rating (1 through 5): 4
Ultimateears.com

QUICK PICKS * IMPERFECT SAMPLES * BRAUNSCHWEIG UPRIGHT PIANO

By Rob Shrock

There are plenty of sample libraries out there created with the goal of capturing a large, pristine grand piano in perfect condition and flawlessly recorded. Imperfect Samples takes a different approach to libraries by going for natural and organic character over sterility and preserving the little imperfections in the samples that signal to the listener that they are hearing a real instrument. Imperfect Samples currently offers four pianos: Fazioli Concert Grand (a large grand); Hohner White Baby Grand (a small grand); Brasted Broken Upright (out-of-tune honky tonk) and Braunschweig Upright Piano.

The Braunschweig Upright Piano (VST, AU, EXS24, Kontakt) is available as Basic ($59.49, one 8-layer perspective only) and Pro ($133.86, two mic perspectives and up to 14-layers). Perspective 1 (Basic and Pro) is recorded two inches from the soundboard for a very immediate, up-close and large sound. Perspective 2 (Pro version only) is recorded closer to the hammer position for a softer but slightly more percussive sound.

Depending on the style of music, a big grand piano is not always the right choice. I was very happy to find this upright piano, an instrument that is generally under-represented in the

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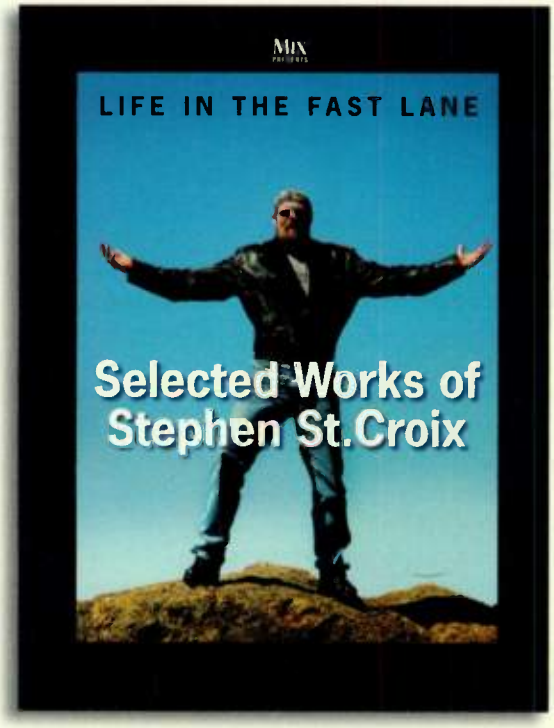
Life in the Fast Lane

Selected Works of Stephen St.Croix

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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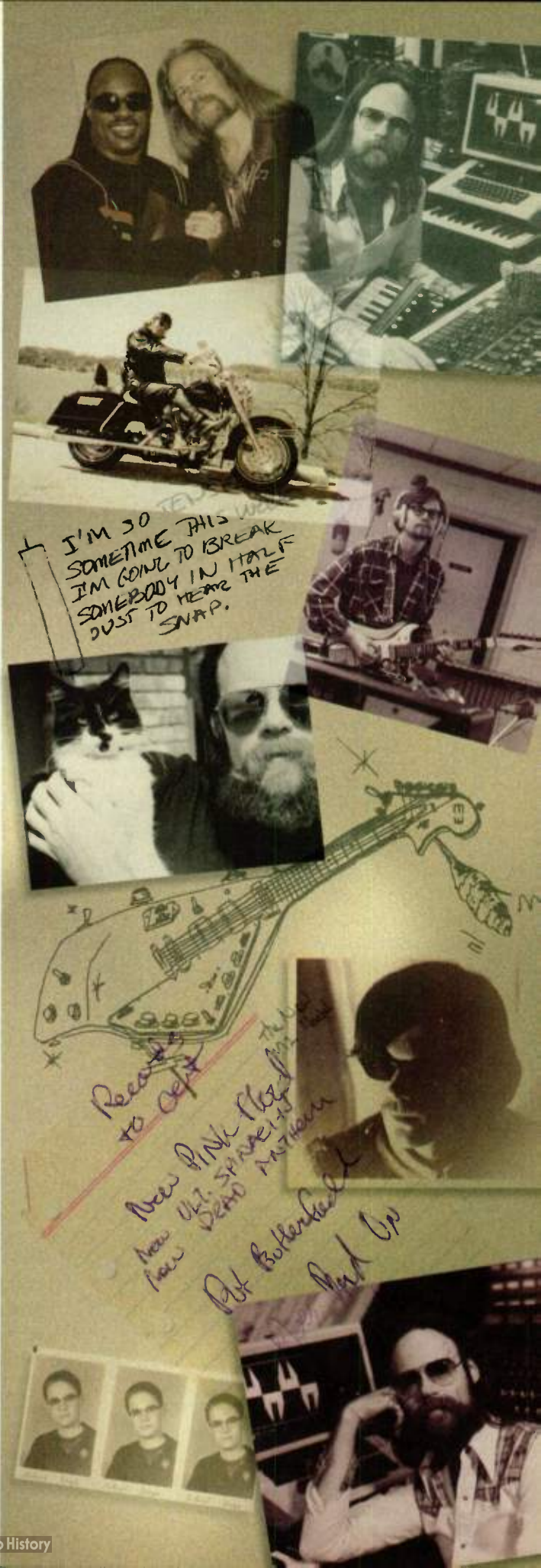

world of sample libraries. Many classic pop recordings used upright pianos instead of big grand pianos. In particular, alternative, rock, singer-songwriter and film recordings often benefit from the character and intimacy of an upright piano.

At first listen, the Braunschweig Upright is a little shocking. It drips with character, explodes with rich harmonics, and is full of life. It is not tuned to perfection to the point of being lifeless—you can actually hear the strings beating against each other in a single note. To some, it may sound a bit too far out-of-tune, but I think it sounds great. And, unlike many piano libraries, it actually sounds better when placed in a track. As you add drums, bass, and guitars around this piano, it sounds even more realistic and full of character: Think John Lennon's "Imagine," but recorded better. It also handles EQ well, and it doesn't disappear and get mushy when the stereo image is collapsed.

Like with most piano libraries, I had to tweak the velocity response from my keyboard controller and/or DAW to find the sweet spot; but once I did, the piano was very dynamic and responsive to my playing. And if you really slam the velocity, you can get a great, rockin' Jerry Lee Lewis or early Elton John sound. When played softly, the Braunschweig is downright moody and melancholy, even eerie.

Of the two perspectives offered in the Pro version, I prefer Perspective 1, which is included in the Basic version. It is overall more dynamic and clear and exhibits an extended frequency response on the highs and lows compared to Perspective 2, which is darker and more distant. Perspective 2 would be better suited for moody film scores or background parts in a recording, rather than being featured up front, in my opinion; however, usefulness and application are completely subjective. I have also had good luck layering the two perspectives together for an even more involved sound, although the 10-layer patches are the highest available for both perspectives (Perspective 1 also has 12- and 14-layer patches; Perspective 2 goes up to 11-layers). I'm also not completely convinced that the mapping is identical between the two perspectives' 10-layer patches when layered; but, in practice, there is so much chorusing already from the "loose" tuning of the piano in general that it probably would go unnoticed.

Overall, I find the Braunschweig Upright Piano immensely useful. It is a great complement to the other pianos in my collection. I welcome the approach that Imperfect Samples is taking by not sucking the life out of their instruments. I love an instrument that exudes character, and the Braunschweig Upright Piano delivers in spades

Overall Rating (1-5): 4
Imperfectsamples.com

QUICK PICKS * STARR LABS * Z5 MIDI GUITAR CONTROLLER

By Marty Cutler

MIDI Guitar Controllers are better than ever. Still, as a guitarist's gateway to MIDI and synthesis, guitar controllers are hard-pressed to compete with keyboard and drum-pad controllers, whose powerful MIDI implementation usually places them way ahead of the expressive curve. Although recent-generation controllers such as those from Roland and Axon units offer lots of real-time control, there's always room for more.

Starr Labs has been manufacturing all sorts of alternate controllers for years. Among the company's diverse instruments is their line of Ztars: a guitar-like hybrid instrument which—instead of using pitch to MIDI conversion—utilizes keyboard and fret-switching technology to provide fast and accurate MIDI access to guitarists. The concept of fret switches has been around the block a few times, but Starr has worked the idea into instruments capable of virtually unparalleled MIDI control and therefore, great expressiveness, which helped garner the company an EM Editor's Choice award in 2002 for the Z6S Ztar.

Since that time, the company has added numerous new instruments, firmware updates, and upgrades, including the addition of USB controllers in 2004, and wireless MIDI communication. For the most part, the Ztar line has consisted of custom, one-off instruments, and as such, most were relatively costly. The Ztar Z5 represents Starr Labs first production-line models, and at $1,595, it comes in at a considerably less-expensive price tag. Surprisingly, the Z5's implementation remains quite sophisticated, and in some ways, it feels like a more solidly constructed instrument than its predecessors.

My Z5 review unit arrived in a sturdy plastic hard-shell case, replete with documentation, USB and MIDI cables, and a wall-wart power supply that connects to a MIDI adapter. The unit can draw power from the adapter or from your computer's USB port. The USB connection sends and receives MIDI data, which

makes it especially appealing to laptop jockeys looking to minimize MIDI interfaces and awkward power and MIDI cable runs. The instrument body and neck are maple, with a sunburst finish. Toward the bottom-right of the body is a four-direction, programmable joystick. A set of six string triggers with adjustable tension sits on the body.

Get With The Program

The Z5 programming section sits on the instrument's side panel, facing upwards at the guitarist. The panel's bright green LED display is nested between two four-button rows of soft keys, flanked by increment and decrement buttons, and an edit switch. Hitting the Edit switch takes you into the Z5's rich set of features, including Velocity curves, string response, sensor response, MIDI Clock (The unit has a built-in sequencer), many editable parameters are individualized per string, and you can tailor the feel of the instrument to taste. Probably one of the Z5's coolest carryovers from the rest of the line is the ability to create and store alternate tunings. I was easily able to create a raft of alternate guitar and banjo tunings. You can assign string output to different MIDI channels and synths, and create zones in which you can further subdivide the instrument's output to different devices. To the programming panel's left are buttons for sequencer-pattern selection, octave up and down transposition, a Panic button, and much more.

Heavy Necking

Maybe the greatest difference between the Z5 and its siblings is the unit's fingerboard. Instead of rows of buttons representing triggers for each fret, six vertical rubber sensors, roughly the circumference of strings, traverse the length of the fingerboard. Rubber frets run crosswise, dividing the scale into 24 frets. The "strings" serve as switches, and when used in tap mode, become velocity-sensitive triggers.

Using a string-like system rather than rows of buttons makes the transition to a controller easier for guitarists, but it will still take time to get used to the idea that there is no vibrating string under the fingertips, and tactile references such as string gage and neck width don't apply here. Notes sustain long as your fingers hold the chord. The flip side is that you'll need to develop new damping techniques unless you like unintentionally sustained notes. (Starr Labs says the muting system can avoid this issue.) These are not flaws in the Z5; it's the cost of doing business with MIDI.

There are way more playing options than this review can encompass; the Z5 may be the company's entry-level pro instrument, but it remains a deep one, with tons of expressive capability. Its configuration is ridiculously versatile; you can play it like a guitar (in which a string can play only one note or sustain a note and layer successive notes on the same string, tap the fretboard, or combine the tapping and picking into one instrument. Starr Labs has done a tremendous job of bringing in a powerful MIDI controller at a reasonable price. Take it for a spin.

Overall Rating (1-5): 4.5
starrlabs.com

QUICK PICKS * SAMPLELOGIC * CINEMATIC GUITARS

By Marty Cutler

Samplers are great tools for capturing the sonic nooks and crannies of acoustic and electric instruments—if only in snapshot form, which always invokes the argument as to why anyone would want to replace the real thing with an imperfect copy. The fact is, once you get a nuanced instrument inside a sampler, the number of ways you can reshape its sound multiplies by a nearly infinite amount.

SampleLogic, no strangers to altering the sonic landscape of conventional instruments and natural sounds, have focused their talents on acoustic and electric guitars, resulting in a collection of predominantly processed sounds. All of the source material derives from guitars; nevertheless, Cinematic Guitars strays far afield of its origins while retaining familiar and appealing properties of its source material.

The product is available as a direct download from SampleLogic's Web site or in a box set. Native Instrument's Kontakt

Player accompanies roughly 6GB of sample data, and the package is authorized neatly through the NI Service Center.

Cinematic Guitars harnesses the considerable guitar-stretching abilities of Steve Ouimette. The library dishes out exotic, guitar-derived sounds and effects alongside a handful of more conventional acoustic and electric guitar instruments. Moreover, the sounds are geared toward soundtrack production with (to mix metaphors) a widescreen sonic approach; the majority of sounds are thick, animated, and huge.

Down the Rabbit Hole

Native Instruments Kontakt Player harbors Instruments (single MIDI channel patches), and Multis, which combine instruments in different ways for an aggregate effect. Cinematic Guitars divides into three main instruments categories: Atmospheres, Instrumentals, and Percussives. These branch out into a number of subdivisions. For instance, Instrumentals branches into folders for arpeggiated instruments; guitars, loops, pads, and synth-type sounds. The loops subfolder under the Instrumentals category adds another layer of subfolders. Thankfully, Kontakt provides a tree menu with which to navigate through the bounty. Things get a bit confusing; nonetheless, as several Multis lurk in the single-instrument folder, and if you aren't attentive, you could inadvertently purge instruments you have loaded into other slots.

There are few hard and fast rules in the organization of the patches; although there are folders for performance-oriented patches such as tempo-synched, arpeggiated or gated instruments, don't be surprised if additional tempo-synched instruments show up in other folders. Nonetheless, patches are still appropriately organized by function, and much of what drives a patch's performance is accessible from the user interface for easy customization. Among other controls are Attack Release knobs, cabinet modeling (with a programmable rotator effect) reverb, delay, flange, a multimode filter, and plenty more.

Atmospheric Disturbances

The Atmospheres folder breaks down into Ambiences and Stingers; the former generally serve to underscore mood, whereas the latter group is used to emphasize an event or transition. Once you open the Ambiences folder, you can choose between folders devoted to a variety of moods: Bizarre, Dark and Scary, Euphoric – Spiritual, and more. For the most part, the ambiences are pads with looping melodic or percussive motifs emerging and developing over time. In a number of cases, patches are augmented with a few variants, consisting of a slightly different sample map, step sequenced modulation, arpeggiator-driven, and modulation-wheel controlled patches. These variation patch titles reflect the additional feature (SEQ for sequence or MW for modulation wheel, for instance) Every MW patch I played, controlled filter cutoff; given Kontakt's formidable modulation capabilities and SampleLogic's expressive sound set, this was disappointing; a few mod-wheel crossfades or other modulation choices would have been welcome.

As with SampleLogic Morphestra (Reviewed in the Feb **2010 EM**), the company recruited a handful of film-and-game-composition artists to program a batch of Multis. Among these, the contributions of composers Atli Orvarsen (Sunrise Drive and Monastery Memory), Jesper Kyd (Space Cowboys) and Steve Tavaglione (Gentle Minor Strummer and Harmo Knees), whose aforementioned patches were especially welcome for their emphasis on atmosphere and mood rather than violence and bombast (see **Web Clip1**). Don't overlook the SampleLogic Multis, though; they offer plenty of evocative patches that go beyond the "Scoring for 24" paradigm. Can This Be Real, with its backward guitars and padding evokes a powerful sense of wonder (see **Web Clip 2**).

My gripes are trivial alongside the sheer number of imaginative, useful sounds you'll find in Cinematic guitars. Many of the patches are breathtaking and evocative. There's a ton of useful, wide-screen sounding material, and the effects and easy access to patch-modification multiplies the collection's value and utility several times over. Cinematic Guitars may not be the only film-scoring sound library you'll ever need, but it fills a sonic niche few, if any collections occupy, and does it beautifully.

Overall Rating (1-5): 4
samplelogic.com

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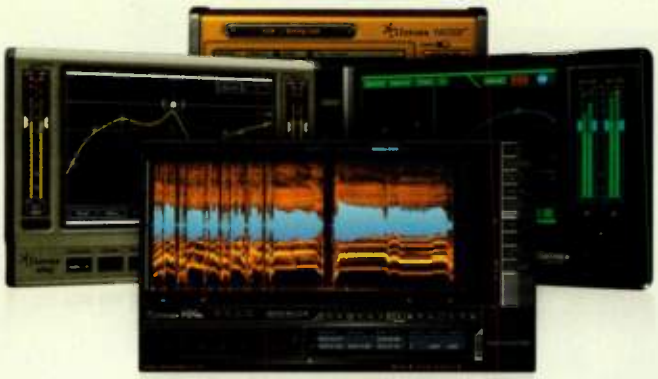

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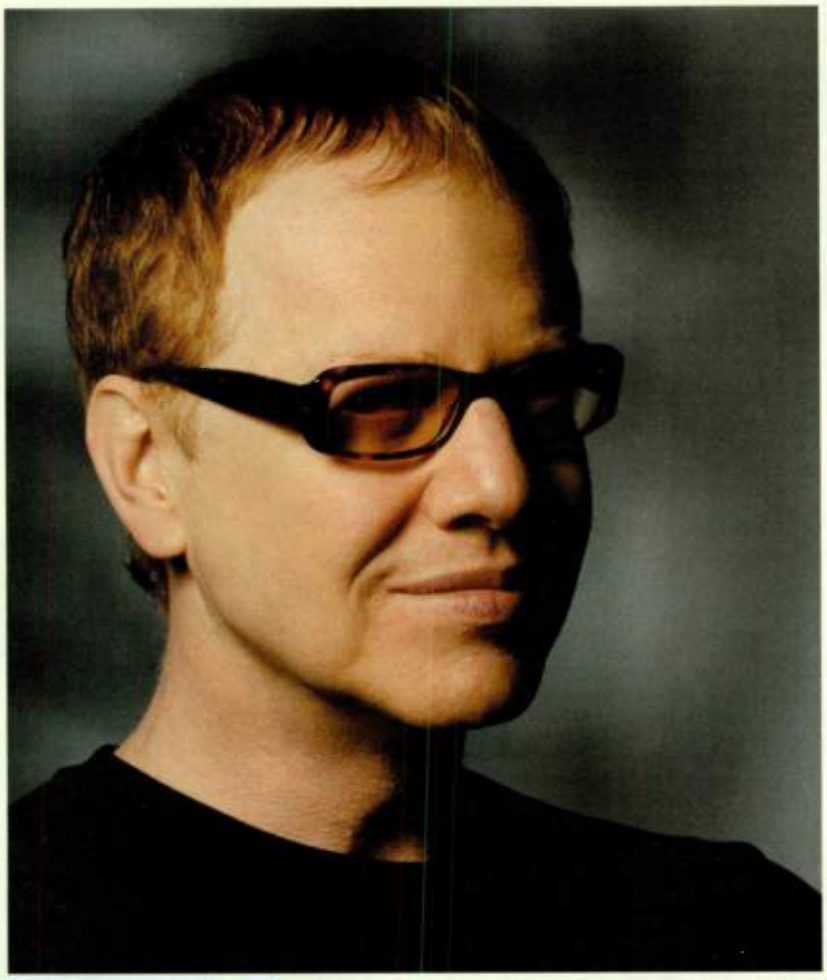
By Greg Pedersen



Danny Elfman

The following is excerpted from "Danny's Big Adventure," which appeared in the May 2006 issue of *EM*. For *EM* readers itching to enter the celluloid madhouse, Elfman offered some tips for surviving film-scoring gigs with a few shreds of your sanity (and stomach lining) intact.

Work those themes. "When I'm starting a film, I make sure I compose a primary theme and at least two secondary ones that can be turned a number of different ways. I'll take the theme and figure out whether I can play half of it and still recognize it. Then, does it work in a major and a minor key? Can I turn it from funny to spooky? Can I cut it down to just three notes and still make it recognizable? These are some of the acid tests I put a theme through while I'm composing."

Be empathetic. "The problem between every director and composer is that music is not easy to describe in words. You can spend hours talking about the score, but from the first moment the music is played, it either works or it doesn't. Then you realize all the talking you've done doesn't mean a thing! I try to approach everything from the standpoint of a director's eyes so I can compose something that's satisfying for me and yet still connects with the director."

Define the demo. "Make sure the director understands that, in the demo stages of an orchestral score, the synth brass are going to sound like car horns and the synth strings are going to have a peculiar edginess. I usually play the director a demo of another score, such as Batman, and say 'Here's the demo score I played for Tim [Burton], and here's the real thing. As you can hear, the real orchestra is going to sound ten times better than the synth orchestra,"

Argue early. "Show the director some themes and sketches as soon as you can and engage their opinions. If there are any problems, the goal is to duke it out in the studio during the writing process. You don't want conflict on the scoring stage when there are 90 musicians sitting there! Ideally, when you get to the orchestra session, all the director should be hearing is a better version of what he or she heard in your home studio."

Let the film conduct. "Most film editors have an internal metronome going, so if you can tap into that rhythm, it will make scoring a lot easier and more fun. In fact, if you're out of sync with the film editor, it will be very hard to make the picture work. Once I lock into the editor's rhythm, though, it's easy to make all my hits match perfectly to the action onscreen."

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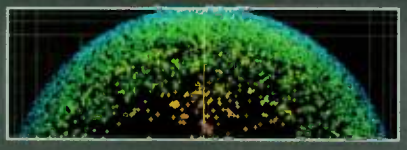

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