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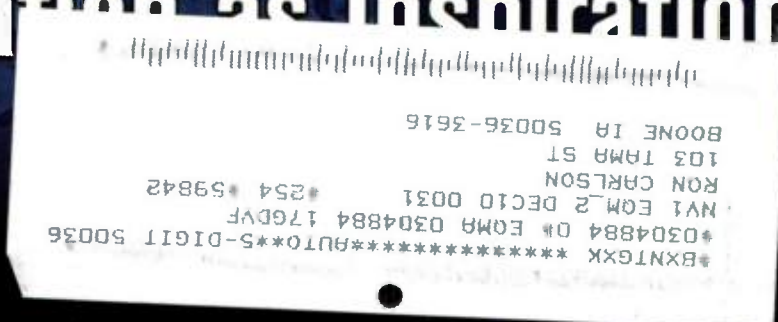
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Exclusive: Costello and Burnett interview outtakes.



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TALKBOX



DON'T LOOK BACK

I was talking with a friend who went from hardware to software recording, but has now returned to hardware. When I asked why, he replied, "After buying a bunch of software over the years where the companies either went out of business, or the plug-ins didn't migrate to the OS of the day, or a DAW wouldn't call up an old song because I don't still have version 1.0 of a plug-in that is now at 5.6 . . . I've gotten tired of having old songs not reload. I always found myself upgrading something, and spending more time in system management than actually working on music."

That's certainly a valid viewpoint, and one that's shared by many others. But I might have a solution: *Don't look back.*

After all, that was a hallmark of tape; once you'd recorded a part, that was it. You could EQ it, or add reverb, or make other minor changes, but the part would never change unless you punched or recorded over it.

DAWs are different. You can postpone, edit, remix, comp, re-amp, slice, and dice. And while

those are welcome options, do they always help us in the long run?

If not, then try this: After you've recorded a part you like, consider it done. Move on. If you used a virtual instrument, bounce it to an audio track. Sure, keep the original MIDI part or whatever, but once a part has become audio, it won't matter if your OS changes or your plug-ins are updated. If you're unhappy with the part, then just re-record it—don't try to beat it into shape.

Did you punch a bunch of vocals? Don't keep the rejects. Bounce it all to one track that starts at the song's beginning, and goes to the end. When you back up your data, you'll be backing up actual audio that you'll be able to load into anything, as long as WAV and AIF files (and maybe even MP3s) still exist.

Music is an art form that is based around expression. So after you record that part, *don't look back*—and despite using none of the technology of tape, you'll have at least one of its benefits.

Craig Anderton

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WILD STUDIO EXPERIENCES



When tracking what was to be the first song on Beth Kinderman and the Player Characters' *Apocalypse Blues*, the drummer hit the crash on the first beat so hard, it went flying off the stand. I saved the ensuing laughter and jokes, and then attached them to the real take, so the album has a false start. Of course, the keeper take was a few takes later, so this moment of studio vérité on the album is, in fact, a forgery."

—Dave Stagner, Minneapolis, Minnesota



"Let your contact cleaner dry. We were excited to try out this amp purchased on eBay. The pots were really bad, so we opened it up and sprayed in some contact cleaner. I

suggested we let it sit for a second, but others got excited and it was turned on; it looked dry. A few chords were played, and in a flash, the still-wet contact cleaner caught fire. Quickly, the three of us blew it out and extinguished the flame. Once the smoke had cleared, one guy said without hesitation, "Wow, does that thing sound amazing!" This is one of the many proofs I have that "Things really do sound their best *right* before they blow up!"

—Anthony P. Kuzub



"My very first paid recording session was to record and master ten Vietnamese songs in one day as a grand opening for our studio. It was nuts! And I don't speak

a word of Vietnamese! Most stressful day I've ever had!"

—Jonathan Barrett, Costa Mesa, California



ASK EQ

Yes, in some cases you really can ReWire more than two programs into a host—no matter what people tell you.

I recently did a session at a studio of a friend who's really into ReWire, and I'm hooked. He said that you need a super-powerful computer to pull it off, but didn't really elaborate. How much computer do I really need? Can I get by with a dual-core machine?

Jacquie Tobias, via email
Seattle, WA

EQ: Your friend is half-right. (And we wonder why we get these kinds of questions right after a new version of Reason has been released!) The ReWire protocol itself uses almost no power; it's really just a way of connecting one program with another. However, because you'll be running two programs at once, they'll be splitting your computer's resources between themselves.

For example, if one of the programs has a virtual instrument loaded that stores a ton of samples in RAM, there might not be enough RAM left for the other program. Try running each of the programs that you want to use, and if either one consumes a lot of CPU and RAM, then ReWiring might be a problem. On the other hand, if your CPU isn't breaking a sweat,

you'll probably be okay. You may need to increase latency a bit to lighten the CPU load, but in general, if you make sure your computer isn't spending resources on unnecessary tasks, any modern music computer should be able to handle ReWired applications without problems.

If you want to get heavy into ReWire, the nicest present for your computer would be as much RAM as it can address. So is a 64-bit machine with a 64-bit OS the answer, as this type of system can address far more RAM compared to 32-bit systems? Not so fast. ReWire isn't compatible yet with 64-bit operating systems, although it will generally work with 32-bit ReWire-compatible applications running under a 64-bit OS.

One last thing: Conventional wisdom says you can't ReWire more than two programs together, but that's not always true. Look at the screenshot for proof: Both Propellerhead Reason and Ableton Live are ReWired into Sonar, which is playing back music from all three programs. It's definitely taxing the CPU, but it works.

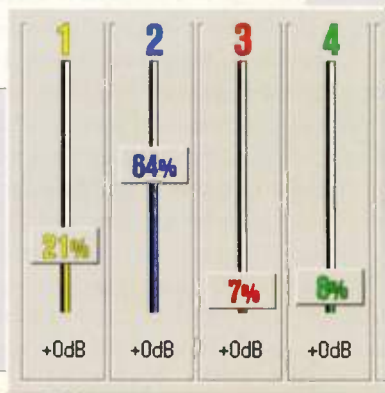
Ask EQ a technical audio-related question, and EQ will answer it. Send it to eqeditor@musicplayer.com.



EQ POLL

How often do you wear earplugs?

- 1 When I'm at a loud concert, but not when I mix
- 2 Anytime I'm exposed to unsafe SPLs
- 3 Only when it hurts
- 4 Never





THE PHILISTINES JR.

on the Dewanatron and Other Instrumental Oddities

After nearly a decade hiatus since the band's last album, super indie producer and mixer Peter Katis (The National, Interpol, Jónsi of Sigur Rós, Tokyo Police Club, Mates of State), together with his brother Tarquin and drummer Adam Pierce, have succinctly answered the very question posed in their coyly titled new release, *If a Band Plays in the Woods...* (Tarquin Records).

In fact, the Philistines Jr. have been playing in the woods of suburban Connecticut for 20 years, where Peter's incredibly outfitted, top-of-the-line home recording studio captures the band's charming, visionary sound. As with most Philistines Jr. records, the new album combines rock instrumentation, vibraphone, and glockenspiel as cornerstones, with oftentimes radical shifts between outboard-mangled vintage guitars, \$60 Casio keyboards, and home-made electronic instruments.

On "A Trip Down the Rooster River," a track that Katis just couldn't make work vocally, for instance, he enlisted the mysterious Dewanatron "dual primate console," played simultaneously by lifelong best friend and inventor, Leon Dewan, and his cousin, Brian Dewan. "It's this crazy monstrosity with actual telephone dials, and all these multiple oscillators and sequencers that have to be hand-tuned," says Katis.

"It's putting out one signal, but it's doing a bunch of totally different things with weird modulations. How they control it, I don't know. It's like trying to play a Theremin on a boat at sea," he laughs.

Knowing how unwieldy the instrument can be, Katis went into recording with clear instructions. "I was like, look, this is the chord progression I want, so let's try and get something as in tune and not totally insane as possible. I knew it would be more than insane enough."

"How they control it, I don't know. It's like trying to play a Theremin on a boat at sea."

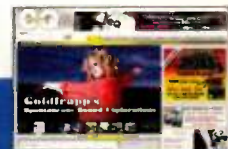
—Peter Katis

The record also features an old Lowrey console organ, dueling Theremins played by virtuoso Rob Schwimmer, and a super-rare (Gibson) Clavichord, the instrument responsible for the bagpipe sound in The Beatles' *Baby You're a Rich Man* and the solo in Del Shannon's *Runaway*. "Very, very haunted house," says Katis.

For lo-fi rhythms, he resurrected an old Farfisa from his growing combo-organ graveyard. "I don't remember the model number, but it's a very unusual organ that has this really elaborate sequencer. I spent a lot of time playing with that, turning off most of the things (like drums) that you would normally have on, leaving just these weird, quirky elements."

But it's an old ARP PE-IV String Ensemble that Katis concedes as being one of his secret weapons. "If you stick it in and play very few notes, or just a single note that can harmonize over the whole chord progression, it can add this sort of melancholy that nothing else I know of can." Because of the ARP's over-the-top '80s New Wave sheen, he likes to overdrive it, "a lot . . . mangling the top end a bit so you can place it so low in a mix that it doesn't get in the way. Listen to records I've made; it's always there. People make fun of it, but it's there because it works." Jason Scott Alexander

More Online



Read EQ's entire interview with Peter Katis.

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Maserati (left to right)—Chris McNeal, Matt Cherry, Coley Dennis, and Jerry Fuchs.

MASERATI

Dark, Blown-Out Jams Captured Old-School Style

Pyramid of the Sun, the fourth full-length from Athens, GA.-based post-rock quartet Maserati, is an ascendant album built like the Aztec structure that inspired its title, featuring a precisely angled base, painstakingly arranged building blocks, and a reverently detailed skin. Its eight tracks form a spiritual alignment of Krautrock's motorik insistence, prog-rock's auroral drive, and indie rock's unflagging attitude. *Pyramid* also acts as a tribute to drummer Jerry Fuchs, who tracked parts for the album at The Bakery in Athens before tragically passing away in November 2009. (Steve Moore of Zombi, a LinnDrum, and a little Pro Tools comping orchestrated some final breaks and fills.)

Fuchs propelled the band rhythmically since 2005, and on *Pyramid* he pushed the band forward in even broader ways. Fuchs, a man who had MIDI In and Out tattooed on his wrists, brought an appreciation of the vintage sequencing of Ash Ra Tempel/Manuel Göttsching, Can, Cluster, Neu!, and Aphrodite's Child/Vangelis. This came into play when Maserati reconvered at Cacophony Recorders in Austin, TX, to flesh out *Pyramid* throughout 2009.

Working with engineer Erik Wofford, Maserati captured blown-out jams with just outboard preamplification and EQ by Chandler Limited, API, Aurora Audio, and Mercury Recording Equipment in order to preserve dynamics, using both tape and tracks mapped from Pro Tools HD2 to their own faders to appropriate a '70s recording style. The board was a 32-channel, mid-'80s Sound Workshop Series 34C with a master section modified to include a discrete, transformer-balanced summing amp from Purple Audio, "which brings more to the tone and depth of a discrete vintage console,"

says Wofford. Overdubs went through a Universal Audio 2192 converter at 44.1kHz.

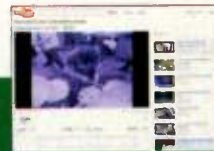
Several spirited facets of the *Pyramid* vibe were captured through the application of Echoplex and Roland Space Echo tape delays, as well as Morley PFA Pro Phaser, all manually dialed in. "We'd use an Alesis micron [analogue-modeling synth], or a MiniMoog or Little Phatty, run a path, start it delaying on the quarter-note, and slowly add the repeats so it would repeat into the 16th notes," says guitarist Coley Dennis. "And Erik knew all the Morley's sweet spots, so he'd rock that aluminum brick back and forth while we played some leads." (Select phrases/loops were sent/returned through similar effects post-tracking, as well as treated with manual tape slowdown for creative distortion, or given Big Muff and Talk Box to add sustain/bottom end.) Also, to achieve certain expressive arpeggiation, a click track would be sent through an Electro-Harmonix 16-Second digital delay (also extensively used on live guitar), then that rhythm was fed to the keyboards; this allowed for more diffused, but in-sync analog delays.

Slightly panning/EQing dozens of guitar, bass, and synth tracks to avoid destructive frequency competition, mix engineers Jeremy deVine and Jeremy Van Der Volgen added clarity to density. The result is an album of cascading tones that's dark, with a bit of dry thump, but reconciled with an effusive, danceable energy that does Fuchs proud. **Tony Ware**

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by David Albin

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Nothing Like the Sun

With *A Thousand Suns*, their most ambitious and divergent album yet, Linkin Park blaze a new trail for alternative rock

by Richard Thomas

“We wanted to create something that’s challenging to us, not fall back on the things we’re used to doing. So we threw the rule book out the window, and when it felt we should go left, then we should probably go right instead.”

Chester Bennington and the rest of Linkin Park are sitting onstage at the Music Box Theatre in Hollywood, fielding questions from a packed house of fan club members, music press, and VIP guests about their newest full-length, *A Thousand Suns*. For the 47 minutes prior to the Q&A, the band debuted the album in its entirety, synced with a laser light show that would enthrall even the most seasoned raver. With nearly half the songs containing up-tempo BPMs and dance music cadences—not to mention the noticeable absence of anthemic rock guitar hooks and only three tracks featuring raps by

Mike Shinoda—the experience couldn’t help but accentuate the differences between this and Linkin Park’s previous body of work. With the exception of Bennington’s trademark guttural screams, any resemblance to the rap rock genre they helped define has been rinsed out. Intensity and ferocious introspection are still the endgame, but the path has changed. And when that path is lined with more than 50 million album sales, two Grammys, and nine Number One singles on the Billboard Alternative Chart, throwing the rule book out the window takes more than a simple leap of faith.

Continued

THE CATALYST

To understand the variant sound of *A Thousand Suns*—its elusive melodies, fractured guitars, and protracted interludes—you first have to understand the way Linkin Park function as a band. Rarely, if ever, do more than a handful of the six members record simultaneously, nor do they “jam” as a group, traditionally speaking. There’s also no division between writing and recording, and demo ideas frequently make it into the final mix.

“I would say, in general, that we don’t have a standard way of doing anything,” laughs guitarist Brad Delson. “You go in for two months and you cut a record, right? Our process is nothing like that, and I think that’s one of the reasons the sounds on this album turned out the way they did.”

The band tapped legendary producer Rick Rubin—no stranger to shepherding artists through transitory periods—to co-produce. Having worked with Linkin Park on 2007’s *Minutes to Midnight*—in itself a bit of a departure, musically and vocally—Rubin helped reinforce their creative path and maximize the effectiveness of the band’s unique songwriting approach.

“When we did *Hybrid Theory* and *Meteora*, Brad and I did the bulk of the writing,” says Shinoda. “We would write the music and I would write the vocals and we’d give them to the rest of the band to make notes or change it, but essentially we were doing it like a hip-hop production team. This is the track, these are the vocals.”

“Rick tried to get us to cut more stuff live on *Minutes to Midnight*,” Delson continues, “and I think he

realized that the strength of the band lies in a more hip-hop project approach to recording; a much more digital, studio-based way. That’s where our art lives.”

The key to *A Thousand Suns* was a combination of organic, small-group writing sessions and diplomatic Monday roundtables, wherein new material, revisions, and opinions would be shared among members. The goal, according to the band’s self-penned bio, was to see whether or not they could “abandon the precepts of commercial ambition in pursuit of what they believe to be honest art.” To do this, they would need to start with a foundation of hand-crafted source material that blurred the lines between synths, guitars, and percussion. For Shinoda, the group’s primary sonic architect and beat-maker, this meant getting back in touch with gear like the Akai MPC1000 and rekindling shades of 1994, when he was sampling and mashing together Wu-Tang Clan, Nine Inch Nails, and the Smashing Pumpkins on a cheap Roland MS-1.

“That attention to the ear candy sets the tone for a record,” says Shinoda. “If it gets as much attention as the song itself, it could really add up to something special.”

HYBRID THEORIES

The bulk of the album was recorded at Shinoda’s studio (The Stockroom), turntablist Joe Hahn’s studio, and NRG Studios in North Hollywood, where the band has locked out Studio A, off and on, for roughly two years. Shinoda’s space is set up like a u-shaped control center, with important pieces of gear such as his MPC1000, Access Virus TI Polar,

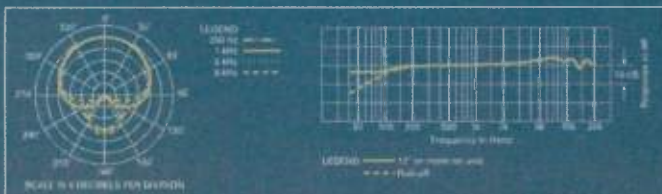


Left to right: Joe Hahn, Mike Shinoda, and Rob Bourdon at NRG Recording Studios in North Hollywood.

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"The best artists follow their instincts.

It's easy to remake the same album over and over again, and while certain fans will claim they want to hear more of the same, in reality it gets old fast."

—Rick Rubin

Roland Juno-106, M-Audio Axiom Pro 61, and Moog Voyager just an arm's length away. Rather than eat up real estate with a console, all mix channels are housed in two SSL X-Racks that feature eight VHD input modules, two Mic Amp modules, two Super-Analogue EQs, two SuperAnalogue dynamics modules, one 8-channel input, and a master bus. All hardware and outboard compressors are run through three 48-channel, 1/4-inch patchbays, which then connect to the X-Racks. Monitors are ADAM A7s and Mackie HR824s.

At NRG, the band had a 64-channel Neve 8068 at their disposal, monitored through Yamaha NS-10s and YST-SW100 subs, plus a pair of vintage Auratones, powered by a Byston 4B amplifier. ProAc Studio 100s and a Perreaux amp, Rubin's preferred combination, were also brought in. Many of the same hardware pieces, including an array of effects pedals, went back and forth between studios.

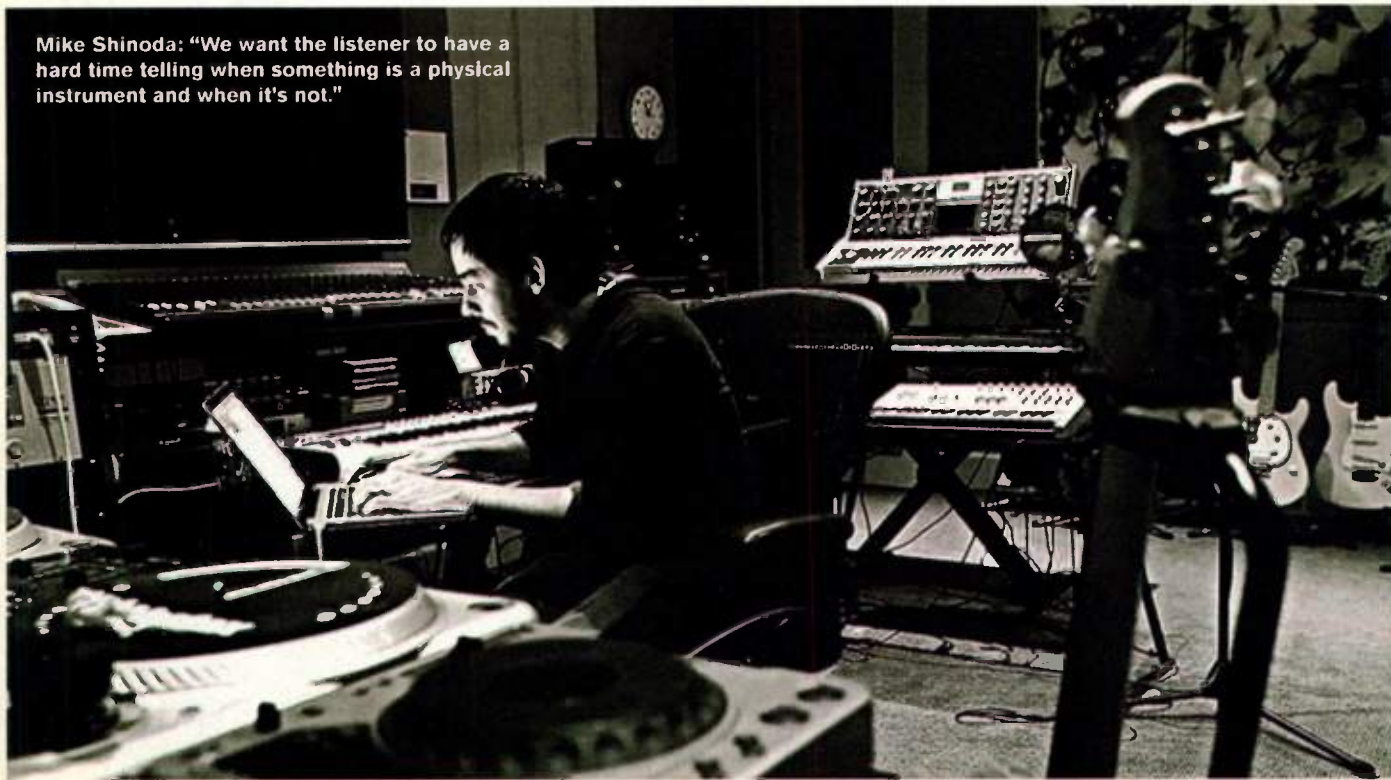
"The concept at NRG was to encourage the band's workflow," says engineer Ethan Mates. "We wanted to have a million things set up and ready to go at once. I think we had 48 Pro Tools inputs at any one time."

To help the band keep track of everything, Mates and assistant Josh Newell created laminated sheets listing all the available instruments and their corresponding inputs. A quick peek at any of the video clips on LinkinPark.com—segments taken from their making-of documentary, *Meeting of A Thousand*

Suns—gives you an idea of all the toys at their disposal. With piano central to the album's mood and pacing, a Yamaha C7, Rhodes suitcase 88, and a Hammond B3 with a Leslie cabinet were always available. Many of the bass parts were also tracked with keyboards, using a combination of GForce soft synths and hardware instruments such as the Juno-106 and Access Virus Indigo and Virus TI Polar. On actual bass tracks, Dave "Phoenix" Farrell played a 1950s Fender P Bass through a vintage Ampeg SVT head and an 8x10 cabinet, miked with a Royer 122 and a Heil PR-40, one on top of each speaker. Mic outputs were sent through the Neve console preamps and bused through a Universal Audio LA-2A. Tones were achieved through a variety of effects pedals: On the caustic, low-slung "Wretches & Kings," a musical and lyrical big-up to hip-hop's golden era, the bass was run through a ZVex Mastotron pedal with a copious amount of Fuzz. Other ZVex pedals such as the Woolly Mammoth, Tremolo Probe, and the cheekily named Super Hard On were used on guitars. "The guitar played a great supporting role because it really filled out certain areas," says Shinoda, who wrote and recorded many of the guitar parts on *A Thousand Suns*. "That's been the joke inside the band: If you left it up to our guitar player, there'd be no guitar on the record. It's not that Brad dislikes guitar. It's that he's been so excited about experimenting with sounds and song structure."

Three primary guitar rigs were set up, each to

Mike Shinoda: "We want the listener to have a hard time telling when something is a physical instrument and when it's not."



MARK FIORE

accentuate a specific vibe. A Fender Blues Jr. combo amp, miked on-axis with a Neumann FET47 about four inches back from the speaker cone, was used on songs that needed more of a large, echo-y tone. A Hiwatt Lead 100, run through a Marshall 1960A cabinet, was miked with both a Sennheiser MD 421 and a Shure SM57, and was featured primarily on more dynamic songs such as "Waiting for the End." Mates also brought in an Orange Tiny Terror and PPC112 cabinet—the head upgraded to a "Holy Terror" with the aid of Mercury Magnetics transformers—which he miked with a Mojave MA-100. The combo amp was most often recorded to a separate track and used for completely wet effects, like a 100% mix from a Fender spring reverb tank or a tape echo with no original signal.

"If we were blending cabinets together, all the summed mics would end up going down a single bus, which had the 1176 and a Chandler Germanium EQ after it," says Mates, who set the 1176 for slowest attack and fastest release, maxing out at about 4dB of compression. "Using a compressor and EQ across the bus instead of on each mic helps glue the sounds of the different amps together and makes it easier to dial in things like sustain."

Like bass, guitar, and synth, the drums were also a mix of programming and performance. Drummer Rob Bourdon played a Gretsch kit on the more aggressive songs, while a '60s Ludwig kit was used on slower, breathier numbers. With a few exceptions, miking was generally the same for both kits: AKG D112 and Yamaha SKRM-100 on the kick, Shure SM7 and Mojave MA-100 atop the snare with a Sennheiser MD441 underneath, Neumann KM84 on the hi-hat, AKG C451 on the ride, and Sennheiser MD 421s on all the toms. A single Royer 122-V and a stereo pair of Royer SF-12s and Neumann M49s captured the room. A small Rogers kit was also set up in a blanket-laden vocal booth and miked with a Shure SM7 on the snare, an Electro-Voice RE-20 on the kick, and a Neumann U47 for the overhead.

"There are times Rob is playing with the loops, [then] there were times he came to the table with a live drum part that was so spectacular that it killed all the sampled drums," Shinoda recalls. "We want the listener to have a hard time telling when something is a physical instrument and when it's not." A perfect example of this approach is "Burning In the Skies," which begins with programmed kick and snare, with Bourdon providing hi-hat and tambourine. As the song builds, Bourdon's parts are overlaid with the existing programmed beats. The Pro Tools session for "When They Come for Me," the album's most complex rhythmic track, comprised more than 100 tracks, and took more than a year-and-a-half to complete. "I don't know how we're going to play it live," jokes Delson.



Rick Rubin.

VOX POPULI

On *Minutes to Midnight*, Shinoda and Bennington experimented freely with microphones and signal paths, which ended up complicating the recording process. For one, it separated their voices a bit too much. In addition, using multiple setups made it difficult to punch in quickly and seamlessly. In the end, they ended up going with a Neumann U47, first through a Neve 1073 and then into either a Chandler TG2 at The Stockroom or a Universal Audio 1176LN re-issue at NRG. Shinoda's mic configuration for his raps was a bit different: a Shure SM7 into a 1073 and an Empirical Labs Distressor. In many cases, Shinoda and Bennington would record and double melodies and harmonies, then choose the "vocal hierarchy" during mixdown. With multiple tracks to choose from, they were able to blend and fade between each singer. "Robot Boy," for example, begins its first of three separate movements with six overlaying vocals—one main and two harmonies per singer—then balloons to more than 24 tracks packed with volume fades and EQ automation. "We decided to go for a more vintage vocal layering, a la the Beach Boys and The Eagles—again, to contrast a robotic, mechanical-sounding track," says Shinoda.

As important as it was to create vocal consistency between the two singers, it was also important to apply that handmade sonic aesthetic to create divergences when the song called for chaos. In the pulsating, dance-rock "Blackout," a mash of pedals and outboard gear was used: Bennington's chorus was scratched up and imbued with stutter

Linkin Park (left to right)—Joe Hahn, Chester Bennington, Brad Delson, Mike Shinoda, Rob Bourdon, and Dave 'Phoenix' Farrell.



KLAUS THYMAN


edits by Hahn, then run through a Thermionic Culture Vulture valve distortion unit and recorded back into the MPC, where each member took turns hand-playing different patterns through the pads.

"We had about 30 passes of each guy rocking out, and everyone had a different style," says Delson. "We took the best moments and comped them into that cutout vocal solo."

At the crescendo of the chorus on "Waiting for the End," vocals are again mixed with pedals, guitars, and scratching to create a unique robotic effect. While Delson played the riff, Shinoda manipulated an Electro-Harmonix HOG (harmonic octave generator), which was connected to an expression pedal to control the octave sweep and a resonant filter to add some edge. Layered on top of the guitars is a track of Hahn scratching Bennington's chorus. The HOG is used again on the song's spacey, pad-like guitar, but followed by

an EHX Holy Grail reverb pedal and a Fulltone Tube Tape Echo.

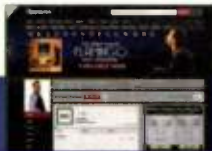
"As we progressed throughout the process, Rick was adamant that nothing sounded standard, nothing sounded stock, and nothing sounded like anything you could just dial up," explains Delson. "I joke with him that going on this wild, two year experiment was his doing, but he was quick to push back. What he does is bring out the best in each group. He reinforced the path that we set for ourselves."

"The best artists follow their instincts," says Rubin. "It's easy to remake the same album over and over again, and while certain fans will claim they want to hear more of the same, in reality it gets old fast. Linkin Park came to power at the end of the rap/rock wave, along with Korn and Limp Bizkit. That wave no longer is in vogue, so to make another album in that style would have probably shortened their trajectory and the relevant lifespan of the band. But most importantly, Linkin Park have moved on as artists from that old sound. The new sound is likely to alienate some old fans who, for whatever reason, aren't growing along with the artist they follow. Also, many new fans who would have never liked them before have the chance to find Linkin Park as a band they can love. For the long-term creative health of the band, spreading their wings, challenging themselves and moving forward is the only choice." 

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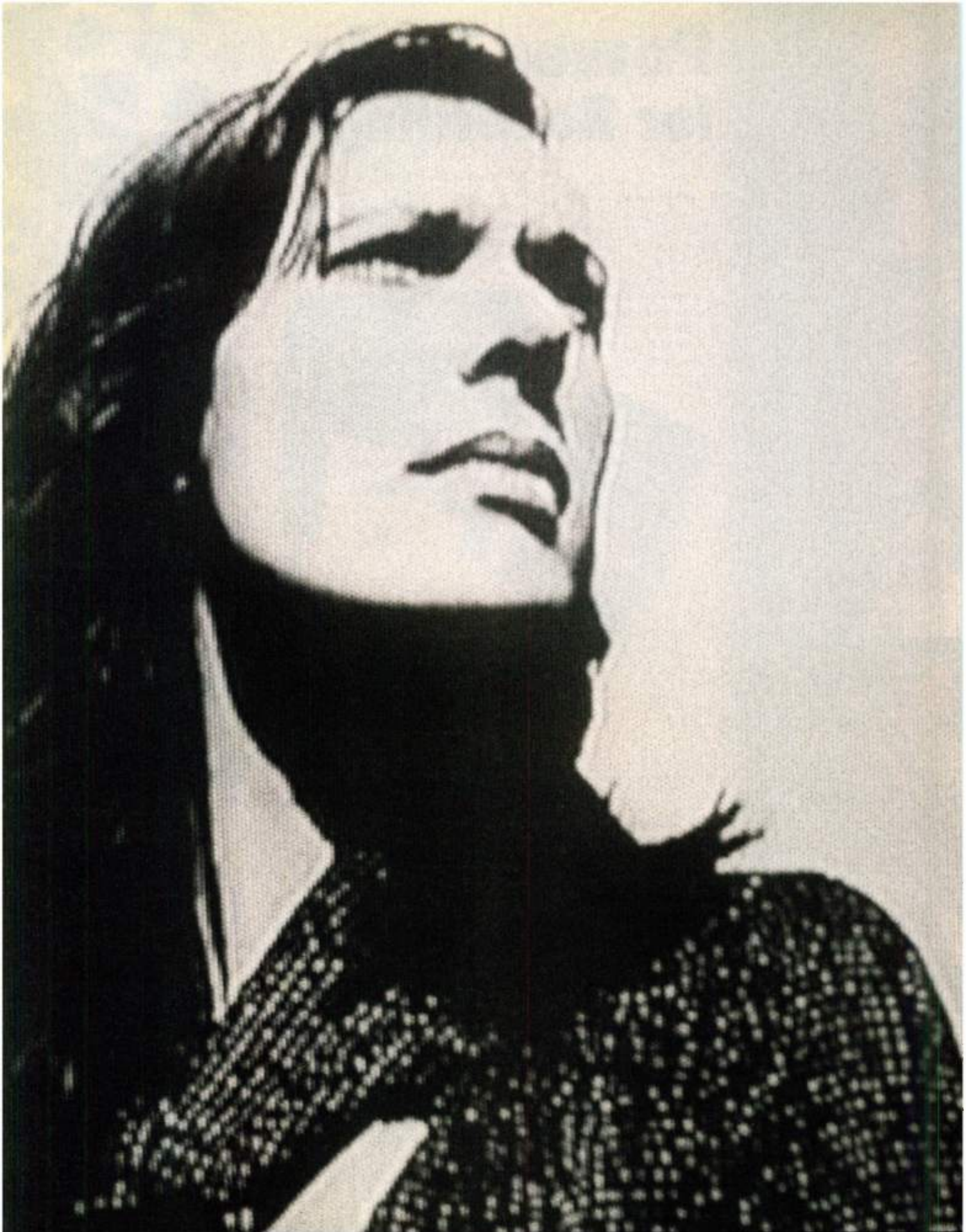


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Out of the Lab

Stereolab chanteuse Laetitia Sadier aims for indie-pop simplicity in her debut solo effort, *The Trip* by Patrick Sisson

A bedrock element of Stereolab's continental cool, Laetitia Sadier's voice is unmistakable. Hearing its breadth of variation on *The Trip*, from the "grey disco" of her "Un Soir, Un Chien" cover to the languid "Natural Child," reveals the depth and fluidity that can be uncovered in a new context. For her first solo album, Sadier experimented with a new setting while keeping a foot anchored on comfortable ground, splitting recording time between Emmanuel Mario in the UK, who worked with her group Monade, and lo-fi singer/songwriter Richard Swift, who opened for Stereolab's last U.S. tour and works out of his Portland studio.

"I wanted to have a new sound and come across something different," says Sadier. "I was looking forward to working with Richard because we had never worked together before, so that gave me scope to learn something new. But I didn't really have a specific preconceived idea. I wanted to be surprised! And I was, working with Richard."

With a philosophy that aims to "take photographs rather than make a painting," Swift set up his studio as a spontaneous, low-pressure environment. Swift, who played drums and guitar on many tracks, Sadier, and other contributors to the Portland sessions worked together in one open room, without talkback. Directness and simplicity were key; only about a dozen tracks were used for each song, and while Swift admits there's some ear candy on the record, the team was more focused on stripping back and

streamlining. Synthetic pulses and film score atmospheres coexisted without crowding out the music.

"It's a really loose recording situation," says Swift. "Half the time we're actually listening to records [Tom Tom Club was a favorite], talking and hanging out. I've always felt you need to create an environment where the clock isn't ticking, it's loose, and you can work where you want to. I've always gotten the best results that way, rather than hammering it over take after take and working yourself half to death."

Sadier arrived last fall and started working on the song sketches she had previously sent Swift, vague references that they would develop into real, desirable shape. Though Swift prefers straight analog recording, he worked in Pro Tools for this album to make it easier to integrate recordings from other studios. He still

Richard Swift.



sent tracks through analog gear, such as a Roland Space Echo, Empirical Labs Distressor, and an Altec amp/mixer, to give them a bit of warmth.

"Everything was there in Richard's studio that I needed to make the sounds I wanted to," says Sadier. "Richard doesn't have a ton of gear; just the necessary ones of good quality, which he knows inside out. He's aware of the type of acoustics his studio has and knows how to get the best out of it. He is very creative and soulful, and came up with many ideas as we went along."

The stark beauty of *The Trip* comes from the way the unencumbered songs breathe and flow. True to Swift's style, and reflective of the final product, most

everything he recorded came from second or third takes, including Sadier's singing. "I didn't comp any of her vocals," he says. "No Auto-Tune; she'd just sing, start to finish. There's a real arc to the emotion she's conveying."

Sadier aims for an open, relaxed, and warm sound, and her performance here—which ranges from the emotional "One Million Year Trip," about her sister's suicide, to a subdued version of George Gershwin's classic "Summertime"—sounds natural. Her voice was simultaneously recorded with Shure SM58 and ADK S7 microphones, run through an AKG BX-10 reverb. "With that setup, I was able to pan the reverb and print it to tape," says Swift. "I love how reverb sounds printed to tape. The vocals sound consistent, even though they were recorded on two different continents."

Swift also utilized extensive reverb on the background vocals, which included his own falsetto and contributions from Rebecca Gates of the Spinanes. The trio recorded a lot of three-part harmonies, and due to the women's somewhat deep voices, it was sometimes hard to tell who was singing. "With these ghostly background parts here and there that come in for little moments and work like strings, in a very orchestral way, the record felt a bit haunted in a sense," says Swift. "We kept saying it sounded a bit

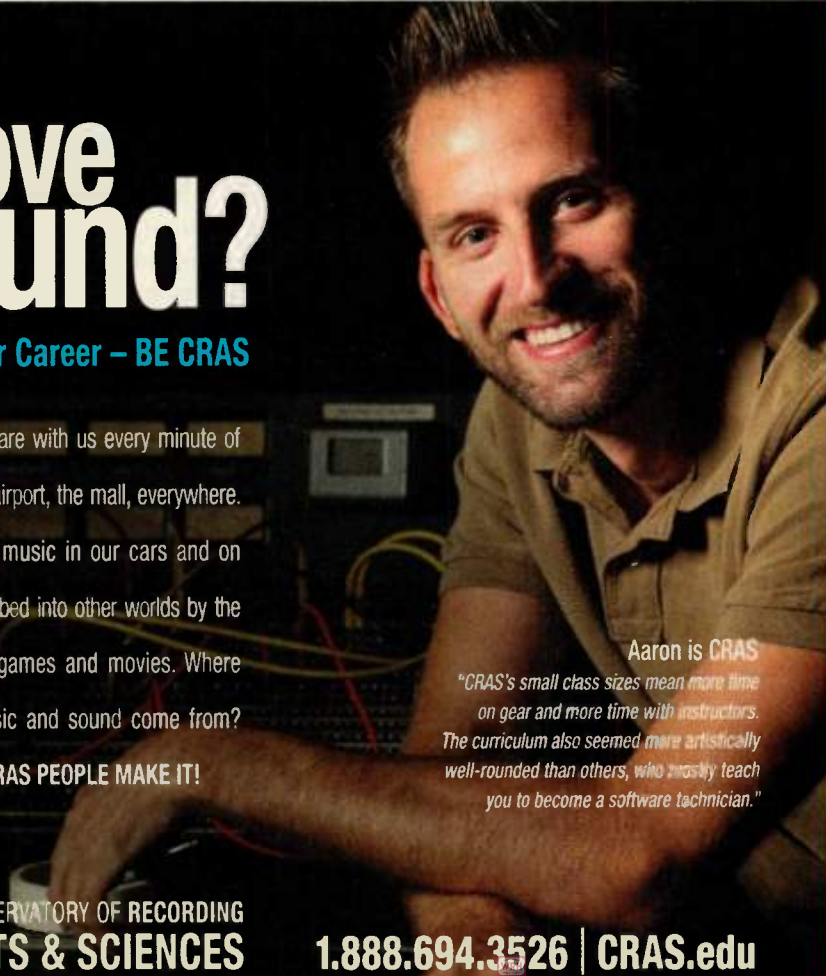
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like the ghost of Laetitia's sister."

Swift framed the vocals with subdued, yet driving and diverse instrumentation. From the lounge feel at the end of "Natural Child," achieved with a soft touch on drums, subtle transitions, and lilting guitar chords, to the way the drums are a little low in the mix, creating atmospheric space in a fashion similar to a Serge Gainsbourg record, it's unobtrusive, yet compelling.

"I'm very spatial in the way that I mix," says Swift. "It gets a little too confusing to me when I don't know where the music is coming from—'oh, there's a dry snare drum a foot away from my face and a guitar panning from left to right for no reason.' I like minimal, specific, and focused sorts of sounds."


When he's recording the drums, Swift uses minimal miking techniques, often using just a single overhead. For *The Trip*, where drums were set to the rear, he used an SM7 or Coles ribbon overhead and occa-

sionally an SM57 on the kick to give it a little extra power. "I know the drum kit and the gear well enough to play to the compressor," he says. "I know how to play to the EQs, which it makes it slightly easier."

On "One Million Year Trip," Swift added a quick, tuned slapback delay on the overhead drum mic, which created a metallic pulse that courses through the first three-quarters of the song.

On bass, Swift split the signal from a mid-'70s Peavey Bass with a DI and ran one signal direct and one very dirty via a Fender Deluxe guitar amp modded with a Vox AC30 speaker and a spring reverb, and he EQ'd out the low-end phase and overtones. "I tend to think of more reverb-heavy bass as something that's more like what they were doing in the '50s and '60s, says Swift.

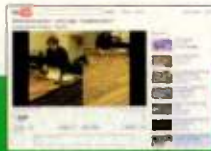
Sadier shared a "prepared-piano" technique that she picked up from Monade/Stereolab bandmate Julien Gasc, which added a haunting sound to "Statues Can Bend": applying duct tape to the piano strings to mute them, then close-miking and compressing the sound.

Sadier and Swift's intricate approach to *The Trip* succeeded, in part, because they created the right atmosphere. While the album has many serious moments—"there's some heavy subject matter; I think she probably had to exorcise some ghosts, in a way," says Swift—Sadier still sounds adroit and fluid. 

More Online



Watch a performance of "The One Million Year Trip."



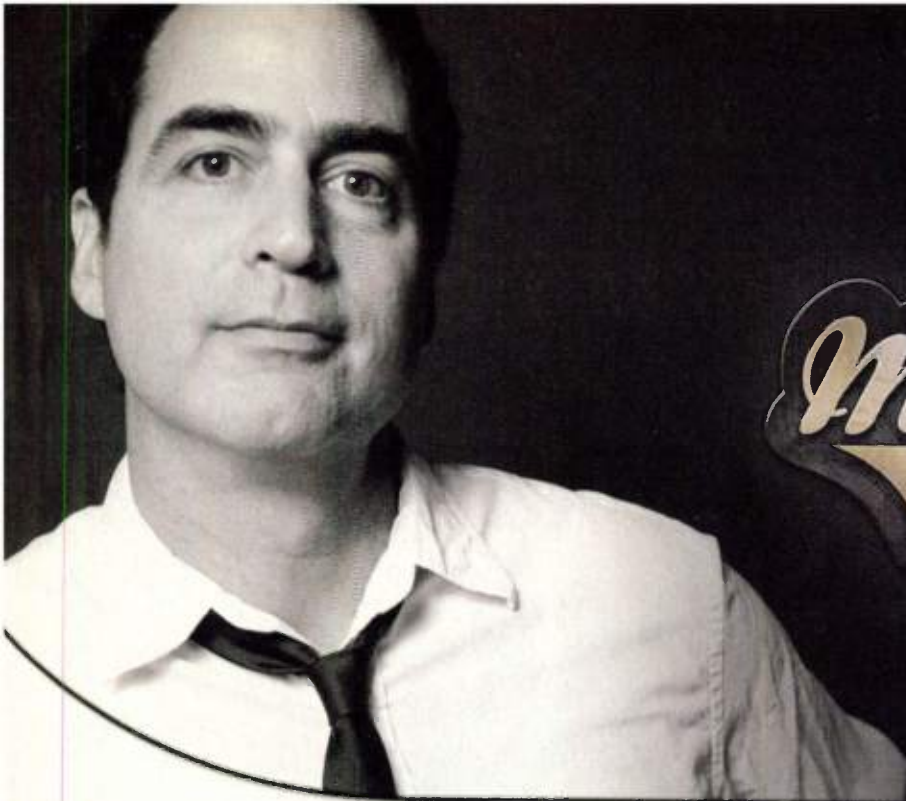
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Americana Influences, Timeless Techniques

Running a wide gamut from 1930s-styled New Orleans torch songs to bluegrass blowouts to rousing rock and roll, Elvis Costello teams up with producer T Bone Burnett to capture a lively groove and natural sound on *National Ransom*. by Ken Micallef

"My first album [*My Aim Is True*] was made in 24 hours," says Elvis Costello. "*This Year's Model* was made in 11 days. I think *Armed Forces* was all of three weeks. I thought we had gone into the world of the depraved and the ever-profligate in taking six weeks to make *Imperial Bedroom*. But after a while, you think, 'What is it you want to hear?' You want to hear the songs brought to life as vividly as possible."

Costello's *National Ransom*, produced by T Bone Burnett with his team of recording engineer Mike Piersante and mastering engineer Gavin Lurssen, was recorded in a brisk 11-day session. A wonderfully natural and rich-sounding recording, *National Ransom* reflects not only Costello's increasingly Americana-influenced music, but Burnett's golden (er, make that Platinum) studio techniques. As heard on Robert Plant and Alison Krauss' *Raising Sand*, the *O Brother, Where Art Thou?* soundtrack, and Elton John & Leon Russell's *The Union*, Burnett's production

style is the result of incredibly high standards based in a common-sense approach. Recorded direct to a Studer A827 24-track two-inch, *National Ransom* is as live-sounding as a hootenanny and twice as enjoyable.

Like the rest of Burnett's production catalog (Los Lobos, Sam Phillips, Roy Orbison, The Wallflowers, Gillian Welch, Ralph Stanley, John Mellencamp), Costello's *National Ransom* is a study in sonic purity. Every inflection of Costello's rangy voice is fleshed out; the band is as tactile as the hair on your arm; Pete Thomas' drums have never sounded so warm, so soulful, so richly *real*. It's as if a veil has been lifted between the recording studio and the listener, between the musicians and your ears. After 15 years with his crack production team, transparency has become Burnett's trademark.

"I can't call it my music," Burnett says, "but I can say for certain that we treat recorded music as an art form. We don't treat it as a pop media event. Marshall

McLuhan said that a new medium surrounds an old medium and turns the first medium into an art form, as television did with the movies. The Internet has done that with television. Television is in a golden age at the moment, these incredible dramas like *The Sopranos*, *The Wire*, *Mad Men*. Recorded music to me is very much an art form like that, the act of recording and the way it's released and perceived. It's all changed; we're no longer in the mass age. We're now in an age when people have to find niches."

It's Better, It's Burnett

Burnett readily claims that his records simply sound better than the dreck that commonly fills the airwaves, iTunes, and the Internet. "These records sound better than most of the records being made these days," Burnett says. "So many records are highly compressed, over-compressed; they're all made in a computer. Rather than

Continued

Costello and crew pause for a pic. Top row (left to right)—Chris Breakfield, T Bone Burnett, Elvis Costello, Kyle Ford, Garth Fundis, and Mike Piersante. Bottom row (left to right)—Paul Ackling, Milo Lewis, Jason Wormer, and Jim Lauderdale.



putting a mic up in front of a guitar, something is patched into a machine. The kind of work we are doing is not mass-production. We're doing very custom productions."

In many ways, Burnett is radically altering practices that have been common in recording studios for 30 years. Burnett, Piersante, and Lurssen only process in analog; they

work solely in high-res digital mastering formats, and their musicians never play loud. "We've been minimizing attack and maximizing tone and overtone for the past 15 years," Burnett says. "For 30 years, the trend in recording was to maximize attack and minimize all the overtones because they're wild and they can create havoc in the sound. We

use all that havoc. We love overtones.

"For years, the bass drum, for example, would sound like somebody hitting his knuckle on a wall; it was all midrange attack," he elaborates. That was especially true because drummers would hit the drums really hard and leave the beater on the bass drum so all you would get was the attack. We do the opposite; we try to barely touch the drum; then the resonance is as loud as the attack—louder, hopefully. If you play the drums softly, you capture the tone and the overtone, and the overtones set up other overtone structures and different rhythms and different melodies get set up within the song. There are counter melodies that take place that are completely unpredictable. That's the stuff I love the most."

Recorded at Nashville's Sound Emporium and LA's The Village and mixed by Mike Piersante (assisted by Kyle Ford) at Burnett's Electromagnetic Studios in Brentwood, *National Ransom* spans a lush range of Costello-styled Americana: bluegrass balladeering in "That's Not the Part of Him You're Leaving," full-tilt boogie in "National Ransom," New Orleans wit, wonder, and serious Costello

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finger-picking in "A Slow Drag with Josephine" (which is being pressed into vinyl for 78 rpm release).

Recording one or two takes was the norm, as was cutting Costello's vocals live with his guitar, with supporting musicians arranged in a close-knit circle. Drummer Pete Thomas was isolated in a booth; background vocals were recorded in an adjacent room immediately after the initial take by Jason Wormer. Everything was recorded direct to a Studer A827 24-track, using consoles (Neve VRP 48-channel, Neve 88R) only to monitor tracking.

"We don't do any cutting around of parts of songs and replacing them, or any of that stuff," Costello says. "That just isn't the kind of music we're making. This is a natural recording in that sense. You don't want to be a Luddite and not use the advances in technology, but you've got to keep them serving the music. When you've got musicians of this quality and you're combining them in the combinations that we are, you know that they are going to play something you want to hear. There is no mystery to it; you just perform the song.

"Seventy-five percent of this record is first or second takes, and 95 percent of the singing is in the room with the band," Costello continues. "But we don't make any great proclamation of it being a 'live in the studio' recording, because as you hear, there is no lack of nuance or refinement in the sound."


Strategic Miking with Vintage Ribbons

Musicians recording instruments and vocals live in close proximity can create an engineer's worst nightmare. But Piersante already had a plan in operation, having engineered Costello's 2009 album, *Secret, Profane & Sugarcane*. "You have the obvious 'Let's put Elvis in a booth so we have a discrete vocal,'" he explains, "but it didn't seem the way to capture the band and Elvis and get the immediacy and the interplay that would happen if they were all live together in the room. So I set them up in a circle and used mostly a lot of RCA ribbon mics [RCA 77-DX, RCA-74 Jr. Velocity, RCA 44-BX, RCA MI-6203 Varacoustic into Neve 1073s and 1081s]. It worked out

very well, so I just continued with the same setup for this record."

The *National Ransom* band combined The Imposters and The Sugarcanes: guitarists Mark Ribot and Buddy Miller, lap steel player Jerry Douglas, pianist/organist Steve Nieve, violinist Stuart Duncan, accordionist/pianist Jeff Taylor, trumpeter Darrell Leonard, mandolinist Mike Compton, bassists Steve Crouch and Davey Faragher, and drummer Pete Thomas. Guest singers included Vince Gill and Leon Russell. With this crowded session circle, wasn't bleed and leakage a problem?

"You can't avoid leakage," Piersante replies. "The spill and bleed you get into the other microphones is a big part of a live recording. It becomes your ambience. When you have a whole bunch of guys and a whole bunch of microphones, that can also get you in trouble. You have to be careful. But it's all about two words: ribbon mics. You use a figure-eight pattern, and if you're aiming the mic at guy number one, then the guy to his right and left are sitting at the null points of that microphone. You get the bleed from across the circle but the guy next door is




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limited in his leakage by the nature of the ribbon mic."

Piersante placed his RCA ribbons within a foot of each musician, depending on the instrument and the song. He generally approaches placement like orchestral spot miking, using a pair of Neumann KM 84s for room mics in a spaced stereo-pair configuration.

"The front wall of Studio A at Sound Emporium is nicely wood slatted," he reports. "I miked the room from the front wall so the guys who were close to that wall were within five feet of those room mics, but

the mics were up high, pointing down, so the people at the back side of the circle were 15 to 20 feet away from the mics.

Another ancient ribbon was used for Costello's guitar, which was tracked simultaneously with his vocal during the band performance. "The old RCA MI-6203 Varacoustic ribbon mic has become my favorite since we used it on Ralph Stanley," Piersante recalls. "I try to aim it at the section of the guitar I want to record, and turn the side of it toward the singer's mouth so it rejects as much vocal as possible. Elvis is really good about getting in

a good spot and not moving around; he is a consummate professional."

But when recording Costello's rangy vocals, Piersante used a Wes Dooley AEA R 44 ribbon mic. "Dooley built his own ribbon mics based on the old RCA 44 Bing Crosby radio mic; it is very true to the RCA design," he says. "Using a vintage ribbon mic on an artist like Elvis, you're going out on a limb. We're capturing performances, and God forbid I miss a performance because of a broken mic; that take could be the one."

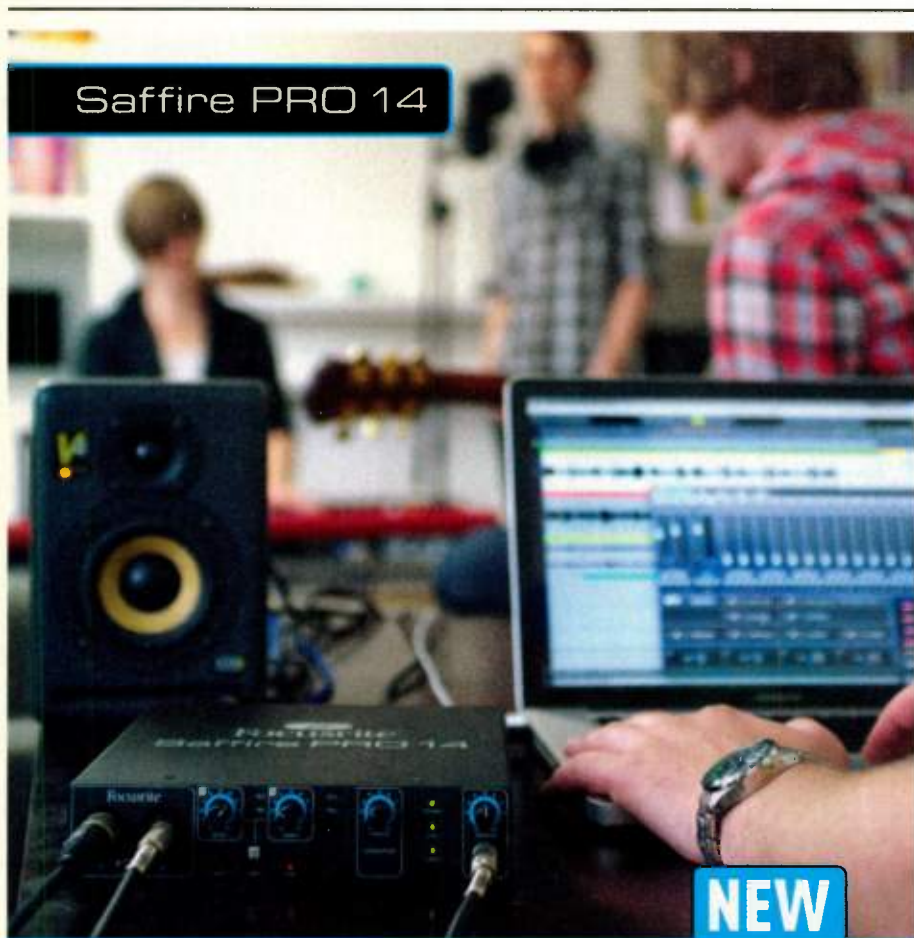
'Hi-Fi Lo-Fi' Approach

So is the sound of *National Ransom* simply the result of all those beautiful, vintage ribbon microphones? "To a degree, it is the sound of these old ribbon mics," says Piersante, "but it's also a lot about what I don't do. I'll try to leave things; I'll get a sound and I'm not afraid to put some EQ or compression on it, but if you've got a great musician and a great instrument in a great room, that's 80 percent of your battle toward getting good sounds.

"I call our sound a hi-fi lo-fi sound," he adds. "We capture everything very hi-fi and we're very careful with the way we treat it and the kind of gear we'll run it through. But we don't try to make everything completely clean and sparkling. We like the character of the noise of the ribbon mics and the bed of stuff that might be lurking below the track."

Costello's long time tub-thumper, Pete Thomas is renowned for his storming sound, massive groove and centered time feel. But his drums have never sounded *this* good. (Thomas played on a '40s Gretsch kit, which contributed significantly to his unique tone.) Yet unlike the other drummers Burnett favors, you can't call Pete Thomas a "quiet" drummer.

"Pete hit the drums in a nice way that we could get a lot of tone out of them," Piersante says. "I probably used five mics on his drum kit, including the room mics—a Neumann 47 FET for his kick drum, and an SM57 on his snare. Overheads were an old Gefell-era Neumann tube mic from the '50s, a CMV 563; it has whatever that Neumann reality factor is from the '40s or '50s, but also a very natural and uncolored sound that doesn't hype or cut out any of the frequency areas. I used a Neumann U67



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on his floor tom, and a Coles 4038 for a close room mic in his drum booth. A couple compressors and Neve preamps straight to tape."

Piersante used an "old Telefunken version of a U 67" when recording guitarist Mark Ribot, and occasionally an SM57 "for a crunchy rock sound." He placed the 67 on an isolation block, back about 8 to 12 inches, depending on Ribot's volume.


An integral member of Costello's band since the '70s, pianist Steve Nieve was recorded in mono with a vintage Neumann U67, run through an original Universal Audio UA 175 Limiter. "[The limiter] has somewhat of a Fairchild quality, so that one mono mic was run through there with a decent amount of compression applied to get that dreamy piano sound," says Piersante. "We miked the piano pretty much above the hammers, a foot or two off-axis to pick up the whole soundboard, then gave it a good amount of squish with the 175. And we added another RCA 77 ribbon to the low end of the piano, as well."

A Million Ways to Greatness

National Ransom sounds beautiful, golden, practically a time capsule of tested studio techniques. How can the home-studio enthusiast possibly hope to match the sound of 1940s RCA ribbon mics and Neumann tube mics mixed down through a Bushnell-modified API console from 1968 to an Ampex ATR 102 1/4-inch tape machine?

"The most important thing is to get a really great set of speakers," Burnett advises. "Those become your eyes and ears. If you're shooting something and you can't see it clearly, then you don't know what you're doing. The same applies with recording; being able to hear what you're doing is the crucial thing. So get a great set of transducers like the ATC [SCM 150s] or the Westlake Audio monitors Mike uses at Electromagnetic [Westlake BBSM 10s and BBSM 4s]. If you're using acoustic instruments—if you're not just plugging a box into another box, but you're using a guitar or violin—take a lot of time in miking. Even an SM 57 is a great microphone. And how good the instrument itself sounds will determine a lot. The most important thing

is the great instrument, then the great speakers. But even beyond that, if somebody is playing and they sound great, it doesn't really matter how it sounds. You

can record it through anything and if the song is moving, and the singer is singing it beautifully, it's great. It can sound a million different ways and still be great." 

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EQ Giveth, and it Taketh Away

When tweaking EQ, the long-held opinion is to boost less and cut more. Human ears can hear a boost easier than a cut, but that just makes things worse if you boost the wrong frequencies. (A bit of psychoacoustic knowledge for the brain: A 6dB boost is about as apparent as a 9dB reduction.) Try not to get sucked into the vortex of endless EQ twiddling endlessly. If a slight adjustment doesn't do the trick, chances are extreme ones won't either, but as always, experimentation is encouraged.

A Fine Line Between Boomy and Full: 100–200Hz

This is a tricky range to mess with, and you can easily make your track sound like sonic sludge, so when tweaking, take small steps instead of giant leaps. Also, listen to your settings at low and high volumes, soloed as well as in the mix. You need to find a nice middle ground, because this frequency range's perceived volume differs greatly depending on playback volume.

Boost 100Hz 1–2dB to add “fatness” or “fullness” to incredibly thin-sounding guitars. Cut 100Hz 1–3dB to remove boom on guitars and increase clarity in relation to the bass track. Boosting 200Hz can help even out the guitar sound if some notes are jumping out, while others sound dead. If all the notes seem to disappear into an indistinguishable mess, cut 100Hz 2–3dB and boost 200Hz 1–2dB.

Tweak Outside the Box: 800Hz

Resist the urge to boost this frequency; it generally

makes a crummy guitar sound even crummier. However, if your acoustic guitar track sounds like elves replaced your beautiful Martin with a cigar box, cutting 800Hz 2–3dB can help restore the impression that you actually tracked with a quality instrument.

Sharpen Up: 1.5kHz

Boost 1–2dB to enhance the attack on rhythm guitars; this is especially effective on open chords. Cutting 1.5kHz 2dB helps if the guitar track sounds dull and lifeless.

Hit 'Em Where They Live: 3kHz

This is a very important frequency for guitar because most of the attack and “distinction” lives here. Boost this frequency 1–3dB to enhance projection, but be careful, because too much boost can cause “listening fatigue.” Cutting a couple of dB in the 3kHz range will pull an in-your-face guitar back a bit and allow other midrange instruments to be heard.

If multiple guitar tracks all have an identical tone, carve out some individuality by applying 2–3dB of boost of 3kHz on one, and 4kHz on the other, and 2kHz on a third. As an alternative, try cutting these same frequencies.

If boosting 3kHz doesn't give enough attack, especially on acoustic, 2dB of boost at 5kHz should do the trick. But overdo it on the 5kHz and it's Shriville for the ears. Distorted electric guitar also benefits from a 5kHz boost of 1dB, especially if grind is the sound you crave. Giving a lead guitar track a 2dB boost can make the notes more distinct and crunchy. Cut 5kHz 2–3dB to soften out a thin- or shrill-sounding guitar track.

Close to the Edge: 7kHz

If your guitar track sounds like a wet blanket, a slight boost of 1–2dB at 7kHz will add sharpness and bring the track more into focus. Cut 2–3dB if the track has so much edge that your ears want to secede from your head.

A Brilliant Sheen: 10kHz and beyond

If the track is lacking brilliance and clarity, a quick 3dB boost at 10kHz can really bring out the *ka-ching* in acoustic and electric guitars, but too much will make the high end sound heavy and offensive to the ears. Start reducing 10–15kHz 1dB at a time if the extreme high end sounds out of whack. **EQ**

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With only two mic inputs, the Avid Mbox, like other 2-channel interfaces, presents a challenge when it comes to tracking drums. However, with a little experimentation and an open mind, it's not difficult to get a solid drum sound with only two transducers, a decent room, and some compression. Sure, you could pre-mix several mics to a stereo pair using a mixer. But there a number of options when you want to keep things simple.

(Although you're using only two microphones, be sure to check that they are in phase by centering their pan position, and listening for any peaks or dips in the frequency spectrum when you pull up both faders.)

Mic Choices

One issue to address when choosing mics for the Mbox is that the preamps offer less than 60dB of gain, making it difficult to get a good record level with some dynamic mics, and ribbons in particular. And because both channels get phantom power at the same time, you cannot combine a ribbon and a condenser mic without some help: The Cloud Microphones Cloudlifter boosts dynamic and ribbon mics by 20dB while matching their impedance needs, without passing the +48V to the mics themselves; the phantom-powered Røde D-Power Plug is a single-channel way to increase a dynamic mic's output by 20dB.

Kick and Snare

If the song is based on a solid backbeat, simply miking the kick and snare can work wonders. The trick is to place the snare mic in such a way that you capture the right amount of hi-hat for the track. Typically, this setup doesn't yield pronounced cymbal and tom sounds, which might not be an issue for some songs. However, a clever arrangement of the drum part will allow you to overdub accents and fills using a different mic placement.

Overhead and Kick Drum

It worked for Ringo, and it might work for you. The early Beatles recordings placed either a dynamic or ribbon mic facing down over the drums, with a dynamic or ribbon pointed at the bass drum. With this setup, you need to find the position where the overhead mic gives you a good balance of snare, hi-hat, toms, and cymbals. The kick drum mic should be

placed where it yields the right amount of punch and tone for the song.

Overhead and Room Mic

This setup has many variations, depending on what you want to achieve. Place one mic above the drummer's head as before, then use the second mic to get the listener's perspective of the full kit, rather than just an isolated bass-drum sound. Often, placing the room mic a few feet in front of the kit at knee level, pointing between the kick and hi-hat, will give you a punchy sound that has the various instruments properly balanced. The distance between the front mic and drums will determine the amount of room sound you capture. Again, be sure to check for phase issues between the two mics before you hit the Record button.

Stereo Overhead: Drummer's Perspective

Good drummers balance the sounds of their kit as they play, so why not take advantage of what they're hearing? Place a stereo pair of cardioid condensers above and slightly behind the drummer's head, pointing down at the drums. The goal is to get the right balance of drums and cymbals. Consequently, mic selection and position are important: If the pickup pattern of the mics is too wide, the cymbals may overpower the drums.

Although placing the mics in an X/Y pattern offers a familiar stereo image, experiment with either a spaced pair or an ORTF configuration if you're not happy with the balance between drums and cymbals. The height of the mics above the drums, as well as their distance from the ceiling, also play a role in how successful this setup is, so be sure to take those elements into consideration.

Stereo: Audience Perspective

You can explore the same stereo configurations with the mics set up in front of the drum kit in order to capture more of a concert sound. The issue here is getting a punchy enough kick drum sound, so be sure to listen for low-end timbres as you look for the best place to set up the mics. Often, setting them up between knee and chest level will provide the most satisfying balance between cymbals, snare, and kick. **ea**



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Recording Standout Vocal Tracks

It's easy to get into a rut when recording vocals. Most singers automatically set up a cardioid mic, level with their mouth; they never pause to consider a different strategy. But while standard recording methods might produce good results that don't offend, sometimes taking a more novel approach will yield a truly head-turning vocal track that stands out from the pack.

Kiss an Omni Mic

The problem with cardioid and other directional mics (such as those that have a hyper-cardioid, super-cardioid, or figure-8 polar pattern) is that they have an inherent bass-proximity effect: The closer you get to a directional mic, the more bass boost your vocal track will exhibit. That's not necessarily a big issue if you maintain the same distance from the mic at all times while singing. But should you vary how close you stand to the mic, many vocal lines will have a completely different tone from the others. For a consistent sound, you may need to adjust bass-cut equalization line-by-line during mixdown to clean up varying amounts of mud and boominess on your vocal track.

An omnidirectional microphone exhibits no proximity effect, no matter how close you are to the mic. This allows you to get within kissing distance of the mic's capsule and still produce a crystal-clear sound. Sing as close to an omni mic as possible, and your tracks will boast technicolor detail and compelling urgency that demand attention. If the mic overloads, switch on the pad to prevent distortion.

Use a Bi-Directional Mic with EQ

If your trademark is a singing voice with naturally very deep bass, an omni mic may not do you justice. Try using a bi-directional mic (or a multi-pattern mic set to bi-directional mode) instead. All other things being equal, a bi-directional (aka figure-8) mic will produce the most low bass. Try singing about a foot away from the mic, and keep that distance consistent. During mixdown, use a parametric equalizer's bell-curve filter to cut roughly 4dB at around 150Hz and set the filter's Q control to about 1.2. That will clean up any muddiness that the bi-directional mode produced but leave the lowest bass frequencies intact. Don't be afraid to apply a little bit of narrow bass boost at around 60Hz to enhance that glorious low

end you were born with, and apply a bit of boost at 4kHz to improve presence. The result: a clear, detailed vocal with mineshaft-deep bottom end.


Think Small (Diaphragm)

Most vocal tracks are cut using a large-diaphragm condenser mic. Small-diaphragm condensers generally capture more detail than their larger cousins, but their lightweight diaphragms tend to pop very easily when exposed to vocal plosives and wind from heavy breathers. For a vocal track brimming with detail, try singing over the top of—instead of directly into—an omni small-diaphragm condenser mic. Omni mode is typically the least sensitive to plosives and wind turbulence and therefore less likely to pop. And if you sing 90 degrees off-axis (that is, perpendicular) to the mic's diaphragm, wind from your mouth will safely project over its top. Use a Popper Stopper wind-screen for added protection.

Forget Good Posture—Slouch!

There's a good reason why many singers prowl the stage bent over like the Hunchback of Notre Dame while belting it out: diaphragm support. For more power in your vocal delivery, try setting up your mic about a foot lower than your lips and angle it up toward your mouth at roughly a 45-degree angle. You'll need to bend forward in order to sing directly into the mic. Doing so will compress your diaphragm, providing greater support that will turbo-charge your vocals.

Starve Your Headphone Mix


Listening to too many tracks while singing can confuse your sense of pitch and groove. Limit your headphone mix to drums, bass, one or two chordal instruments, and your live vocals. Hearing instruments that play melody lines, especially in your vocal range, will tend to distract and make you sing off-key, so take 'em out of the cans. To improve your vocal phrasing, goose the kick and snare drums in your cue mix to reinforce the beat and backbeat. Add little or no reverb and other effects to your vocals in the headphone mix, because they will also throw you off-pitch. A vocal that sounds great with such a sparse headphone mix will sound unbelievable once the other instruments and effects are added during mixdown. 

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5 Tips to Help You Manage Your Mix

Here are some easy tips to give you more control during the mix and better results at the end.

Parallel Compression

Sometimes you want to use a hammer, and sometimes you want to use a feather. Parallel compression lets you tweak subtle settings against an effect. This treatment can be used on any element in the mix, but for demonstration purposes we will use it on the drum group.

Group all of the drums tracks together. (Do not include percussion.) Create a sub group master for the group. Now place an aux send on each of the tracks in the drum group and set it to pre-fader and unity gain.

Set up an aux return, and place a compressor/limiter on the insert of the aux return. Try a very heavy compression setting to start with so it's easier to hear in the mix (I start my compressor settings at 10:1 at -25dB); once you get used to the sound, you'll probably want to tone it down some. Blend the sub master return with the aux return in the mix and hear the drums come alive. Because you are sending each track individually through the aux bus, but returning as a group, you have maximum flexibility in the mix. If you want the snare to hit the compressor harder, just add more of the aux send.

Automate Flange Effects to Image Mono Instruments

Sometimes all you have to work with is a mono audio track, but it seems to get lost in competition with other tracks in the mix. I have often championed the use of imaging with digital delays for mono instruments, but here I want to put forth the proposition that all images are not created equal; some images are used to widen the stereo field and some are used for effect. This time, place a flange on the delayed side and automate the wet/dry mix to provide a wonderful variety of sounds during the progression of the song.


Experiment using this technique with all of the components of the flange—vary the depth, rate, or even the waveform. This is a subtle change, but high level-mixing is all about subtlety.

Beef Up One-Offs by Limiting the Master Bus

I am generally not a big fan of putting effects on the stereo master bus during the mixdown process. However, for quick one-offs (i.e., tracks you want to toss out into the world to get some feedback before the mastering session), there is nothing like placing a great limiter on the master to really beef up your output. I use a Waves L1 Ultramaximizer set to a -3 dB ceiling and a process gain of 12. This setting will level off the top volume of the mix while bringing the instruments into sharper focus, and has a tendency to pop the top end of the EQ spectrum while thickening up the low midrange.

Don't Return Everything You Send

It sounds counter-intuitive, but you don't have to return a signal to the place where you would naturally bring it back. The re-routing of effects can give you choices in the mixdown that you could never have dreamed of—the optimum word being choices!

Let's go back to our drum example for a moment. We have just compressed it, and we have two different signals returning back to the stereo bus. Let's place another aux send on the return of the compressed aux track and bring that return back to the stereo mix. Place a short room reverb on the new aux return. Make sure that the send to this new return is in pre-fader mode. Keep the reverb return fader up and take the compressed fader down. This will give you the sound of the original signal and the compressed signal through the reverb together in one mix. Don't stop with reverbs; try any effect that you like! This crazy technique works great. 



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PRESONUS STUDIO ONE PRO

BY CRAIG ANDERTON

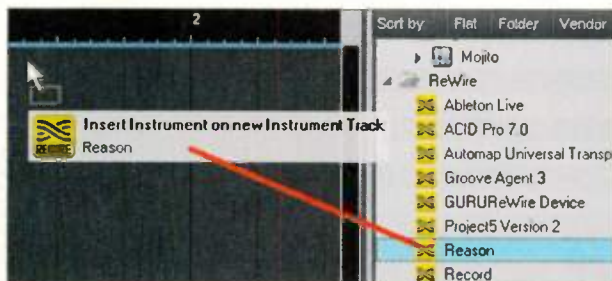
Expand your options with ReWire

OBJECTIVE: Integrate more instrument sounds, or specialized looping applications like Ableton Live, via ReWire.

BACKGROUND: The ReWire protocol allows running at least two applications simultaneously on the same computer, with one program's audio outputs feeding the other program's mixer. Transports are synced as well, including any looping. For this example, we'll ReWire Propellerhead's Reason 5.



1 Click on the Browse tab. In the Browser, click on the Category tab. In the Browser, click on the Category tab. Unfold the ReWire folder to see the list of available ReWire devices.



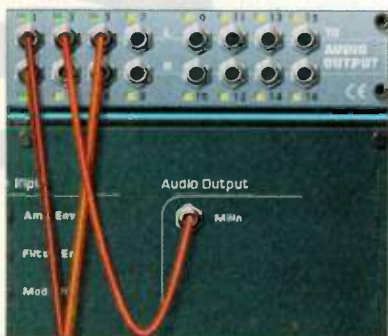
2 Drag a ReWire device into the Song, as you would any virtual instrument.



3 A window appears that lets you open the application. Open it.



4 Reason's main output appears as a channel in Studio One Pro's mixer.



5 To bring individual outputs from Reason instruments into Studio One Pro, first patch them to the desired Reason interface outputs.



6 Then, click on the Expand button to the left of the Reason label in the Mixer's Instruments section. Checking an output automatically creates a mixer channel for it in Studio One Pro.

Tips

- Step 1: You don't have to click on the Category tab; ReWire devices will also appear in the Flat view.
- You can create MIDI tracks to drive the instruments either in Reason or Studio One Pro (if the MIDI input is routed to the correct program).



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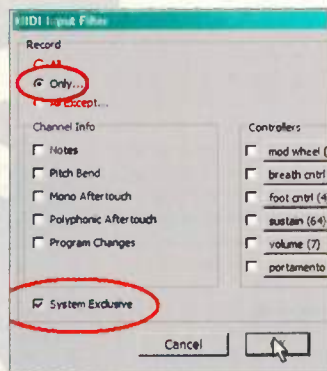


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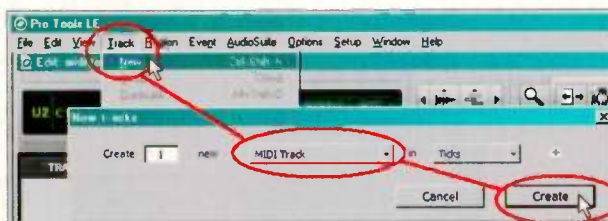
Save presets and data from external MIDI gear using Pro Tools

OBJECTIVE: Restore the status (presets, etc.) of external MIDI gear to the way it was when you recorded a project.

BACKGROUND: You can store preset data from most external MIDI gear as MIDI System Exclusive (Sys Ex) data within a Pro Tools MIDI track. Playing back this track through Pro Tools' MIDI out to the gear's MIDI in restores the gear's settings embodied in the Sys Ex. The following assumes the external gear's MIDI out connects to Pro Tools' MIDI in, and tells how to transfer Sys Ex data to Pro Tools.



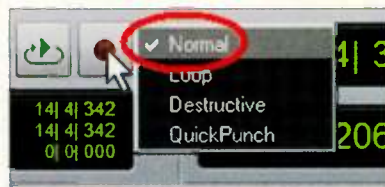
1 In Pro Tools, go **Setup > MIDI > Input Filter**, then check "Only" and "System Exclusive."



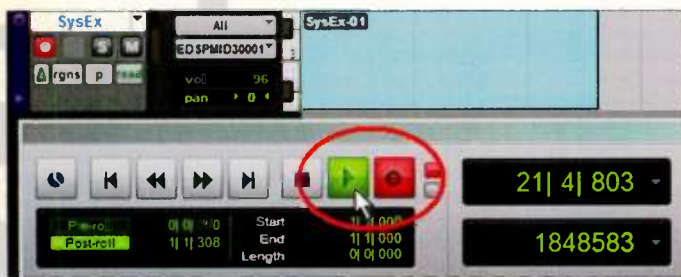
2 Go **Track > New** and create a MIDI track.



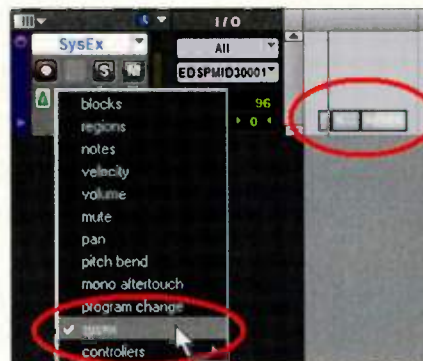
3 Select "All" for the track MIDI input, and also enable Record.



4 In the Transport, right-click on the Record button and select "Normal" (recording).



5 Prepare your MIDI device to send Sys Ex. Click on Pro Tools' Record button in the transport, then click on Play and initiate the Sys Ex dump at the MIDI device. When the dump is finished, stop Pro Tools.

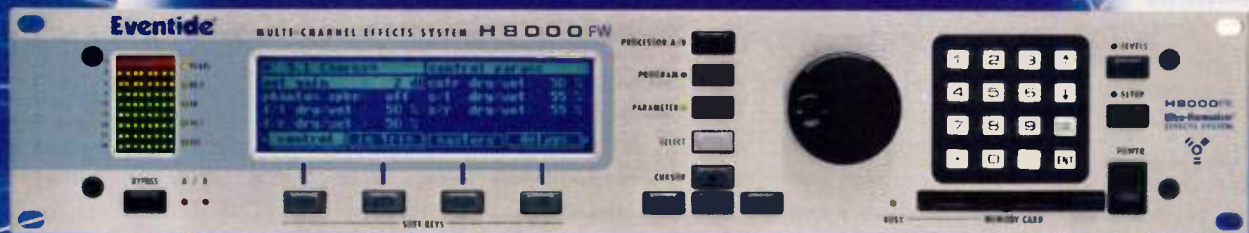


6 To see the blocks of Sys Ex, select "sysex" with the Track View Selector.

Tips

- Step 5: In the Transport, if you click on Return to Zero and Wait for Note, initiating the Sys Ex dump will cause the recording to start at the very beginning of the track.
- When using Eleven Rack's physical MIDI connectors as a MIDI interface, check "External" under **Setup > MIDI > Input Devices**.

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Despite all that brain and brawn, the H8000FW is remarkably friendly and easy-to-use, optimized for flexibility and control. Virtual racks have been crafted which give you up to five stereo effects processors combined in one preset-algorithm. Search functionality helps you sort presets for easy retrieval.

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STUDIO GIFTS FOR GEAR GEEKS

BY CRAIG ANDERTON

It's that time of the year when you're glad you have tube gear, not just for the sound but because it heats your studio; snow falls gently outside your window (or if you're in Iceland, maybe it's volcanic ash . . . but the look is the same); and the malls are filled with humanoid bipeds reaffirming their faith by consuming as much as their credit cards will allow. In other words, it's the holidays, and it's time to do something nice for your loved ones—or yourself.

EQ looked for recent gear goodies that would delight the recipient, while given today's tough economic times, indebt the giver as minimally as possible. It turned out there were far more options than we could fit in the pages of this magazine, making the choice that much more difficult. But we feel that the following all represent really excellent value, and would be something that any of us would certainly be happy to see under the Christmas tree, Hannukah bush, or just sitting next to a high-octane eggnog.

So enjoy, and happy holidays from all of us at *EQ*!

Alesis VideoTrack

\$299 MSRP, \$200 street
www.alesis.com

THE BIG PICTURE

We literally mean “the big picture”—this pocket recorder does video, audio, and even still shots. Yes, you can record a rehearsal with a cool little audio recorder, but actually *seeing* how you come across is a step up. It's also great for documenting recording sessions, and if you want to do a quick video of your band playing live or in the studio and upload it to YouTube, you're covered.

GEEK SPEAK

The F=2.8 lens is teamed with a 1.5" x 2" (2.4" diagonal) color LCD—a decent size for seeing what you're shooting (or have already shot). Video and photo resolution is 640 x 480, with videos saved to MP4 format and photos to JPG; a built-in flash allows taking photos under low-light conditions, and you can output to PAL or NTSC video formats. For storage, VideoTrack accepts SD and SDHC cards up to 16GB (Figure on about 50 minutes of video recording time per GB.)

The package comes with a standard-USB-to-mini-USB cable, 2GB SD card, rechargeable Li-ion battery, carrying pouch, palm strap, AV cable, and



hand grip. There's also Windows software for transferring/viewing images, doing primitive editing, and uploading direct to YouTube. But no worries, Mac fans: On either platform, the VideoTrack appears as a mass-storage USB device for easy file transfers.

REAL WORLD

VideoTrack is *exceptionally* easy to use. Options are few—it's “point-and-shoot.” The internal video processing DSP is outstanding, as it transparently adjusts light balance and focusing (in fact, better than my miniDV camera that cost five times as much). The battery is user-replaceable, so carry a few spares and you won't have to worry about running

out of juice; you recharge the battery through the VideoTrack's USB connector, powered by either a computer or optional-at-extra-cost AC adapter.

HITS AND MISSES

So why bother with a VideoTrack if your cell phone does photos, videos, and audio recording? Well, compare the audio quality: VideoTrack has stereo condenser mics that do the audio proud. Also, your phone probably doesn't have the kind of image-processing DSP that can make videos look better than they probably should.

The biggest miss had been the inability to zoom while recording, but a recent firmware update fixed that (and it's a good sign that Alesis continues to tweak the performance). The one thing you'll definitely need is a wind screen for the mics if you do outside recording, because they're quite sensitive.

Another potential problem is landing in jail. I was at the Seattle airport, and as part of a video about gigging in Europe, wanted some footage of traveling between terminals on one of those Disneyland-type terminal shuttles. Of course a security guard wanted to know why I was taking videos of an airport transportation sys-

tem; but I avoided any problems with the magic words, "Want to be in a documentary video?"

TARGET AUDIENCE

Me! Seriously, long before I got into video, I always carried around some kind of portable recorder, and have the sample library to prove it. But now I do a lot of video work, and the VideoTrack quality is sufficiently good that if I capture a decent clip, I'll likely be able to edit it into a "real" video. VideoTrack is also a great way for audio types to ease into video at minimal expense, while still getting decent quality . . . it's pretty astonishing what a couple hundred bucks will buy these days.

More Online



Grab the firmware update.

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Arturia Analog Experience "The Factory"

\$299 MSRP, \$269 street
www.arturia.com



Jupiter-8V, Minimoog V, Modular Moog V, Prophet V, and Prophet VS—and the price is most certainly right for adding a bunch of classic analog synth sounds to your studio's toolbox.

GEEK SPEAK

The keyboard, while optimized for Analog Factory, is also a general-purpose MIDI controller with velocity, 11 endless knobs, four sliders, 11 switches, pitch bend and mod wheels with a surprisingly good feel, expression pedal and sustain switch input jacks, 5-pin DIN MIDI out (as well as MIDI over USB), and *aftertouch* that's surprisingly controllable—it's not just "afterswitch." The controller can be bus-powered, or run from an optional adapter; the software works with Mac OS X 10.4 or above, and Windows XP/Vista/7.

THE BIG PICTURE

The Factory is a hardware/software combo: MIDI-compatible 32-note USB keyboard featuring full-size keys, and Analog Factory 2.5 software (stand-alone or VST/AU/RTAS plug-in) with 3,500 sounds. The sounds are drawn from Arturia's popular line of virtual instruments—ARP 2600V, CS-80V,

REAL WORLD

Installation was drama-free, and authorization is done online via the eLicensor (formerly Syncrosoft) system that ties authorization to your hard drive (which saves a USB port), or USB dongle (not included). The keyboard is solid, with metal construction and wood end plates. Played side-by-side, the Analog Factory presets and "big brother" virtual synths from which they're derived sound identical.

Arturia's known for warm, organic sounds that recall not just the sonics, but the "vibe" of classic synths. As a long-time analog synth user, I can say yes, Arturia gets it right.

A browser lets you choose patches based on instrument, function (bass, brass, lead, fx, and eight others), and 18 characteristics; you can enable multiple choices—for example, pad and string patches for the Jupiter and Minimoog. You can also filter on user presets and favorites; get into the habit of building a list of favorites, because a lot of these patches are "keepers."

HITS AND MISSES

The big hits are the keyboard, sound quality, sheer number of patches, and price—as is having hands-on control over the most crucial parameters (filter cutoff/resonance, envelope ADSR parameters, LFO rate/amount, two effects mix controls, and four "wild card" parameters that differ for each patch). Sometimes the wild cards don't do much—like the Minimoog patch where all four control level—but with some patches, they can make dramatic differences. Another hit: the companion MIDI Control Center software that easily re-assigns the controller's knobs and switches for controlling other MIDI gear.

Misses are few: Patch editability is limited, but that's mitigated

by the front panel knobs, and being able to save user presets. However, if something like delay isn't programmed into a patch, turning the Delay knob won't magically add it, and not all patches respond to aftertouch. And if you feel a patch is a bit over the top, you may or may not be able to reel it in. Fortunately, that's the advantage of having lots of patches and a filterable browser: Odds are, you'll find the sound you need.

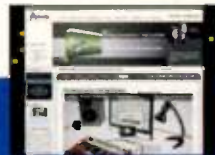
TARGET AUDIENCE

If you have a keyboard controller but lack classic analog synth sounds, you can also buy the Analog Factory patches by themselves (\$249 MSRP). Tight budget? Try the "little brother" Player package (\$169 MSRP, with 25-note controller and 1,000 patches). But even if you have a big keyboard, you still might want to go for the full Factory: The keyboard fits comfortably on a

desktop for instant playing, and you can also use it as a controller to trigger loops, alter plug-in parameters, and the like.

In economic times when springing several grand for a full-blown synthesizer is not always realistic, The Factory gives you great analog sounds and a way to play them. It's a very compelling package.

More Online



Check out videos and lots of audio examples.

Get All The Links at eqmag.com/dec2010

Peavey AmpKit LiNK/Agile Partners AmpKit

AmpKit LiNK interface \$39.99 MSRP, \$29.99 street, Basic AmpKit free, AmpKit+ \$19.99, additional effects/amps typically \$3
www.peavey.com

THE BIG PICTURE

Some people still haven't gotten the memo that Peavey creates pretty incredible technology, but maybe they'll figure it out after using the AmpKit system, which transforms your iPhone, iPod Touch (except 1st-gen), and iPad into a sophisticated, low-latency, extensible amp and effects sim. You can download a free app with 2-channel ValveK-ing amp, two cabs, noise gate, overdrive, and two mics; but for \$20 the AmpKit+ package provides three additional amps and eight more effects. You can buy more *à la carte* components; so far a total of 12 amps, 13 cabs, 16 effects, and eight positionable mics are available. Okay, maybe we didn't get the jetpacks we were promised for the future, but turning your *phone* into a versatile virtual backline for your studio is pretty cool.

GEEK SPEAK

The AmpKit LiNK interface has a hi-Z 1/4" in, 1/8" headphone/line out, and plug that interfaces with the iThing-of-your-choice audio, thus circumventing some of the incompatibility issues with devices that interface via the data port. (AmpKit LiNK even works with the Android, although at this point, the AmpKit app doesn't.) It requires two AAA batteries, but for a great reason: Recognizing many people will be using earbuds and high-gain amps, Peavey's active design minimizes feedback. This alone gets two thumbs up. The software's from Agile Partners, who already have a solid reputation for other guitar-oriented apps. They know what they're doing.

REAL WORLD

"Intuitive" is overused, but this system is totally obvious. And it's more than just a 21st-century Scholz Rockman, as you can record your playing to provide a backing track, or even re-amp within the app (recording automatically creates an additional dry track). You

can import other backing tracks, and export to a computer; you'll also find a metronome and tuner. Most importantly, the AmpKit system has sounds that back up the potential. The amps are smooth-warm, even—the effects are accurate, and the overall sound quality rocks as long as you don't push levels to the point of digital internal clipping.

HITS AND MISSES

I wasn't expecting the system to be this good, even though I'm well aware of Peavey's high-tech expertise. I mean, c'mon, it's a freakin' phone. But it seems Peavey took this project really seriously instead of just jumping on the iBandwagon.

The price multiplies quickly if you want *all* the effects and amps, but it's only high when compared to the ultra-low-cost world of apps; by real-world standards, the entire system and a bunch of effects are exceptionally cost-effective.

TARGET AUDIENCE

Sure, mobile guitarists will love this. But maybe this also signals a re-definition of the entry-level market. Had this been around when I was



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starting, I would likely have seen it as a better option than buying something like a multi-effects—especially for serving as a studio processor capable of a huge variety of sounds. Just play through it: You'll become a believer.

More Online



Watch three
AmpLiNK/AmpKit demos.

Get All The Links at eqmag.com/dec2010

Focusrite Saffire Pro 14

\$299.99 MSRP, \$250 street

www.focusrite.com



THE BIG PICTURE

Prices continue to decline for quality FireWire interfaces, and here's proof: The Pro 14 is a cost-effective, cross-platform FireWire 400 interface featuring two Focusrite Saffire mic pres (that can also handle mic or instrument inputs), two line ins, and both MIDI and coaxial S/PDIF I/O. To further differentiate itself from other audio interfaces, the package includes a pretty hefty software bundle with a Gigabyte of loops and samples, plug-in suite, and a sweet mixer application.

GEEK SPEAK

The interface runs on a PPC or Intel Mac (OS X10.5.8 or 10.6.2), as well as 32- or 64-bit versions of Windows 7/Vista and XP SP2 (32-bit only). Unlike some other economical interfaces, resolution goes up to 24-bit/96kHz. Although bus power works fine, there's a globally-compatible AC adapter for those with 4-pin FireWire connectors (or anemic FireWire buses). The instrument input impedance is spec'ed at 10 megohms, which loads an electric guitar pickup about as much as a flea loads an elephant.

REAL WORLD

Installation on a Mac is plug-and-play, and Windows is only a shade more complex. Just remember that you're dealing with FireWire, which can sometimes be temperamental. TI chip sets work well, and I recommend using a FireWire card rather than motherboard I/O. With laptops, turn off wi-fi cards, and make sure all your computer's drivers (including graphics cards) are up to date. When living in a suitable environment, the Saffire Pro 14 is easy to forget—it just sits there and does what it's supposed to do.

HITS AND MISSES

The big win for most folks are the preamps. Focusrite preamps aren't "character" preamps designed to color your sound (we have tubes and audio transformers for that), but instead deliver a sound with clarity and definition. However, don't overlook the MIDI 5-pin DIN in/out connectors, which are vital to the many studios where physical MIDI devices remain a big part of the workflow. Another hit is the mixer routing applet, which also looks great—but don't forget the VST/AU plug-ins (EQ, Compressor, Gate, and Reverb), Novation BassStation virtual instrument, and sample content. These

aren't "let's throw stuff in the package to make people think they're getting a deal" add-ons, but usable material. You also get Ableton Live Lite, which is definitely limited compared to the full version. Still, if you haven't worked with Live, it's a suitable intro.

As to mics, although the two mic inputs switch automatically when plugging in line-level signals, for instruments, you need to switch within the mixer application. Also, phantom power can be applied only to both inputs simultaneously, not individually.

TARGET AUDIENCE

Focusrite's Saffire USB 6 (reviewed in the September 2010 issue) is pretty similar, but a few bucks cheaper. Why choose one over the other? Aside from the obvious (you have only USB or only FireWire), the USB 6 has DJ-friendly outputs/monitoring, but the sample rate tops out at 48 kHz and there's no S/PDIF I/O. The Pro 14 does 96kHz and S/PDIF, giving it the edge for higher-end applications.

The Pro 14 seems aimed at solo artists who will be recording stereo guitar, vocals, or other sources one pass at a time, as opposed to a big studio miking up a drum kit. Savvy recordists know that the most important elements are the mechanical ones at the end of the signal chain—mics and speakers—and you want them to connect to the electronics as transparently as possible. The Focusrite mic pres are a big help in that respect. And while not promoted as a mobile recording solution, the small size and bus-powered operation would be quite at home on the road.

More Online



Download the owner's manual.

Get All The Links at eqmag.com/dec2010

Sonoma Wire Works GuitarJack

\$199 MSRP

www.sonomawireworks.com

THE BIG PICTURE

We have travel guitars, now meet the travel studio. Sonoma Wire Works makes FourTrack, a multitrack recorder (for iOS 3.0 or later, iPhone 3G or later, iPod Touch 2nd-gen or later), but do you want to be limited to using the iThingie's audio? And where are you going to plug in a 1/4" guitar cord, or find a suitably high-impedance input and headphone out? Enter GuitarJack.



GEEK SPEAK

As we're in Apple-land, here's what works and what doesn't. GuitarJack is compatible with iOS 4 apps, but not with iPhone 4, iPad, or iPod Touch 4th-gen. (However, a new model scheduled for release in Q1 2011 provides compatibility with these units, and there's an upgrade offer for existing owners—see www.sonomawireworks.com/guitarjack/upgrade/.) Its 30-pin connector is compatible with iPod Touch (2nd- and 3rd-gen) and iPhone 3G/3GS.



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Rather than using the host's audio connector, GuitarJack goes through the data port, minimizing latency and improving fidelity. Although GuitarJack works "out of the box" with many audio apps, for total control you can use the control panel from an appropriate app (e.g., FourTrack or the free Taylor EQ) to take full advantage of the 1/4" input (switchable between hi- and low-Z, as well as pad), 1/8" jacks for audio input (switchable among pad, normal, and boost modes), enable input monitoring, and manage the inputs—you can use both simultaneously, and they have variable gain up to 60dB.

REAL WORLD

GuitarJack is all-metal and *substantial*. You could probably throw it across the room and have it survive—providing the data port connector survives, but that's not Sonoma Wire Works' issue. In fact, I suspect it will handily outlast its host (especially if the persistent overheating issue on my daughter's iPhone that killed it slowly over a period of 18 months is any indication).

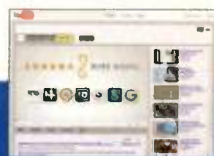
HITS AND MISSES

The big deal is the sound quality, along with the 1/4" high-impedance input. But being able to record a mic and guitar at the same, as well as the integration with FourTrack, are also important. The only real limitation is the compatibility issue with various iThingies, but that's beyond Sonoma Wire Works' control.

TARGET AUDIENCE

GuitarJack is ideal for musicians on the go. But it's also a clean, clear, robust audio interface that far outpaces the audio capabilities of the iPhone/iPod Touch itself—if you're into listening to music on the road, plugging your 'phones into GuitarJack beats plugging directly into the host. And while GuitarJack isn't teeny-tiny, it's definitely small enough to put in your pocket and carry around with a small mic for grabbing samples from the real world. All in all, this is a durable, hi-fi winner.

More Online



Check out the Sonoma Wire Works YouTube channel.

Get All The Links at eqmag.com/dec2010

Primacoustic VoxGuard

\$120 MSRP, \$100 street

www.primacoustic.com

THE BIG PICTURE

In the October 2006 issue, I reviewed sE Electronics' portable Reflexion Filter, which provides acoustic filtering for a mic by impeding signals approaching it from the back and side. It has served me well, but time marches on and VoxGuard is lighter, less expensive, easier to set up, and has a larger surface area for improved absorption.

GEEK SPEAK

VoxGuard combines a high-impact ABS outer surround shell with high-density open-cell foam to provide absorption. There's an obvious difference when using it; just listen to a sound source, then put VoxGuard between the sound source and your ear. The difference isn't like putting in earplugs, but it's not subtle, either. The most apparent reduction happens in the mid to high frequencies.

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In addition to ultra-low latency simulations, the AmpKit apps include a high precision tuner and metronome. You can also upload your favorite songs and play along, record your own backing tracks, create both "dry" (before effects) and "wet" (with effects) recordings, and re-amp a previous session with a different setup—all the tools you need for a complete guitar studio.

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REAL WORLD

VoxGuard handles a wide variety of mics (but not all), including big condensers on shock mounts, and hand-helds like a Shure SM58 (thanks to a small cutout in the back that accommodates any protrusion from the back of the mic and the cable). To use a mic "upside down" you'll need a studio boom with a down extension, and you attach the VoxGuard to the extension. For this, VoxGuard's light weight is a big advantage.

The extender bar included with the VoxGuard is great, as it allows positioning your mic further "into" the baffle to deaden the sound more, or outward if you want to dial in some room reflections. This also allows accommodating mics of various sizes more easily.


HITS AND MISSES

Well, there really aren't any significant misses. The entire unit tends to wobble a bit, but ABS plastic is pretty indestructible, so no worries there. I think as long as you don't rake things over the foam, VoxGuard should hold up just fine.

The major hit for me is the light weight and ease of setup. VoxGuard is incredibly convenient—it works whether I'm sitting down or standing up, and is easy to move around the studio to where it's needed.

TARGET AUDIENCE

With so much work being done in a control room where there can be fan and hard drive noise, VoxGuard's extra couple dB of noise reduction promotes obtaining a cleaner sound. But, it's also useful any time you want to "deaden" the vocal because you anticipate adding electronic ambience, and I also tried it with acoustic guitar to keep out leakage from percussion—it definitely helped. With more bands favoring the "live in the studio" approach, VoxGuard comes in handy there, too (especially if you want more isolation among backup singers).

Primacoustic has a reputation for making clever, low-cost studio accessories—which definitely describes VoxGuard. 

More Online



Learn the science behind VoxGuard.

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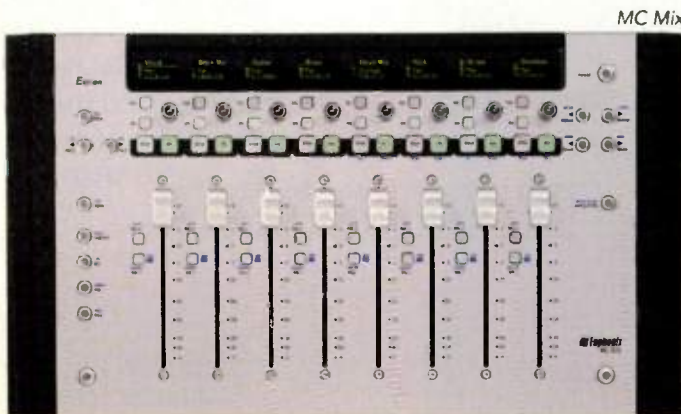
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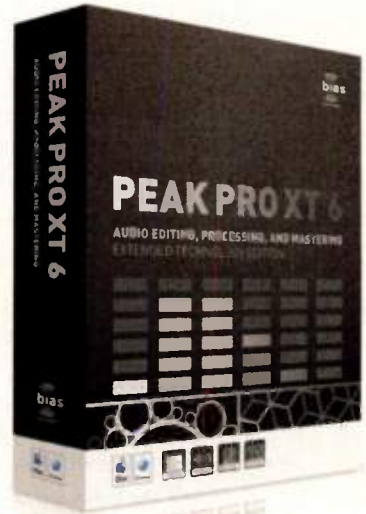
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Shure KSM44A

Large-diaphragm, multi-pattern condenser mic

The flagship of the KSM line — and the new must-have mic for any MOTU studio. The KSM44A is a go-to mic you can count on for great results in just about any DP project, with extended frequency response specially tailored for critical studio vocal tracking. The dual-diaphragm design lets you select among cardioid, omnidirectional, or figure-8 pickup patterns.

Genelec 8040A

Active bi-amplified studio monitor

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





Best Service: Ethno World 5

Marcel Barsotti continues to enlarge his Ethno World library of exotic instruments, adding 10GB of content to the EW4 library—there are 240 instruments and (new to V5) 25 solo voices; the voices alone add more than 3,800 samples and phrases.

The audio engine, Native Instruments' Kontakt 4 Player, gets stronger with each release. The Player's effects are outstanding (love that convolution reverb), as is the flexible routing. You only realize the Player has limitations if you use the full version of K4—with which EW5 is compatible. Also, EW5 skillfully uses K4's scripting and articulation to provide serious expressiveness, and many files exploit the Beat and Time Machine options.

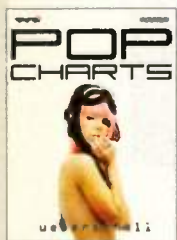
Instrument categories include bell, bowed, gongs, keyboard, metallic, stringed instruments, woodwind and bass, world drums/percussion, and even construction kits for China and the Mideast. Voices come from literally from all over the world, and the recording quality can't be faulted.

\$480 may seem like a lot, but do the math: That's \$24 per GB of expertly-crafted, well-organized, classy content—and probably all the ethnic sounds you'll ever need (well, at least until EW6 appears). Outstanding.

Contact: Best Service, www.soundsonline.com, www.bestservicede.com

Format: Two DVD-ROMs, including Kontakt 4 player; 20GB total content

List price: \$480



Ueberschall: Pop Charts

This two-in-one library has 1.49GB of construction kits (10 total, also with drum hits) and 1.84GB of individual instrument loops (cymbals, piano, electric bass, acoustic drums, guitar, synth bass, and synths). Unlike construction kits designed for building up a complete song, Pop Charts is more of an "idea-starter" that's the audio equivalent of a booster rocket—it overcomes creative gravity, and gets you off the ground. You'll find some excellent grooves, ready for overdubs.

"Pop" doesn't mean shiny, "walking-on-sunshine" pop; instead, think Kylie Minogue in her slinkier moments, doing that vaguely decadent, more deliberate Euro-style pop. (Check out the online example.)

The loops are powered by Ueberschall's arguably under-appreciated Elastik audio engine. It does excellent stretching, provides useful filtering options, and maps loops across a keyboard to allow for a combination of improvisation and programming. You can bounce the loops easily if you prefer dealing with audio instead of a virtual instrument, and because the engine doesn't take much CPU, you can open multiple instances. Ueberschall does excellent work; Pop Charts is no exception.

Contact: Ueberschall, www.ueberschall.com

Format: One DVD-ROM with 3.18GB of content; 10 construction kits and a variety of general-purpose loops; 1,836 loops and samples total

List price: \$114



Sony: Backpacker Beats

This isn't a typical construction kit, with folders of loops for different songs; instead, you get tons of compatible loops, organized by instrument. You can throw just about anything together and make it stick: Almost all loops are in C, and thanks to Sony's excellent Acidization, you can stretch and transpose with ease if needed.

Twelve folders hold 578 loops with the usual suspects—drums (well-represented with 147 loops), percussion (79 loops), and bass (60 loops). You'll also find guitars, keys, FX, bells, horns, strings, synth arps, synths, and vocals. Tempos generally hover in the sub-100bpm range—but jack it up to 120+, and you'll transition from "urban" to more of a Crystal Method vibe.

The "same key" strategy simplifies assembling full pieces, so this is an audio-for-video natural when deadlines are tight (or, start with one of the included 12 Acid projects); the recording quality is neutral, so you can put your own stamp on the sound—like extra-crunchy old school, or future shock electronic.

Granted, hip-hop lends itself to loops, but I've seen few libraries in any genre that are this versatile and easy to use.

Contact: Sony Creative Software, www.sonycreativesoftware.com

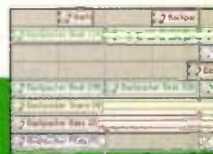
Format: CD-ROM with 640MB of Acidized WAV files; 16-bit, 44.1kHz

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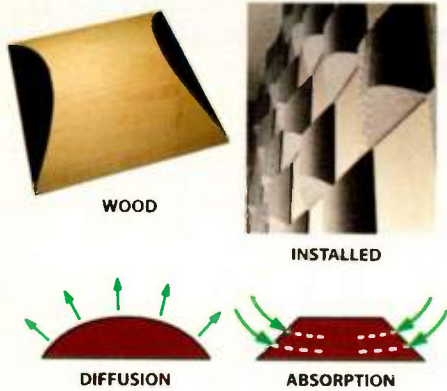
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PETE TOWNSHEND

BY J.J. BLAIR



For more than four decades, Pete Townshend has stood at the epicenter of one of the most influential rock acts of all time—The Who. Here, *EQ* looks back on our August 2007 interview, in which Townshend shares insights on the role of artist as producer.

EQ: You were one of the first recording artists to have a home studio. How difficult was that to achieve back then?

Townshend: It wasn't until I got to my apartment on Wardour Street in early 1967 that I found a place where I could make as much noise as I liked. It was a commercial room, so the buildings around it were empty at night, when I did most of my work. It was here I got my first mixer—a little filmmaker's Uher—and a Grampian spring reverb. A little later in this same room, I supplemented my Vortexion machines [that ran at 7.5 ips] with two Revox G37s. These ran at 15 ips, and they sounded superb. I had no idea at the time about aligning them, and just experimented with different types of tape to get the best sound.

Do you have any advice for the people who have decided to forego the use of professional studios and make their records at home?

Tricky question. It would be wrong to generalize; everyone works in his or her own way. I would say try to keep your recording system as simple as you can. Don't be tempted

by software upgrades if you are in the middle of a project that is going well. Wait for the break. If you can, start with something—whether acoustic or sampled or synthetic—that inspires you, and stay close to that first inspiration and make the process about honoring it. Something happens at point zero in the creative process that is special, and is easily muddled by process or self-indulgence. On the other hand, you have to enjoy the process, so if getting it muddy makes you happy, go for it. We all enjoy our own demos more than anyone else on the planet...because we were there throughout the whole process.

You have made some of the most adventurous production decisions in rock. Do you feel that putting off decisions and throwing the kitchen sink at a song's production can be beneficial or detrimental?

The dual role of artist and producer could be a tricky one. If you've recorded at home, maybe it demonstrates humility to allow dramatic adjustments to be made later on. On the other hand, if you are a hot-shot, big-name producer, it might be that you know the record company is going to want some other hot shot to remix your mixes. Pro Tools makes all of this possible, and natural. However, I think better music is made in layers, when musical decisions are made as you go along. How can you, for example, add a cello part to a song that really blends when you know that someone further down the line could completely change the backing track underneath it and put it out as a solo cello record? That's an extreme example, but musicians like to listen to what is there and work with it or against it. They work with what they have. Even so, great records have been made in so many different ways; it's tempting to preach one method, but that would be Luddism. **EQ**



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