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# Talk Box



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## ADAPTING TO THE NEW REALITY

You say you want a revolution — and you got it. Now what?

The record industry as we know it is fading fast. We haven't quite reached the stage where selling 423 CDs in one week gets you a Number One record on SoundScan, although we're moving in that direction.

But what surprises me the most about the record industry's rapid slide is that people are surprised. In general, monolithic entities have become democratized over the years, for better or for worse. Computers used to belong exclusively to huge corporations, with IBM, Cray, DEC, and a handful of other companies dominating the industry. Now people can go into a local electronics store and buy the parts to build their own computer.

The telephone industry in the USA used to be controlled by one monopoly, Bell Telephone. Oh sure, it got broken up into smaller subsidiaries, probably for cosmetic reasons more than anything else. But now we have Voice Over Internet Protocols, and Skype, the "killer app" for cheap phone calls. The monolithic post office has been usurped by fax, email, Fed Ex, and UPS. And even electric power distribution is starting to become decentralized, as more people install solar heating and photovoltaic panels that often end up putting power *into* the grid.

And for music, you no longer need a large corporation to own expensive studios; people can produce hits in bedroom studios. Nor do you need an unwieldy distribution network for physical products, as more songs move electronically via the Internet. From bands giving away CDs in order to score more live gigs, to MySpace, to iTunes and Web pages where people can download music, the music distribution system has turned into a chaotic free-for-all.

When Napster appeared, the record industry had a golden opportunity to dominate online distribution as they did physical distribution simply by going through the door that Napster opened with more clout, more resources, and more access to artists. For whatever reason, they didn't; now they're paying the price. It's not inconceivable that at least some segments of the record industry could re-invent themselves and come up with a model that works in the context of digital distribution in the 21st century. But based on their past track record, I wouldn't bet on it.

So in terms of getting your music out into the world, the power has indeed gone to the people. Now the question is: What are we going to do with that power?



**Executive Editor:** Craig Anderton, canderton@musicplayer.com  
**Editor:** Matt Harper, mharper@musicplayer.com  
**Managing Editor:** Debbie Greenberg, dgreenberg@musicplayer.com  
**Contributors:** Jeff Anderson, Merrick Angle, Moses Avalon, Dan Daley, Chris Dunnett, Lee Flier, David Miles Huber, Heather Johnson, Gus Lozada, Roberto Martinelli, Shane Mehling, Lily Moayeri, Michael Molenda, Phil O'Keefe, Bill Ring, Richard Thomas, Jeff Touzeau, Rich Tozzoli

**Art Director:** Doug Gordon, dgordon@musicplayer.com  
**Staff Photographers:** Paul Haggard, phaggard@musicplayer.com, Craig Anderton, canderton@musicplayer.com

**Publisher:** John Pledger  
**Senior Account Director/West Coast:** Mari Deetz  
Tel: 818-567-2051; mdeetz@musicplayer.com  
**Account Director/East Coast, Midwest, & Europe:** Jessica Sullivan  
Tel: 661-255-2719; jsullivan@musicplayer.com  
**Director of Online Sales:** Joe McDonough  
Tel: 212-378-0492; jmcDonough@musicplayer.com  
**Account Director/Record Labels:** Sage Litsky  
Tel: 212-378-0438; slitsky@musicplayer.com  
**Manager of Specialty Sales:** Joanne McGowan  
Tel: 650-238-0296; jmcgowan@musicplayer.com  
**Product Spotlight & Classified Sales:** Christine Vela  
Tel: 631-274-5805; cvela@musicplayer.com  
**Specialty Sales Assistant:** Darlene Labrecque  
Tel: 650-238-0297; dlabrecque@musicplayer.com  
**Production Manager:** Amy Santana

## MUSIC PLAYER NETWORK

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**Please direct all advertising and editorial inquiries to:**

EQ, 1111 Bayhill Dr., Ste. 125, San Bruno, CA 94066  
(650) 238-0300, Fax (650) 238-0262; eq@musicplayer.com

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# Punch In

TUNE IN, TURN ON, PUNCH OUT BY  
MATT HARPER AND THE EQ STAFF

by Shane Mehling

**T**here really isn't another band like The F\$%&ing Champs. For years the San Francisco-based trio have been a metallic force to be reckoned with, unabashedly channeling bands such as Iron Maiden, Queen, and Led Zeppelin with an idiosyncratic slant that has attracted scores of metalheads and indie rock fans alike. Their sixth release, aptly titled *VI*, is a collection of 12 gems featuring shredding guitars, bombastic drums, and once again leaving the bass and vocals to other, needier bands. We talked with newest recruit and guitarist Phil Manley to discuss the precision and dedication behind the recording of *VI*, which further justifies The Champs' immodest moniker.

**EQ:** *Is there a lot of time spent in pre-production before you enter the studio?*

**Phil Manley:** We don't really go into the studio without everything already mapped out. There are some more prog/psychedelic

sounds on this record and we're using more super-bright guitar — for instance I used a [Fender] Telecaster — but The Champs sound is very dialed in, and it's a lot of takes. I actually developed a shoulder problem from tracking. We spend a lot of time punching in because it'll be just not exactly right. We obsess over tracking.

**EQ:** *How long did it take to record *VI*?*

**PM:** We did the record in four or five tracking sessions, and we had a pretty limited palette we'd work with: two Marshalls and a custom head, which is essentially a Marshall copy. Also, one thing that helps as we don't use a bass player is that we have straight 4 x 12 cabinets, not slanted, because straight cabs have more low frequency resonance. You're building up low end in guitars where they usually wouldn't have much.

**EQ:** *What about the mic setup for guitars?*

**PM:** We had assorted mics, but used a lot of [Shure] SM57s, which



# The F\$%&ing Champs



give great high end, and a Beyerdynamic M160. We also tried a Coles 438 and a BLUE Bottle mic. Sometimes we'd use isolation headphones to figure out where to put the mics.

**EQ:** *Could you explain that process a bit more?*

**PM:** When setting up guitar sounds with someone in the control room, you can crank the head, and the person wearing the headphones can move the mic around. There is so much isolation, you can hold it in front of a Marshall stack, and actually hear where the mic sounds the best. They're really amazing, but they're not like those Bose noise-canceling headphones, which I think use phase reversal. These are like what you would wear at the shooting range.

**EQ:** *What were you using for the drums?*

**PM:** We have an old Gretsch kit, and a Ludwig stainless steel drum set, that is this actual steel, super loud set. We work with both kits with different preamps. There were [TDL Technology] 421s on the toms, [Summit Audio] 221s for overheads. It was mono overhead, but Tim uses a lot of outboard mic pres. . . .

**EQ:** *And the kick?*

**PM:** We did something weird for the kick drum by plugging a mic into a compressor, and completely ignoring a mic pre. Some '70s compressors have so much gain that when you're miking a source as loud as a

kick drum, you don't need a mic pre; so we just used an 1176, jacked the gain up to the threshold, and that's the kick drum sound.

**EQ:** *Any other little oddities in the recording process?*

**PM:** Tim also sometimes will put two valve mics, which usually have high outputs, into an EQ, and then the EQ out into tape. He sometimes goes straight from the tube mic directly to the tape machine. If it's a loud enough sound source like a bass or kick drum, it's pretty much the exact sound from the studio.

**EQ:** *Do you like working in a band that is totally self-sufficient in terms of production?*

**PM:** Well, I owned a studio but realized I was spending too much time working at the studio instead of writing music. It's a delicate balance. Tim does well, but occasionally we'd have friends come in as tape ops, because I hate when you want to record and someone has to run in and turn on the tape machine, then run back out, get their headphones back on, and then start playing. Especially because that would usually be me [laughs]. So I really do like it, but it's a big help to have a tape op.

Check out video from the The FS&ing Champs sessions for VI at [www.eqmag.com](http://www.eqmag.com).

**W**hen Joshua Klipp, a San Francisco-based vocalist and songwriter, decided to record and release his recent batch of pop material, he followed a well-worn path in the independent music community. He issued a three-song EP (*Patience*) in late 2006, and built up a buzz and a following in preparation for a full-length effort to fol-

low. Since issuing his inaugural release, *Won't Stop Now*, in May 2007, his audience has swelled a bit more, and his music career, which he manages around a demanding day job, has accelerated to a near-frantic pace.

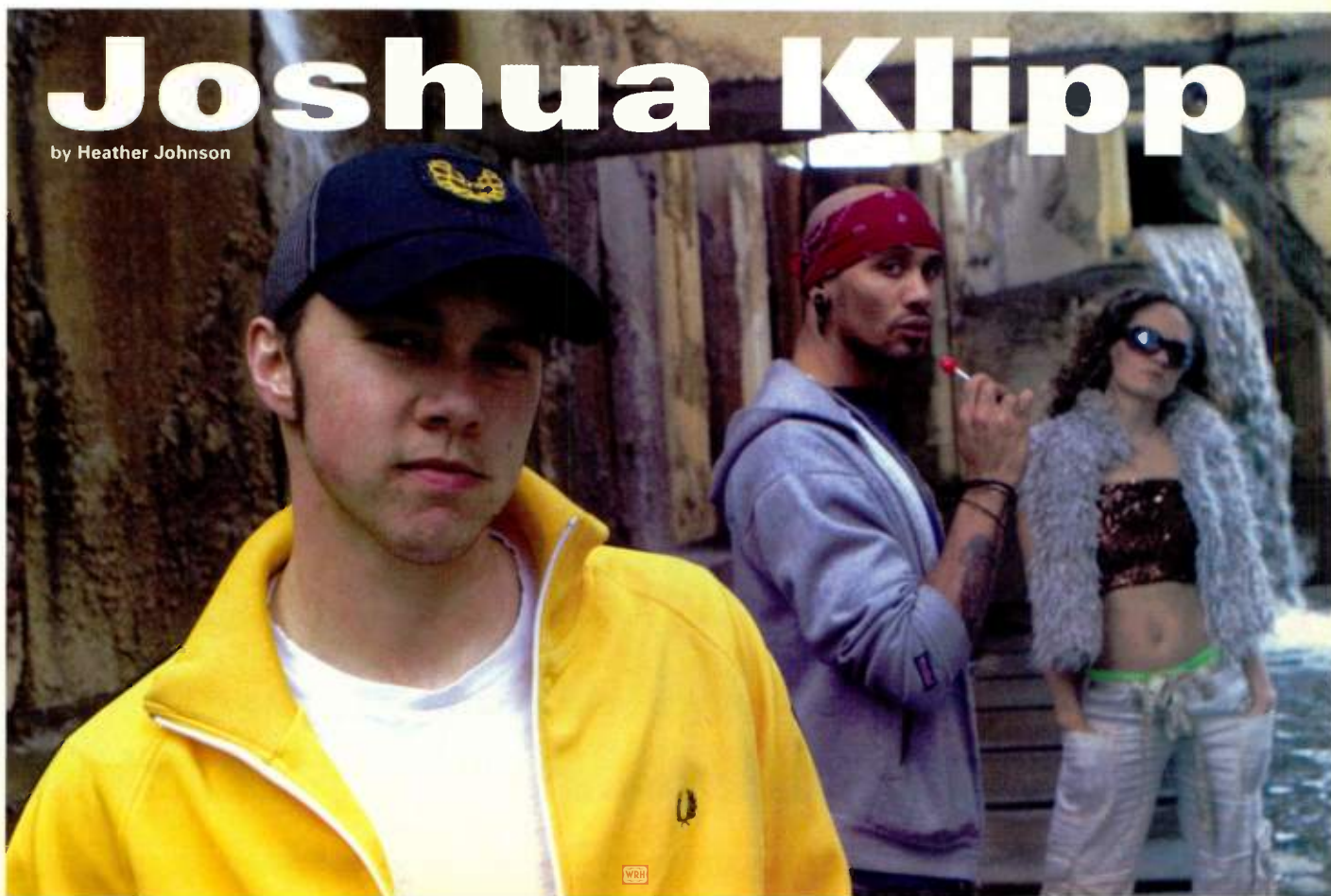
But while his business plan seems standard, the story behind his R&B-inspired dance songs — in particular, a

song called "Little Girl" — is nothing if not inspiring, heartbreaking, and unique.

Klipp wrote "Little Girl" almost five years before he began work on the EP, but parts of the song fit perfectly with a new idea he had. Songwriting partner Kristopher Cloud crafted a new melody around the original chorus, hook, and backing vocals, then Klipp

# Joshua Klipp

by Heather Johnson



# Punch In

wrote new verses that alluded to a more personal struggle.

But when Klipp stepped up to the mic to sing "Little Girl," the seasoned vocalist faltered, but not for lack of ability. For the first time, his soothing male tenor faced the soft, feminine voice of his past — a voice that was once his own, before he transitioned from female to male.

The melding of both his pre- and post-transition vocals happens only on "Little Girl," and probably won't happen again. "It was so intense, I could only do it once," says Klipp. "The experience was so deep and wrenching but so emotionally resolving, too."

Ashley Moore, who operates AMOR Music Productions in Alameda, CA, not only recorded the EP, but also offered valuable artistic insight. "When he first started singing ['Little Girl'], it felt really . . . distant. I said, 'Okay, you've written these amazing lyrics. Now put yourself back in that place . . . sing to that little girl.' The takes he did right after that were keepers. They had this edge to them, and after the last take he was in tears. That comes across in the track."

Aside from the past-meets-present vocal harmonies on "Little Girl," *Won't Stop Now* combines the old with the new in terms of recording, as well. After Moore incorporated old vocal tracks into a new song on the *Patience* EP, engineer Loredana Crisan combined the EP tracks with nine newly recorded songs to create one cohesive collection. Both processes presented particular challenges.

Klipp and Cloud brought Moore a rudimentary two-channel mix of the original "Little Girl," as well as near-complete MIDI tracks of their new version, which were then transferred into Moore's expanded Pro Tools MixPlus system as audio tracks.

She then recorded Klipp's vocals directly to Pro Tools using a Neumann U87, which ran into a Neve 33104 mic pre to a dbx compressor. His emotional delivery, enhanced by Cloud's backing vocals, helped balance the all-synthesized, and often dense, music bed. "One mix was 60 channels," Moore recalls. "By the time the mixes were finished, I'd pretty much maxed out all four TDM DSP cards with plug-ins."

With new vocals complete, Moore extracted, manipulated, and placed the original vocals. "I made a copy of the chorus and the hook, applied heavy filters to them, and then applied that to the source track, out of phase, to try and eliminate some [out-of-tune] vocals. Then I took that output and ran it through modulation and some psychoacoustic stuff to try and give it some space, because the source tracks sounded really thin. This helped them step forward a little bit in the mix."

Moore also worked in snippets of old pre-choruses into the verse, then, while mixing the album, added one final glimpse of the past — the female voice calls, while a stronger, masculine voice comforts. "When I put that last piece in, we said, 'Okay, it's finished.'"

In early 2007, Klipp and Cloud took the EP masters and music for eight new songs (six originals, two covers) to SF Soundworks in San Francisco to begin work on *Won't Stop Now*. Again, there was much vocal work to be done, as well as some clever mastering and remastering to match the EP tracks with the new recordings.

Klipp settled in SF Soundworks' Studio 3, which offers a Pro Tools|HD3 Accel rig and the ample racks of outboard gear one would expect from a high-end facility. He sang through a Telefunken U47, into a Neve 1073 mic pre/EQ, which ran into an LA2 compressor. In mix mode, Crisan



added a bit of Pultec EQ and either the Thermionic Culture Phoenix compressor or UA175, depending on the track. The new songs feature Cloud's backing vocals along with additional contributions from Klipp's brother and gospel choir-director father, as well as such guests such as Hollywood, a hip-hop artist and one of Klipp's backup dancers; Katastrophe, a well-known FTM (female-to-male) hip-hop MC and producer; and Noiro, another transgender artist who remixed Klipp's song "Rescue Me."

The final step of melding past and present came during the mastering process, also handled by Crisan at Soundworks. After mixing the new tracks in the studio's SSL 9000J-equipped Studio 1, Crisan then worked toward matching the EP tracks with the new recordings. "The new tracks were mixed on the SSL with almost no plug-ins, but the EP was mixed in the box, so the analog mixes certainly had more color," she says.

Not the ideal situation, but Crisan had to remove some of that analog color before leveling out all of the tracks in mastering. Working in Pro Tools with the aid of the MD3 stereo mastering plug, Crisan primarily used a Fairman tube mastering EQ and the Lavry mastering converters to raise the levels without any clipping. After mastering the new and remastering the old, she printed everything a "tad hotter."

In the eleventh hour (midnight, to be exact), Klipp's former band, the Kliptones, the band he fronted pre-transition, joined him on covers of "My Funny Valentine" and "Summertime," the latter of which Klipp had sung before . . . an octave higher. "Revisiting those songs, and with my old band, was like coming full circle," says Klipp. "That process of revisiting the old and coming into the new created closure in many ways."



## This Month on EQtv

Join us for the official launch of EQtv: EQ's own video channel chock full of tips, tricks, tutorials, behind the scenes footage of some of the hottest sessions, and tons more. To check it out, visit [www.eqmag.com](http://www.eqmag.com) and click the pretty little link. You'll be glad you did. This month you'll see:

- Inside Louder Studios with Tim Green and Phil Manley for the mixing of The FS&ing Champs new album
- MD's own Studio 8121's massive mic shootout, complete with downloadable audio files
- Guitar miking lessons hosted by San Francisco's world famous Hyde Street Studios
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There's a truly successful Orwellian "hearts and minds" campaign being focused toward you, the very person who stands to gain from copyright laws, in an attempt to persuade you to cede author's rights inadvertently in the name of technological progression. And it's working on a huge scale, because we, at large, love to bash the record industry. We think the record biz dying is our key out to being struggling musicians/recordists. And there are tons of people out there, oftentimes our own brethren, trying to convince us that resistance to this shift is futile.

But it's not.

What the "Tech Masters" don't want you to know is that, according to the annual reports of Universal, Sony, and Warner, in 2006 the music biz had one of its best years ever, revenue-wise. Or that revenue from the mobile space and other new licensing sources has and will continue to put billions of new revenue into our space. They don't want you to know this because it would deflate the "Tech Masters" argument for DRM-free downloads.

Instead, to distract you, they focus journalists on how majors are dial-up dumb, lazy, and hurting artists by price-gouging Internet radio stations out of existence. They direct reporters to the meaningless statistics of first quarter CD sales (which are always low. It's just after Christmas, duh!).

But has any journalist covering this war addressed the fiscally logical? In the face of a recession, where automobile, film studios, and many other industries are showing losses — plus a radically changing technology landscape and all the negative publicity — majors are still showing respectable profits. So just how dumb are they? So what if sales of CDs are back to 1992 levels? That was still a very profitable time for music, and anyone who says that companies like Sony and Universal can not survive a shift in sales platforms is either lying, misinformed, brainwashed, or a sour-grapes ex-record executive caught in the downsizing that this changing landscape requires.

My personal favorite "Tech Master" sophistry is: "Illegal P2P file sharing hurts (tech owned) music subscription services too. It drives up our cost and we also have to compete with free." This is true Machiavellian genius: Compete with free for a service that is a loss-leader to them in the first place? How dumb do they think we are?

Reality: It's because of these guys that illegal P2P exists in the first place, and if illegal P2P prevails, record companies will be forced to issue DRM-free music to compete.

Which brings us to poor, almost-defeated EMI and their decision to take the advice of "Tech Master" overlord Steve Jobs — the classic "Tech Master." Jobs does not make any real money off

## MOSES EXPOSES:

of music sales. iTunes is a break-even division for Apple, as a loss-leader to promote the sale of iPods. He could care less if labels, or you, make a profit.

If EMI's DRM-free move catches on, the other majors will eventually be forced to do the same. And if Jobs turns out to be right and sales go up, up, up? I'll personally issue a *mea culpa*. But if he's wrong, the majors will not be able to re-cork the genie. Their catalogs will be permanently de-valued and they will be forced to sell your work for nothing. Who do you think will be smiling at their checkbooks on that day?

"But screw the labels," you say. In some ways, I agree. We might come the karmic full circle if they fail. But that doesn't change the fact that the benefits would not outweigh the utter financial chaos for everyone — including the indies — were this to happen. Fact: Labels are the "banks" of our industry. They loan money to thousands of artists, who then spend it in thousands of studios and with thousands of producers, who hire thousands of engineers, who buy gear and invest in new artists, who sign with labels, and so on. Fact: We're all in the wake of this economy. The fantasy that if labels die, a Phoenix will rise from the ashes is very unlikely. In reality, labels need to stay in business for there to be a viable music industry.

So-called media experts and analysts who applaud EMI's "wisdom" and curse the RIAA's defense of copyrights are trying to distract you from the real danger. But "Tech Masters," and their web/news-proxies, love these pawns and give them a media platform. Then outraged and disappointed music executives grant interviews and ignorantly agree with them just to relieve their angst. This bandwagon effect is helping the "Tech Masters" load the gun they have pointed to our heads.

Question: Have you ever heard a technology spokesperson agree with labels or argue in favor of copy protection? Never! They argue for DRM-free music to make a more "consumer-friendly experience." They are arguing that the consumer's rights are senior to the artists, that the way a consumer buys music is more important than the rights of the person who created it.

Much as labels may suck, the "Tech Masters" are not on your side. They want you to work for free. To convince you, they offer gadgets, peddled with hopelessness for the industry that offers at least a slight chance for you to thrive. Don't listen to them. If you think the bottleneck was tough before, imagine a musical world run by three or four tech companies.

It's time we started thinking like artists again. Not computers... or computer makers.

Although much has been written about mastering, I've seldom seen the topic addressed of how one finds a good mastering engineer. Here's what has worked for me, but first, let's examine why mastering has

become increasingly important for independent artists.

In terms of sonic quality, releases have gone in two different directions. Because recording is so affordable and there are so many bands/musicians out there just throwing anything they record up on MySpace or YouTube, on one end the standard has been greatly lowered. I do not mean this from a musicianship standpoint (although there's

probably some truth to that as well), but more from the standpoint of recording quality. Conversely, because of advancements in distribution channels, musicians like you and me can now sell our stuff on Amazon, BestBuy.com, Borders.com, and the like alongside the major releases. Because you are competing with the majors, you *have to* compete with the majors: One of the biggest mistakes bands and musicians make is comparing their recording to their buddy's band down the street. (I feel the same is true when it comes to packaging your product, but that's a whole other subject.)



Reader's Advice  
Seeking The Master




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Once you realize the importance of mastering, the next issue is finding the right engineer. One of the best ways is to read credits on CDs where you like the overall sound. Another option is to contact various mastering engineers and ask for samples of their work (as well as rates). For example, when I was about to finish my first CD, I knew after laboring over a year and a half on it I wasn't going to sell myself short with the final step. Stylistically, my first CD was similar to that of fellow Flamenco-based guitarist Jesse Cook and I really liked the punch on his CDs. So, I read the liner notes and found his first two CDs were mastered by a guy named Trevor Sadler. I contacted a few other mastering engineers as well, both in my area

and nationally, and received samples from them; however, although the samples were all good, none had quite the same punch as that of the Jesse Cook CDs. At this point I knew who I wanted, but could I afford him? And as he was working for Narada Records (the label Jesse Cook was on), could I even get him . . . so I cold-called Narada Records, was patched through to his voicemail box, and left a message.

The next day he called me back and informed me that while he did (at the time) do all of Narada's releases, he still did freelance work ([www.mastermindproductions.net](http://www.mastermindproductions.net)) and had a great price for low budget indie-artists such as myself. As it turned out, he was very affordable.

The bottom line is that if you think mastering is a luxury, think twice: These days, it's a necessity. But do your research, as the quality of mastering engineers varies as greatly as, well, the quality of music. And don't be afraid to ask — you just may get the answer you want to hear. —Chris Dunnett

**Got a tip you would like to share with your fellow EQ readers? Hop on over to [www.eqmag.com](http://www.eqmag.com), sign up for the forums, and drop us a line on the Letters to the Editor page. Every month we'll pick the handiest bit of info and publish it in the next EQ. So what are you waiting for? Tell the world!**

# Brand New

by Merrick Angle

Often hailed as the "American Radiohead," the New Jersey foursome known as Brand New have done little to ward off such comparisons, though still managing somehow to interject their own style in the "big, dynamic, emotional" rock game. With their latest album, *The Devil and God Are Raging Inside of Me*, they broaden their palette even more, effectively shedding the "just another Emo band" tag for something



much grander, much more effective. Catching up with frontman Jesse Lacey and engineer Claudius Mittendorfer shortly before the band embarked on a European tour, we squeezed a quick Q&A in and tried to get to the bottom of what allows Brand New to sound fresh in a rather crowded room.

**EQ:** *Where did you end up recording this time around?*

**Jesse Lacey:** We did a lot of the basic tracks at Long View Studios in Massachusetts, and then did the overdubs at our friend Mike Sapone's [Taking Back Sunday, Public Enemy] studio [Sapone Trax].

**EQ:** *There are a lot of big-sounding guitars on this record. What did you play on this album?*

**JL:** That was one of the main goals when we went into the studio. We never have much of a fixed plan, but we definitely wanted this one to be loud and noisy.

I've been playing [Fender] Jazzmasters for about three years, and I can't live without them [laughs]. Even when we had all our guitars in the studio, I'd always use that one.

**Claudius Mittendorfer:** We had really different approaches for recording different guitar parts. Being at Long View meant we had all these different spaces and nice-sounding rooms, and we didn't have to close mic everything. We could let things breathe a little bit. Whereas when we tracked down in the basement, we experimented with DI'ing guitars, and making them sound as obnoxious and as "close" as possible.

**EQ:** *There is a very intimate vocal sound on a lot of the tracks, how did you achieve that?*

**CM:** It's nice to take the time and find the mic and chain that works with the vocal, but obviously you need a patient vocalist for that, and Jesse was always willing to put up with it. We had the usual SM7 for the screaming bits, for use where other mics would collapse. We had this Brauner VM1 that worked well on the low, breathy-type vocals, as well. Sapone brought along a Gefell UM92 and a [Neumann] M149, which were the main "go to" mics.

**EQ:** *Was there anything really crazy, really outlandish that you tried during the recording?*

**JL:** Claudius' grounding technique! We have old amps with bits broken off them, guitars that buzz, so if there was a bit of hum when we played, Claudius went around putting a spoon in our socks.

**EQ:** *A spoon?*

**JL:** Then he would tie a guitar string from the headstock to the spoon!

**CM:** Sometimes it works. . . .

**JL:** We used it so much we forgot the spoons were there. You were going to use it later, so why take it out? It became kind of comfortable.



# NATE "DANJAHANDZ" HILLS

by Shane Mehling

Most 25-year-olds don't find themselves fielding questions about winning Grammys, but after Nate "Danjahandz" Hills won two this year for his work with Timbaland on Justin Timberlake's smash hit *Futuresex/Lovesounds*, he knew the question was going to start coming up.

Of course the superstar producer game is still new for Hills, a self-styled beatmaster/engineer who not long ago was stuck in his room with nothing more than a Casio WK-1630, making beats for no one in particular. "The WK-1630 was the first thing I was making beats on, because it had six tracks on it," he adds with a laugh. "But you know . . . you can only go so far with a Casio!"

Ushered into a more, shall we say, efficient studio setting where Hills began working primarily on a Korg Trinity V3, running through a Mackie CR-1604 into Cakewalk's Sonar, the producer recalls: "I left this guy Tommy Eaton a track on his answering machine and he called me back immediately, asking me to come in to his studio. That was the first time I had ever worked with any more than 16 tracks! I had no formal training, but I was ready to attack and learn. I was like a kid in a candy store, twisting knobs until I figured it out."

This quick step out of his bedroom and into a small project studio ended with Hills putting together the track "Why, Why" for Blackstreet. Shortly thereafter, he met up with Timbaland, his admitted "biggest influence," looking for the chance to prove he was more than just a one hit wonder. Winning Timbaland's affections, Hills followed the producer to Miami to work as his assistant producer — a gig that found the young engineer working with everyone from The Game to Black Eyed Peas to Nelly Furtado. Hills was officially dubbed Timbaland's protégé, and was enlisted to assist the producer when the time came to create a follow-up to Justin Timberlake's multi-platinum debut *Justified*. The rest, they say, is history: *Futuresex/Lovesounds* went on to sell over five million copies worldwide, garnered four Grammy nominations — including record of the year — and Hills got to take two home himself.

But with such a lightning quick rise to producing some of the country's top-selling artists, Hills admits that he is still working on the balancing act of dealing with oftentimes stubborn performers while maintaining the sounds he knows will work best. "It's a definite challenge," Hills says, "but if you have a beat that's strong, you have to keep writing before testing vocals to match [the beat]. There are tons of ways to process vocals, to make them shine, and you want to make the track solid first."

Hills' workflow is obviously producing something right, considering the 70-plus tracks he has produced or co-produced in the last three years, consistently blending fresh beats with addictive melodies. But he puts surprisingly little stock into the tools of his trade, save for, of course, his trusted Akai MPC-4000. "I don't need anything but my MPC-4000, my laptop, and Sonar," Hills assures. "Everything I do is built around that. I'll use the Triton for strings and horns, but nowadays I'm mostly using it as MIDI controller."

Surely a producer of Hills' stature can afford to sample real instruments for more organic tracks, but he seems more than content using mostly canned sounds for his compositions. "A lot of my tracks are just VIs [virtual instruments]. Occasionally I may use a real piano or guitar, because it's hard to synthesize those, but I love the challenge of making VIs sound believable."

So what does the recording process look like for Hills? "I don't use MIDI for much of anything," he says, disregarding his Triton. "I'll get my sound and assign it to a pad, so a lot of what you're hearing isn't quantized. It's just me free handing it." This approach, Hills claims, leaves him free to concentrate on what is most important: writing beats and melodies that sound performed, not programmed. "The hook just has to pop, to keep people's attention, to keep them intrigued. That's all I want out of my tracks."



## Punch In

### STEVE PAGEOT

by Rich Tozzoli



It's been said to succeed in this business you have to work hard. Real hard. Producer/engineer/musician/composer Steve Pageot is a firm believer in that theory, and also, he's proof positive that hard work does pay off when it comes to making albums. From numerous awards for, of all things, playing classical flute to the Grammys he's racked up for his work with Aretha Franklin, Pageot's work embodies the spirit of persistence, dedication, and maximum effort at all times. Intrigued by Pageot's rise to the top, *EQ* caught up with him at his comfortable production suite in New Jersey for a quick Q&A to get some insight into how he feels about the biz.

**EQ:** How did you first break in?

**Steve Pageot:** By meeting Ron Lawrence, one of Puffy's producers. He had a big hit on the radio at the time called "Hypnotize," by The Notorious B.I.G. We exchanged numbers, but it took like nine months for me to convince him to hear my material.

I met him in front of Puffy's studio on 44th street in New York. We jumped in his car, put on my music, and he loved it. But he needed a DAT to work with. So I went back to Montreal, worked on more music, and came back with 20 tracks on DAT. After auditioning them, he said, "I want to manage you."

The best way to get into the business is to associate yourself with somebody who is established. It's all about knowing the right people and being in the right clique. It wasn't easy to get in, but it made it easier to work with someone who had some hits.

**EQ:** Does your previous musical training help when producing other artists?

**SP:** Yes. The fact that I was classically trained puts me in a situation where I know what's going on. So if we're in C Major and the singer hits a G#, I will be able to suggest a harmony note that may go with the chord. When I hear a note outside of the chord, I can suggest other notes, and so on.

**EQ:** What makes a good producer in this day and age?

continued on next page

**SP:** Firstly, we need to differentiate between a producer and beat maker. A beat maker is the one who does the beats and programming, but the producer is the one with the vision. Just because you make beats at home in your basement, it doesn't mean you are a producer. The word "producer" is being used very lightly these days, and it's confusing people. It takes a lot of hard work to be a producer. A good producer should know everything from arranging to engineering, MIDI and sequencing to theory. It helps to be a musician yourself.

**EQ:** *What suggestions do you have for those coming up the ladder now?*

**SP:** Know your craft inside and out — it will save time in the studio for everyone. As with all things, filter out the people who BS you, and don't take no for an answer. Also, respect everyone from the doorman on up; you never know who might be the next president of a label.

## CORNELIUS

by Richard Thomas

"Listening to this album depends on a person's mood at the time," says Keigo Oyamada, the Japanese punk-pop experimentalist known better as Cornelius. "The sound of the album changes depending on what a person's situation is and when they're listening to it."

Though *Sensuous* isn't exactly the musical equivalent of a mood ring, Oyamada's latest is full of future-retro tunes built up around simple production and an astute attention to sound quality and fidelity. It's less atmospheric than 2002's *Point*, but much cleaner than the kaleidoscopic, sample-heavy *Fantasma*, mostly due to Oyamada's in-the-box approach.

"Since the technology and plug-ins have gotten better, I wanted to try recording in a high-bit recording space," he explains. "I wanted to make the high and low sounds as wide as possible."

This time out, Oyamada ditched his monster SSL board and relied exclusively on ProTools HD and Logic Platinum for tracking and mixing, opting to record everything at 24-bit/96kHz. To make sure he got the cleanest signal possible, he used a Rode NT-2 — famous for its extremely low self-noise specs — to mic both his acoustic guitar and his vocal. A Neve 8801 rack completes the chain. While the guitar is undoubtedly Oyamada's song-writing lynchpin, his two primary keyboard choices, the classic Yamaha DX7 and Native Instrument's FM7, give *Sensuous* a fat, classic tone that warms up the otherwise sparse instrumentation. In conjunction with his

start-stop drum programming and guitar work, the synths create the unique blend of ultra-clean but heavily fragmented funk that runs throughout the entire record.

"The theme for this album was, of course, sensuous," says Oyamada. "As in you could touch the sounds. What I was aiming for was to have very clear sounds; almost like having no sound. When there's silence in analog recording, you still get analog noise. I wanted that clear sound, and there's no sound in digital silence. Then you start getting a sense for the non-sound. I've actually put some of those non-sound parts in this recording."

Oyamada used a lot of looping and stacking on his vocals to achieve a smooth yet robotic feel, treating the words on tracks like "Fit Song," "Beep It," "Gum," and "Breezin'" less like traditional lyrics and more like MIDI-triggered sound collages.

"I'm focusing more on the reverberations of the words, not the words themselves," he explains. "The way Japanese words are lined up gives them a different meaning. It's like sound poetry."

It's safe to say that *Sensuous* is essentially a concept album, both in its execution and its content, and a fair amount of musical and lyrical repetition only enhances to this dynamic. Oyamada is a master of subtlety and nuance, and using computer-based sounds and production tactics is a solid fit.





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## SESSION FILE: PLAN B

Who needs actions when you got sounds

by Lily Moayeri

Ben Drew describes his life as if it were a film: a graphic, violent, sexually explicit, and disturbing film with very strong language. Under the *nom de plume* Plan B, Drew turns the events in his life and those of his friends and acquaintances into image-heavy songs with lyrics that draw distinct pictures of their stories, and with music that acts as a catalyst for those pictures.

On Plan B's newest release *Who Needs Actions When You Got Words*, Drew's adulation of Eminem becomes apparent in the style of storytelling contained therein, relying more on personal tales rather than on his surroundings of Forest Gate, England. Assuming a different persona for each song, Drew tackles heavy subject matter from tales of being abandoned by his father ("I Don't Hate You") to religious oppression ("Tough Love") — an approach Drew sees more akin to directing a film, with each song serving as a different clip.

"I've written a film here," Drew tells as he sits poolside at a trendy Los Angeles hotel, the backdrop of Hollywood

framing his face. "My house got raided. They had sniper rifles out back and armed police around the front. They were waiting for us to come out. We opened the door and all of us were smashed down the floor. That experience gave me the original idea. Everything has been taken from [things] that have happened to me, or stories I've been told, which when I was told them came clear in my mind. All the dialog is conversations I've had with friends. My music is just me being frustrated at not being able to make a motion picture. What I'm recording at the moment is a great way to satisfy that need."

### PLANNING AHEAD

Though oftentimes compared to artists such as the Streets and Eminem, the 23-year-old Drew has seemingly more to offer than his contemporaries in the sonic realm. A proficient guitarist, his playing weaves its own narrative throughout *Who Needs Actions* — its acoustic flavorings serving to soften the overall dimension of the album while contrasting

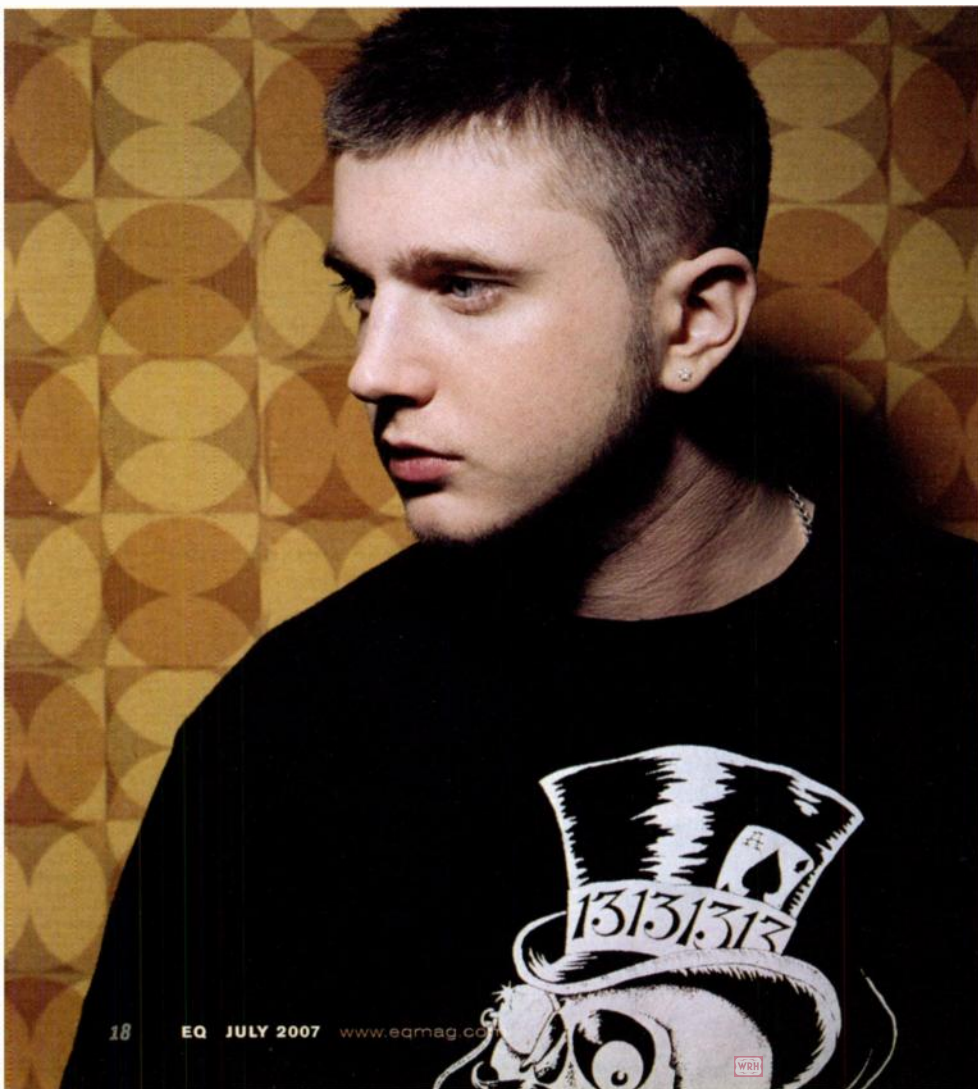
starkly with the heavy hip-hop beats.

Seamlessly flowing from hard raps to full-blown R&B breakdowns, harsh rhymes to melodic croons, Drew's style recalls equal bits of Non Phixion, Justin Timberlake, and Tracy Chapman.

A strange conglomerate of audible influences, for sure, but appropriate given his background. Starting with just a voice and an acoustic guitar, Drew always felt a kinship with the rap scene, having intended to eventually merge his almost folksy approach to street music with more traditional beat oriented hip-hop in the recorded realm. Likening his work to a newly electric Bob Dylan, Drew was met with a similar strain of disappointment when clamoring audiences won over by his work on stage picked up *Who Needs Actions* only to discover something entirely different than what they had originally witnessed. But with musical input from Rage Against The Machine and the Prodigy, Drew felt it imperative to add more elements into his songs in order to make the end result as alternative, and grimy, as possible.

### BRING THAT BEAT BACK

While more of a traditional singer-songwriter in his compositional approach (save for the times where he demos guitar tracks over Mobb Deep rhymes, or tracks raps over sampled guitar lines), Drew relies on cohort Cassell the Beatmaker to flush out the pounding rhythmic lines that add up to the





Plan B patented hip-hop folk mesh. As Drew says, “[Cassell] hears that stuff naturally, and can write it for me quicker than I ever could.” Beginning his work inside Logic’s base of soft synth bundles, step sequencers, and drum machines (such as the UltraBeat), Cassell runs the signal out into the TL Audio M1 Tubetracker 8 Valvemixer in order to add warmth and “phatness” to his beats — a gear employment he also uses for Plan B’s live drum tracks as well, which add enormous depth to *Who Needs Actions*’ thumping and cracking beats and rhythms.

Says Cassell, “We compress the hell out of all the drum tracks, and then run through the outboard M1 to get that rough, beefy, gritty sound, sometimes layering them with additional samples and straight cut live drums to get a live feel and an extra solidness to the drums.”

Samples culled from their favorite albums of old rarely do, as Cassell tells it. Instead, he consults a vast library of live drum breakbeat sample banks, tirelessly processing stock samples until he can barely recall their point of origin, oftentimes matching them with sequences programmed on his trusty arsenal of original Roland TR-808 and 909s, layering and sequencing the tracks within Logic.

Still, Cassell almost prefers cutting the tracks live, and at times letting the raw tracks shine, such as on the standout single “No More Eat in.” Dialing in a click track and then playing a full kit (along with everything from tea cups to guitar cases, using a re-tasked speaker pulled from an old stereo cabinet to mic the sources), Cassell laid down the basic tracks for Drew to play over before programming minor percussive accompaniment. “It’s much easier for me to play involved drum parts than program them,” Cassell says. “It takes too long [to program] and you risk losing the vibe of the track. If nothing else, I like to just play and lay down the groove first so the rest of a band can use it for their timing. Then I’ll add in everything else.”

## THE (NOT SO) SIMPLE LIFE

With Cassell having a handle on the entire rhythm section, Drew is free to focus on tracking his acoustic guitar, which he does with just one [Shure] SM57, allowing only minor compression and EQ to be applied during the mix. When questioned about his simplistic approach (especially given the vast array of styles present on *Who Needs Actions* — from the flamenco-styled “Mama (Loves A Crackhead)” to the melodic blues musings of “Charmaine”), Drew says the intent matches his approach, a disarmingly humble answer that every sound that comes out of his guitar is “accidental and raw.”

Elsewhere, on such tracks as “I Don’t Hate You” and “Tough Love,” a similar approach (*i.e.*, SM57, with the signal largely untreated) is taken on recording the stellar string melodies that shine through the mix. “The strings were all me,” says Drew. “I’m into my classical music, so I sat with Harry Escott, my cello player, and hummed a few ideas. He threw a few ideas back my way as well and we ended up just putting a cello on the album.”

This additive process of these various peripheral musical elements was one of ease to the team, as the majority of *Who Needs Actions* is built upon previously demoed tracks

Drew and Cassell flew into the session. Whether it is in the case of beats being programmed to fit around solo guitar lines, cello accompaniments being recorded to match singular vocal lines, or vocal segments being composed and tracked to correspond with scratch drum takes, the recording process decided upon for the forging of *Who Needs Actions* is clearly a bit, well, backwards — a *modus operandi* oftentimes balked at by most producers. Thankfully for Plan B — a group that is notorious for jumping from producer to producer on projects — one Paul Epworth made himself available to facilitate the completion of *Who Needs Actions*.

## SCREAMS GO HEARD

While Epworth served as the main credited producer for the *Who Needs Actions* sessions (helping give the widely varied styles both from track to track and within each song a sense of cohesiveness and consistency), he’s quick to unload any due credit to Drew, who he calls “a unique artist . . . through his voice, character, and lyrical content . . . that always gives his tracks a sense of cohesion.”

Nonetheless, Epworth brought some invaluable tools and techniques to the table, particularly in regards to capturing Drew’s ever-changing vocalizations — sounds that can be, at times, difficult to capture faithfully. Setting up a Neumann U87, which Epworth says is perfect for both of Drew’s main vocal stylings (rapping and singing), the signal was then run into a GML 8304 mic pre (for Drew’s raps) and an Avalon VT737 SP (for tracks where Drew sang his vocal lines). When it came time to mix, Epworth found that applying approximately 3–5dB of compression with the old faithful Urei 1176 helped bring the vocal tracks together, with only mild EQing and low pass filtering being necessary to smooth out the soon-to-be finished product.

This tactical outboard treatment, similarly, was employed for the multitude of backing vocals that populate the mix of *Who Needs Actions*. This is especially apparent on tracks such as “Everyday,” “Where Ya From,” and “Missing,” where Drew assumes the voices of many characters germane to the stories he spins, running the gamut from the terrifying emanations of the predatory to childish chirps. As Drew says: “There are certain things that have to be told in a certain way. Certain characters have to say certain things. I want to portray people in a real life. They’re going to say certain words. With the little kid on ‘Kidz,’ I’m putting myself in the shoes of a 14-year-old. [The language] comes from being a kid and no one cares and everyone’s talking over me.”

Tackling current controversies surrounding the subject matter Plan B touches on, Drew says, “I always have a moral message in all my music,” he points out. “People that criticize me are people that listen to my music at arm’s length. Might put it on, listen to about a minute, and write it off straightaway instead of properly listening to a song all the way or listening to the album at least half way through so you can get a gist of what I’m trying to do.”

One thing is for sure: Regardless of the misconceptions, when the film of Drew’s stories is finally released, it will have all the ratings you would expect: rated R for Adult Content, Adult Language, Violence — and Compelling Sound. **EQ**

IT TAKES TOO LONG [TO PROGRAM DRUM PARTS], AND YOU RISK LOSING THE VIBE OF THE TRACK.

## SUCCESS STORY: JIMMY DOUGLASS AND TIMBALAND

**The dynamic duo gets deep into recording Justin Timberlake's *FutureSex/LoveSounds***

by Jeff Touzeau

Unless you have been living your life mixing in a closet for the last few years, you've probably heard the handiwork of Jimmy Douglass — the engineer extraordinaire behind so many albums and singles on the Billboard chart lately that it's truly impossible to keep count. Since his career transitioned gracefully from the classic rock 'n' roll, R&B, and soul projects he worked on as staff producer at Atlantic Studios almost two decades ago, he has become Tim Mosley's (a.k.a. Timbaland) trusted right hand man and trusted ears behind the recording console — a sonic craftsman and "behind-the-scenes" pioneer in hip-hop.

Lest anyone think Jimmy was effortlessly catapulted into such a privileged station, think again: He did his time in the trenches alongside Atlantic producer/engineer giants such as Tom Dowd, Arif Mardin, and others, where he was responsible for everything including duping 1/4" safeties, setting up mics, and tracking the label's immensely talented artists. "I worked on a lot of Aretha Franklin, Donny Hathaway. Whatever they had in the house, I was doing. It wasn't genre-specific; it was more like 'Here's what we have — make it happen!'"

### A MATCHED PAIR

As the seeds of modern hip-hop finally began to germinate in the late '80s, Douglass found himself not only serving as an engineer to some of the top acts of the time, but also assuming the role of producer for nearly all the acts he recorded (he also engineered a large portion of Atlantic's rock-oriented catalog during that time). But in the time that's passed since he teamed up with Timbaland several years ago, Douglass says that the traditional role of the producer — at least in the hip-hop world — has taken a 180° turn: "Many of the traditional skills of a producer are no longer needed. Now a guy can walk in with a few beats, hand it to the songwriter, and when an artist is done, call himself a producer. In my day, this guy was called a programmer. He supplied that part on which the song would be built."

The kind of relationship Timbaland and Douglass share is exceptional by most accounts, with Timbaland bringing to bear the new school traditions, and Douglass the old school. "We have a relationship where Timbaland can create these incredible beats and he can pass the ball to an old school producer, so whether he's there for the vocals or not, he's got it covered. He is the quarterback and I'm taking the ball and doing the parts I can do and we're always going to finish. If he doesn't finish, I'll finish."

### BUILDING A LOVESPACE

The fruits of their labors, along with producer Nate Hills, can be found on Justin Timberlake's *FutureSex/LoveSounds*

album, which if you haven't noticed has been ravaging the album charts since late last year. Douglass recalls the genesis of the *FutureSex/LoveSounds* project: "Justin came to Timbaland, wanting to continue what was achieved on his previous album. We had done 'Cry Me a River,' which essentially came to be an epic song. The new album that he had planned was going to have a totally different flavor."

The timing of the project's beginning couldn't have been better, as Timbaland and Douglass had just finished construction on a brand new, 5,000 square foot WSDG/John Storyk designed facility in Virginia Beach. It was ready to go, complete with a Neve VR 72 large format console, two control rooms, and a generously-sized live room. "Justin loved the studio, because when you see it, it really is a spectacularly comfortable place. For John Storyk, our studio was a project of love. For me, it was a practical project: The culmination of everything I've ever learned about what a studio should be."

The room's design seemed to complement their working style. "We had a separate room where Timbaland could be doing his beats, while I could be working in the main control room. We were able to do the album very quickly and very efficiently and there was nothing we needed or wanted for — everything was right there."

### A SENSE OF DYNAMICS

One of the more interesting aspects of *FutureSex/LoveSounds* is the method behind which it was built — perhaps a familiar process for producers already working in hip-hop, but a distinctly different approach from that used in other genres. Douglass walks us through the process: "Timbaland lays down a beat for a couple of hours before Justin says, 'I like it.' Then Justin writes the song in the studio for three or four hours before he begins doing the parts. I work on the parts with Justin, and though he really needs no guidance, I'm invited to act as both a vocal ear and the producer that I am. Once three, four, five hours go by of adding parts, hopefully we have a whole song finished."

He confesses that this process is not what he learned in the old school: "The adage that I had heard back in the day was 'You never write in the studio!' But thanks to the technological advances in the digital world, when you're writing the stuff you might as well be printing it on tape. You don't *have* to do it again — there is no such thing as 'demo-ing' it!"

Douglass also points out that as time goes by, more and more of record production is "in the box": "Previously, producers would have to find a musician to play the parts, then find an engineer to pull all the parts together on the board. Now, a producer can literally reach





Jimmy Douglass takes a quick break from mixing Justin Timberlake's *FutureSex/LoveSounds* to shoot the camera a smile.

into a box, pull out the sounds and play the parts he wants to play. He doesn't have to go get anybody. You're looking at one mind that can create an intricate soundscape."

Still, one cannot minimize the extraordinary gifts of a producer like Timbaland: "He sees the whole vision and has his finger on the pulse of what modern people want to hear," Douglass says. "These days, a good producer brings the savvy to find the right sounds that will draw the people." A good example of this, Douglass says, is the Roland TR-808, a piece of gear that experienced a massive resurgence in hip-hop and R&B long after its initial demise in popularity. "We passed on after it had its day — now, somebody looks at it and says, 'Hey, this is really cool. The kids would like this!' Suddenly it's on every other record in hip-hop and R&B. A good producer brings that sensibility — that's why you hire him," says Douglass.

#### IN THE GREEN ROOM

When the time came to track vocals for *FutureSex/LoveSounds*, Douglass recorded Timberlake in the new live room, accompanied by some home-made gobos he put together: "I went to Home Depot, bought a couple of doors, bought a couple of packing blankets from U-Haul, and I put those doors and packing blankets up in the space and made a booth. I put a [Neumann] U87 in front of Justin and it worked." While Douglass concedes the vocal is all in the performance, he says he often puts a little EQ on the vocal to add brightness and dimension, or compression if he's looking for better clarity or punch.

On "Losing My Way," the second to last track on the album, Douglass was charged with recording a 30-piece choir. Timberlake's strong preference was to have the choir members record their respective parts separately, then layer them. While this approach ended up working well, it ran

contrary to how Douglass might have done it: "I would have used the old school approach, where you have everybody sing the different notes together to get a nice blend. This way you can get the harmonics to give a solid, fat sound."

Douglass and crew took a break of about a month before mixing commenced in Virginia Beach — by this time, it was all about refining and enhancing the vision that had already been established all along. "The producer

**"When you're writing the stuff you might as well be printing it on tape. There is no such thing as 'demo-ing' it."**

already has a blend in mind, even before he gives it to me. I pretty much just put up the faders and go for that blend," Douglass observes. For Douglass, mixing is a time for refining and enhancing — and sometimes experimentation when necessary: "If you're living in a room and you see the color green for a month or two, the next day you come in and it's a dark, dark green, it's like 'Wait, what happened? I was getting used to that green!' Once you change any parts of the core, you gotta be careful you don't lose the essence of the song."

Throughout the production of *FutureSex/LoveSounds*, Douglass, Timbaland, Hills, and Timberlake all appreciated that there was no pressure coming from a record label because Timberlake financed the record himself. "Justin was like, 'Here's the record, take it or leave it.' This was a great way to work, as the label wasn't around saying 'change this, change that.' After all, the record company's job is to keep the artist happy and keep selling those records — not to tell you how to create it!" **EQ**

## TECH BENCH

### Add Presets to Vintage and Analog Effects

by Craig Anderton

Even in today's microprocessor-controlled world, most studios have some kind of vintage analog box sitting around as a "secret weapon." Whether it's a device that offers unique functionality, a truly funky sound quality, or some other desirable characteristic, vintage gear can certainly be fun to have around.

The downside, of course, is it they may lack some of the features — such as the ability to select presets — that we've become accustomed to in today's gear. Even though one of the fun aspects of analog gear is the ability to dial in any value, many times you'll gravitate toward certain specific settings, and getting them back when you want them can be a hassle.

Fortunately, there are some ways to add a limited degree of presetability to effects that were invented before the days of the microprocessor. And of course, the benefit of not having to think as much about your equipment is that you can think more about your music — you don't want to get so involved turning dials that you lose your musical train of thought.

Just remember, though, that any resale value might take a dive if you modify a piece of gear; keep any parts you remove handy in case you want to return the unit to the way it was.

#### DIFFERENT POTENTIOMETER CONFIGURATIONS

Our "mechanical preset" approach involves turning control settings into presets, so the object is to decide



Fig. 1: A potentiometer wired as a two-terminal device.



Fig. 2: A potentiometer wired as a three-terminal device.

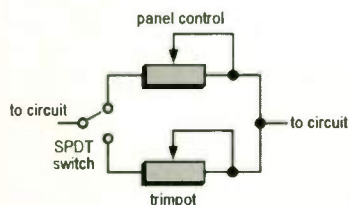


Fig. 3: Adding a trimpot and an SPDT switch allows switching between the panel control and a single preset position.

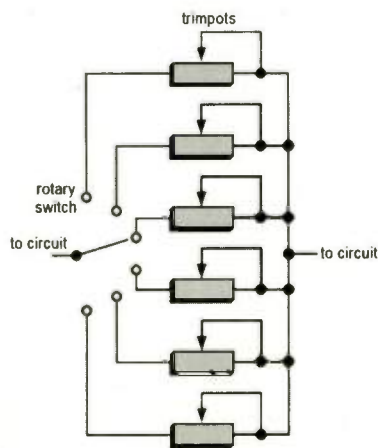


Fig. 4: A rotary switch can choose among multiple preset positions. This circuit shows six trimpots, and requires a SP6T (single-pole, six-throw) switch. It could also switch between a panel pot and five trimpots.

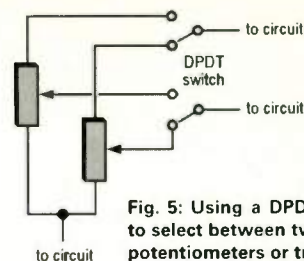


Fig. 5: Using a DPDT switch to select between two preset potentiometers or trimpots.

which control (potentiometer) you want to make presettable, replace it with two or more trimpots (trimpots are miniature potentiometers that aren't designed for continuous use, but for set-and-forget applications — you set them to the position you want and leave them that way, which is perfect for this type of application), then add a switch (typically a rotary switch if you want a number of preset positions) to select among the various trimpots. By adjusting the trimpots for your favorite settings, you can switch to those sounds in the time it takes to flick the switch.

However, before you can make a potentiometer presettable, you need to identify how it's wired. Figure 1 shows a potentiometer wired as a two-terminal device (a rheostat), while Figure 2 shows a potentiometer wired as a three-terminal device.

#### TECHNIQUES FOR ADDING PRESETS

To install a second preset position to the control wired as in Figure 1, you'd add a trimpot of the same value, and an SPDT switch to select between the two controls (Figure 3). Even better, see if you can replace the panel potentiometer with one that has a push-pull switch to do the preset selection. That way the second control could be an internally-mounted trimpot set to your favorite setting, while the original control could remain on the front panel as well as provide a way to choose between the two settings.

We can take this one step further and use a rotary switch to select among the front panel control and several internally-mounted trimpots, or replace the front panel control with a rotary switch and select among multiple trimpots (Figure 4). Again, this assumes the potentiometer is wired up as a two-terminal control.

When the potentiometer is hooked up as a three-terminal device, matters get a bit more complicated. It now becomes necessary to switch between two leads instead of just one, so use a switching circuit like the one in Figure 5.

Here we're using a DPDT (double-pole, double-throw) switch. This can switch two different wires to either of two different positions. For switching more than two potentiometers, you'd need a two-pole, multi-position switch. For example, if you wanted six preset positions, you'd need a switch with two poles and six positions (a DP6T switch). The rest of the pots would be wired up similarly to Figure 5.

Although these applications may seem somewhat simplistic (and you may hear some clicks when you change presets, so turn down the volume first), nothing beats clicking a switch when you need to access a particular control setting as rapidly as possible — it's much faster than turning a dial. What's more, by retaining one variable control in addition to the preset trimpots, you can still obtain any setting you want. **EQ**





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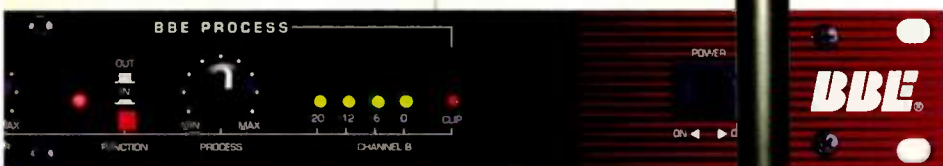
The **E523/D X/Y Stereo Field Recording mic** (\$120), for broadcast and other pro stereo field recording applications, features a closely matched pair of capsules in an X/Y configuration and works on either battery or phantom power. [www.avlex.com/superlux\\_products.html](http://www.avlex.com/superlux_products.html)

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Chiccarelli, whose Grammy award-winning career includes production and engineering credits for artists like **Elton John**, **American Music Club**, **The Stranglers**, **Beck**, **U2**, **White Stripes**, and a host of others, helped Mercer and company (who up until this point had never collaborated so closely with a producer) explore a new palette of sonic possibilities, effectively taking The Shins' music to an altogether different dimension.

Though Chiccarelli describes Mercer as being somewhat reticent at the beginning of the project, a close working relationship quickly blossomed between the two, resulting in the milestone album **Winning the Night Away** — a record that catapults the team to a new level both artistically and sonically. From start to finish, the handy production work of Chiccarelli, and a talented collection of engineers including **Sean Flora**, **Phil Eck**, **Lars Fox**, and **Bob Starck**, is abundantly clear to the listener: It truly takes a village.

Come with us now into a land of **Red Rabbits**, **Phantom Limbs**, and **Black Waves** as we wince the night away in



**EQ:** What, to you, is special about this particular project, and how did the collaboration come together?

**Joe Chiccarelli:** James [Mercer] is a pretty amazing talent. He has a real singular point of view in terms of songwriting and his

sense of melody is unique, as is his sense of harmony. He kind of channels this weird '60s/'70s classic rock thing, and working



with someone with that sensibility was definitely fun.

He had originally started this record at home, but one thing that made this project easy was the fact that James was so open to input at this point in his life. We had been in touch for the last couple of years; he would call and I would help set up his home studio, or he would call with some questions about a song arrangement or would want some feedback on a song, that kind of thing. We remained in touch over a two year period, and I think he was finally ready to have someone come in from the outside and offer a different point of view.

**EQ: What was your original reaction to the demos?**

**JC:** The first time I heard the demos I thought that he clearly had the start of a fantastic album, though he was reluctant to share certain things with the band or me because they were in such early stages of development. You could tell from the beginning though . . . he has his own bent on things; he's one of those artists that you really have to be aware of what makes him unique, and encourage that at all times.

**EQ: Having recorded earlier albums at home, what do you think James was trying to achieve by working with you?**

**JC:** James certainly was more than competent, as he recorded *Oh Inverted World* by himself on a PC in his living room. Initially, he was very reluctant to have anybody work with him, because he was worried that someone would alter what he wanted to do. This is one reason we remained acquaintances for a while — it was kind of baby steps, if you will, for a long time. But having spent maybe two years in the bedroom, I think he was ready and welcoming outside opinions.

**EQ: What role would you say you played, ultimately, in the making of this album?**

**JC:** I was able to bring some honest feedback on his songs and an expression of what I felt was needed to complete them. I also helped him explore possibilities in terms of song structures, arrangements, sounds, and overall approaches to recording. There are so many different ways to record the same thing — I just kind of opened the doors to that for him. I think he initially wanted to try a lot of new things, but was somewhat unsure. I don't think he ever had a bad experience,

but it's almost as if he didn't realize what a collaboration could bring [to the record].

**EQ: There seemed to be a healthy dynamic between you and James. What was it like working with the rest of the band?**

**JC:** They're great guys and it was a true team effort — everyone was supportive of James and myself. Marty [Crandell, keyboards/bass/guitar] was there every bit of the project and Dave [Hernandez, bass] and Jesse [Sandoval, drummer] would come in from time to time.

**EQ: This album has a very distinct feel to it. It's sort of dreamy and weaves in and out the subconscious. Take the first track, "Sleeping Lessons," which has many different textures. It begins with this spacey blues riff that evolves into something much more immediate and in your face.**

**JC:** That keyboard track was something James started at home, but it never really developed — it was just kind of a mood piece with a little drum loop on it. It sounded great without any build whatsoever. It worked well as a moody little piece, and James was pretty sure he wanted it to be the start of the record. So the question became "How do you keep this mood, but keep the listener's interest and also have it be the introduction to the rest of the album, to let you know where the record is going?" We ended up really working on the structure and the dynamics.

**EQ: Did you use any particular method while tracking in terms of how you built the tracks up?**

**JC:** As James started this at home, and also because he went up to Seattle to do some basic tracks with Phil Eck, in some cases it was just a matter of building upon that.

**EQ: How many useable tracks did James bring in?**

**JC:** Not all of them, but some. I think most of the stuff was stripped down to very basic things. In the end, it was about three months of work on my part. In some cases drum tracks were kept, in some cases keyboards and little guitar pieces. There were one or two vocals that were kept. A lot of the stuff was tweaked, repaired, processed. In most cases, we kept parts of the original home tracks and built upon them.

**EQ: Let's take a track like "Australia," for example: Were you using any techniques in particular that helped make James' vocals shine?**

**JC:** James and I just went in for two or three days at the beginning of the project. I wanted to bring the tracks that he had done at home as well as Seattle into a real studio and just give them a listen to see what was on tape, then evaluate what was and wasn't usable. The "Australia" vocal, which we did with a BLUE Bottle, was one of the tracks that we did on those days. One of the things we settled on was, on those rock songs where his vocal was doubled on the demo, we found that it was actually better to re-record and triple it. . . .

**EQ: That doesn't sound obvious at all, at least to me.**

**JC:** I find that with certain singers, sometimes you double them and it just takes the soul out of them. The choruses seemed like they needed the doubled effect, but it just didn't sound right with his voice. So in cases where his voice is kind of double-tracked sounding, it is actually tripled-tracked. Often I'll mix and match things with the double and triple takes where I'll either track them with different microphones, set the vocalist at different distances from the mic, use more or less compression on each, go for a different tone on each so it adds up in a nice way.

**EQ: When you're dealing with a triple, do you prefer to have one vocal track that is mixed front and center?**

**JC:** Yeah, the other vocals tend to be down a little bit, shades that just reinforce the main vocal.

**EQ: On "Pam Berry" you have an acoustic guitar sound matched with a twangy electric that's picking parts over the top. What was responsible for the tones of each section?**

**JC:** We had a Gibson Hummingbird for the acoustic sections and an old Epiphone Zephyr for the electric parts — which ran through a [Vox] AC30 for one track and a Fender Super Reverb for the other, mixed with a direct signal.

**EQ: How were the amps miked?**

**JC:** When James did things at his home studio, he was using a [AKG] 414 and a [Shure]

SM57. I told him, "You gotta get some more mics." So he bought a Royer 121 to use on his guitar amps. He was sort of happy with the 414s for his vocals, but he got an Audio-Technica 4050 to use on his acoustics paired with a Mojave MA200. These were run into a Daking Mic-Pre IV and a Universal Audio 610.

I tend to use a lot of weird and cheap microphones and effects, like weird old Western Electrics, Pultecs, junk mics from the '50s that have nothing but midrange. Sometimes these mics have the most character for things — if it looks like it's broken and from the junk pile of microphones, it gets used [laughs]!

**EQ: The beginning of "Phantom Limb" is a bass, not a synth, right?**

**JC:** Yes. Most of the bass Marty did with a [Fender] P-bass through a really nice '60s [Ampeg] B15, in some cases with a bit of reverb. On "Phantom Limb," we re-amped his bass through a few different fuzz boxes. The signal hit a Neve module that was over-driven, and then it was re-amped with a chain of a couple of different stomp boxes, such as Z.Vex's Woolly Mammoth and Fuzz Factory.

**EQ: How long did it take you to get a**

**handle on the room at Supernatural Studios?**

**JC:** I had worked at Supernatural before, so I kind of knew what was in store for me — they have Tannoy AMS 10As, which I use a lot, and the Yamaha NS10s, which everybody uses. Mixing was a bit of a challenge; everything was done at Supernatural, with the exception of a few things tracked at San Francisco's Soundworks and, earlier on, Avast! in Seattle. Some of that remains on the record: for instance, the basics of "Girl Sailor."

**EQ: My favorite track on the record has to be "Red Rabbits." There is a break that occurs with a violin solo and a beautiful slide guitar that reminds me of "Sleep Walk" by Santo and Johnny from the '50s. Anyhow, is that a real violin just before the guitar solo?**

**JC:** Yes. Paloma Griffin from Pink Martini played on that cut. Chris Funk from the Decemberists came in and played mandolin, fiddle and a bunch of other odds and ends on other songs. He may be on that track as well.

**EQ: "Red Rabbits" sounds like it's**

**underwater. What are all the bubble-popping sounds?**

**JC:** In the beginning, part of it is just a Nord Lead 3 patch. I also used a lot of spring reverb from the Roland Space Echo. There are a lot of heavily compressed "breathing" reverb effects on the tracks. We also used a [Hammond] B-3 and a Farfisa on a number of songs.

**EQ: You've worked on so many projects, and have obviously learned so much over the course of your career. What was most challenging for you on this project?**

**JC:** The most challenging part of making any record is establishing good communication and chemistry with the artist — which I had with James. I think that the most important thing in making a record is that you really have to get inside the artist's head and understand what they are trying to do. Hopefully you have an artist that is really clear about what they are trying to do; that makes the whole process easier. The more you can bond with an artist and really be on the same page, the better the record comes out. **EQ**

## Winning the Night Away Select Studio Notes

### Sleeping Lessons

"There are a lot of strange guitar sounds on that track. In fact, we miked an Epiphone Zephyr with a Radio Shack lavalier mic inside the F-hole. This lends a metallic 'broken' sound that shows up a couple of other times on the record. The beginning of the lead vocal has a little bit of distortion from an overloaded Neve module and a SansAmp. Along with that, we used a couple of very short delays — two and five milliseconds — with a bit of feedback."

### Pam Berry

"The acoustic guitar, at least for me, makes the track because it just sounds so wrong, so childish [laughs]! It adds so much character to the track. The electric guitar is a Les Paul going through a Z.Vex Super Hard-On and a Menatone Red Snapper into a [Vox] AC30."

### Sea Legs

"The crackling at the beginning is a vinyl plug-in emulation. The bottle cap and paper bag sound effects were something that James tracked at home and then put backwards reverbs on them, as well as the strings. A lot of the pad stuff is the M-Audio M-Tron soft synth — a S100 program that emulates a Mellotron. We fell in love with that program and used it throughout the record. James kept pushing me to put more and more reverb on everything, which is why I finally

gave him a yo yo while we were mixing [laughs]! The balance challenge was always in getting it both dimensional and wet, or up front and punchy.

"The trickiest part in "Sea Legs" was the whole middle section. There is a little Minimoog solo that has Roland Space Echo on it where we printed the reverb, and then compressed the whole thing maybe 30dB with a Spectrasonics 610, so that the synth's envelope is kind of breathing with reverb."

### Red Rabbits

"The first part of the track that sounds like it's underwater is actually a Nord Lead 3 synth patch that James had cooked up. The vocals were miked with a BLUE Bottle, which gave it a very big sound. There's also a great delicate 773e organ in the second verse where Marty and James were playing a B3 together that was miked way, way across the room to give it a ghostly sound. In addition, on the word 'Try,' and some others, we cut a bunch of background vocals, then piped them through a Leslie rotating speaker and miked it from a distance."

### Black Wave

"This track starts with a groove James made from sampled digital noises that almost sound like finger snaps. The main synth is a Nord Lead with two different reverbs going into each other and a lot of compression

on them. The basic track was something we put together pretty quickly, but all the weird little dropouts, random breaks, and structure was something that we built by chopping around in Pro Tools later. If you listen in a couple of spots, there are also some Mexican radio sounds that were not planned, but picked up by a guitar amp in the studio."

### Split Needles

"The solo is two tracks of the M-Tron synth. The guys found out that if they switched the presets in the middle of the performance, it would drop out for like a millisecond or so. So that herky-jerky, chopped up feeling in the solo is two passes of the M-Tron where James is actually switching the presets while Marty is playing — it sounds like it's just going to blow up or melt down!

### A Comet Appears

"James always had it in his head to end the record with this track. It was always one of my favorites and I would say, 'Isn't there any way we could get it somewhere earlier in the record?' The tremolo on the main rhythm guitar is actually the Nigel plug-in from the [Universal Audio] UAD-1 card. For the slide guitar sound, we used the neck pickup from a Les Paul through a [Electro-Harmonix] Big Muff, with the amp turned down really low."



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# ROBOT DRUMMER ROUNDUP

They're versatile, always on call, and getting really good

by Craig Anderton

**I**f or most music, you need the foundation of a good drum part. But if you're not a drummer and working alone in the studio, who ya gonna call? These days, people are turning increasingly to software that helps in the actual creation of a part, and also increasingly, the results are becoming more realistic — and musically useful.

This article looks at some of the most popular and common pieces of cross-platform (except where noted) software designed to lay down a drum part as fast as possible. Interestingly, each one takes a different approach to this task; some might resonate with you, while others don't. So, we'll do an applications-oriented overview that describes how you would go about making a drum part with this new breed of software. Hopefully by the end of the article, you'll know which approach is going to work best for you.

## SAMPLE CD LIBRARIES: QUICK AND EFFICIENT, IF THE MUSIC FITS

While not typical software *per se*, when working in a particular musical genre a good set of sample CDs with multitracked drums might be all you need. For example, each Discrete Drums series typically consists of audio CDs so you can audition what's in the libraries without having to load anything into your computer, and a bunch of content: particular projects played by a drummer and broken down into individual song sections (and furthermore, into individual tracks like snare, kick, toms, room mics, etc.), stereo loops mixed down from the multitracked versions, and individual sampled drum hits. They're extremely well-recorded in excellent rooms, use top-notch recording gear and mics, and aren't overly processed so you can add as much or as little EQ, limiting, etc. as you want.

I recently used the Series I set of rock drums to create a fairly complex drum part. Referring to Figure 1, here's a description of the workflow I used, which illustrates how you'd put together a part with sample CDs.

1. If time is a factor, forego the multitracked projects (although they do offer much more flexibility) and use the stereo loops. They're well-mixed, and do the job. (Drums on Demand also makes excellent stereo loops for this purpose.) Some of the loops are on the "busy" side, but you can usually find a fairly straight-ahead verse part and lay that in as a reference.
2. What makes a sample CD drum part really come alive is cutting and pasting. During the verse, there was an instrumental figure between vocal phrases. I needed something different for these; the same project had an appropriate tom beat file. I cut away 1.5 measures of the verse but left in the fill (colored red in Figure 1), and brought in 1.5 measures of the tom beat (light blue) behind the instrumental figure. In one section, I doubled the verse with the tom (yellow), as the song was building at that point.
3. For the chorus, there was a great 4-measure drum beat but it was too complex. However, the first measure was perfect, so for most of the chorus I just cut that one measure segment and copied it multiple times (green), waiting to use the whole beat (orange) until the final measures that led into a transition.
4. Just these few files got the part 90% of the way there. I grabbed a tambourine beat (dark gray) for the choruses, but needed a few more final touches.
5. Cymbal crashes generally don't work well as part of a loop, so I brought some cymbal crashes (brown) in as one-shot samples where appropriate.
6. Finally, in one spot, I wanted a series of 16th note snare hits to lead into the start of the chorus. So, I isolated a snare hit

from the loop, trimmed it to a 16th note, and pasted it multiple times (magenta), leading into a fill. Note the automation curve (light blue line) that increases the volume of the hits over time. I also wanted a dramatic fill toward the end, and there were several to choose from (dark blue) — no problem.

As these files were all acidized, even though the file tempos were a little slow, Sonar recognized the acidization and sped them up appropriately. (When I bring non-acidized files into a project, I'll generally use DSP to stretch them.)

Perhaps most importantly, the Discrete Drums sets clearly had a lot of thought put into them as to the elements needed to make a complete, authentic-sounding part. Each project contains lots of files and variations, so if even though it's a "some assembly required" situation, it's almost always possible to find what you need. If not, you can check out the other projects.

As the parts are played by a human drummer, the parts already have dynamics and expressiveness. Still, some gain changes and automation can add extra emphasis. This also means that the drums hits are *not* quantized to the nearest sample (nor should they be). As a result, with some parts you'll need to add a very short crossfade between files to cover up any glitches or splices.

The part ended up sounding like it was played by a drummer, because in fact, it was; but the real key is editing, which can make sampled loops fit a song like a glove. [www.discretedrums.com](http://www.discretedrums.com), [www.drumsondemand.com](http://www.drumsondemand.com)

## STEINBERG GROOVE AGENT 3: THE ORIGINAL ROBOT DRUMMER

Of all these products, Groove Agent 3 is the most like a true robot drummer. It generates patterns in various styles, with varying levels of complexity including automatic fills. The program works in stand-alone mode, as a plug-in (VST/AU/DXi), or ReWire slave.

Even better, Groove Agent 3 generates what it's doing as MIDI data. If your host can capture this data (e.g., Cubase, Sonar), then you can freely modify the part afterward. This also means that it works well as a MIDI expander module, where you can take advantage of the generous complement of drum and percussion sounds (as well as load your own AIF/WAV samples).

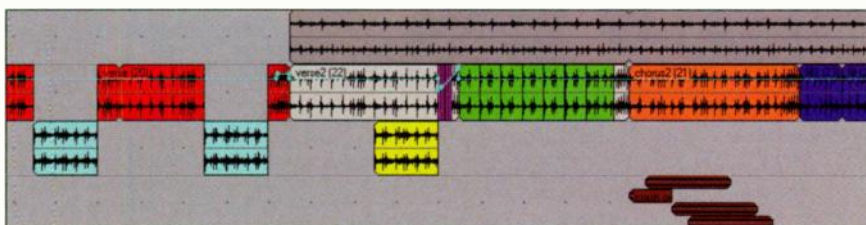


Fig. 1: Editing the loops from a sample CD creates a more customized part.





**Fig. 2:** Groove Agent 3's Dual Mode allows any two options: MIDI-controlled grooves, percussion, or audio loops played by a human drummer.



**Fig. 3:** BFD's Groove library is a separate section that drops down from the top of the interface when needed.

The process of creating a part is simple:

1. Select the style you want; an associated drum kit loads automatically. If you want to tweak the drum sounds, you have quite a few variables (decay, tuning, amount of ambience, pan, etc.).
2. Move a slider to choose the part's level of complexity, from basic to Keith Moon-style flailing.
3. Set Groove Agent 3 to generate fills (random or consistent) automatically, or add fills and accents yourself in real time.
4. Tweak the shuffle, humanize, and ambience knobs as desired.
5. Click on Run, sit back, and listen to the part unfold.

There have been quite a few changes in the latest version. Groove Agent formerly consisted of one module that triggered drum sounds with MIDI, and this is still accessible via Classic Mode; but a new Secret Agent module incorporates digital audio loops played by a real drummer, that nonetheless have the same flexibility (time stretching and the option to add fills) as the MIDI-based options. Furthermore, a new Percussion Agent module provides a variety of percussion parts, again with the usual Agent options. What brings this all together is Dual Mode (Figure 2), which allows using two of the three Agents at any one time.

Sound-wise, there are new acoustic drum kits, digital drum machine and percussion sounds, and an FX section where each of the available 12 stereo outs has its own 9-band EQ and compressor. There are also many more styles, including ones in non-standard time signatures, and algorithms for alternating hits to avoid the "machine gun" effect.

Overall, Groove Agent 3 is the closest you'll come so far to having a drummer

where you just click on play, and unique parts flow out. [www.steinberg.net](http://www.steinberg.net)

### EXPANSION BFD: GREAT SOUNDS MEET GROOVE LIBRARY

Expansion's BFD is a "hyper-realistic" sampled acoustic drum standalone/plugin program (it can also be a ReWire slave). It features multiple drum kits with multiple miking positions, the ability to swap around kit elements, and a great deal of control over the sound. But what interests us here is the Groove Library section (Figure 3), as it lets you create drum parts using a variety of MIDI grooves and fills — some programmed, some created from the playing of human drummers.

BFD's Groove Library includes almost 1,800 grooves and over 400 fills, but you're not limited to that; you can import your own MIDI file grooves, and save them into the Groove Library for later recall. Bi-directional drag-and-drop is supported, as you can drag MIDI sequences into slots in BFD, as well as drag BFD grooves into your host sequencer (assuming that the host supports this).

It's quite easy to put together a drum part with BFD:

1. Drag a bundle of up to 12 grooves into one Groove bank, and if desired, 12 more grooves into the second bank. You can also drag in individual files if you want to mix and match among bundles.
2. Drag a bundle of up to 12 grooves (or individual files) into the Fill bank.
3. Each groove in a bank has an associated keyboard note: Notes C5–B5 play bank 1, C6–B6 bank 2, and C7–B7 the fills bank.
4. Holding down a key plays the groove; you

can also initiate a latching mode, so that the groove keeps playing until you initiate another groove, or trigger the original groove again.

5. Record the MIDI data generated by your controller as you trigger the various grooves and fills. On playback, the MIDI data will trigger the grooves the way you played them.

There are other options; if you're really not into doing any work at all, enable the Auto Repeat, Auto Shuffle, and Auto Fill buttons, then hit a key. BFD will cycle through the various grooves in a bank, and insert fills at the interval you specify. This is great for when you just want something to jam to; if you then want to go back later and create a more complex part, go for it.

You can filter out certain notes if you, for example, prefer to add cymbals as a separate, manually-overdubbed track. You can also ignore the real-time aspects altogether and just audition the MIDI grooves. If you like them, drag them over into your host to create a part.

Overall, BFD straddles the worlds of great-sounding drum expander and robot drummer; most importantly, the program makes it surprisingly easy to create parts that sound as if they were recorded by a drummer in an excellent studio. [www.expansion.com](http://www.expansion.com)

### TOONTRACK EZDRUMMER: MELDING MIDI AND AUDIO

The EZdrummer plug-in has two main claims to fame. First, it's descended from the acclaimed dfh drum sample library. Second, Toontrack states it can yield a great drum track in just a few clicks . . . and it can.

There are two main elements: A set of superbly recorded drums (about 670MB of samples, but using lossless compression that gives the equivalent of about 8GB uncompressed), with several drum sound options and a mixer that doesn't just adjust drum balance, but also can mix in bleed. Although you can use a stereo output to keep things simple, you can also assign any of the nine tracks to any of eight outputs (there's no leftover track; I send the snare top and bottom to the same track). If you want, you can just treat EZdrummer as a sound module, and trigger the drums from a pad controller or keyboard.

But we're talking about putting together something fast, which brings us to the second part: A library of MIDI files that you can audition (Figure 4), and then drag-and-drop into a host sequencer. There's also a "master velocity" control, so you can push the dynamics or bring them back. Here's the typical workflow for putting a drum track together.

1. EZdrummer loads a default kit when you open it — and when I want to put a song together fast, I don't bother changing it. It's always possible to change the kit, swap out drums, alter the mix, or whatever later on.
2. If the default kit doesn't do it for you, click on any drop-down menu on any drum and choose another kit.
3. Open the Groove library by clicking on the Open Grooves button.

**SOME ASSEMBLY REQUIRED**

While the automatic part generation aspect of all these programs is appealing, there's still the old school way: Load up a drum sound module, like Native Instruments' Battery, Big Fish Audio's Drums Overkill, or a sampler with drum sounds (just about all samplers include some drum sets, and there are add-ons like Reason Drums for Reason), and program or play your own MIDI data to drive the sounds.

But there's also a halfway approach. Keyfax ([www.keyfax.com](http://www.keyfax.com)) offers a variety of MIDI files suitable for driving drum modules, so if you want to use a particular drum program or sampler, these can provide the parts you need. Files are available in a variety of styles and genres.

4. EZdrummer ships with a pop/rock library that has five main subcategories: 4/4 Straight, 4/4 Shuffle, 4/4 with 6/8 Feel, 3/4 Styles, and 6/8 Styles. Each of these has additional categories for musical styles, including fills. Choose one of these, and you'll see a list of Grooves toward the right, with another list of Playing Variations.
5. The Playing Variations are MIDI paydirt. You double-click on them to audition them, and if you like something, drag it into your host sequencer's MIDI track that's driving the drum sounds. As MIDI is so malleable, I often treat EZdrummer as a glorified metronome (although I try to get patterns that work well), and deal with the fills later.
6. As the song takes shape, I'll go back and edit the MIDI parts and if necessary, the mix. Because you can treat EZdrummer as an expander module, it's also like having a library of individual hits on hand if you want to add cymbal crashes or other hits.

By basing the sounds on MIDI and including grooves played by a drummer, the resulting parts sound (natch!) like they were played by a drummer — but you have more flexibility than a purely sample-based approach. As to customization, you can add your own grooves and Toontrack has also released four drum kit expansion packs (Nashville, Drumkit from Hell, Vintage Rock, and Latin Percussion) with more planned (e.g., R&B and industrial/ethnic).

So yes, you really can put together a drum part with just a few clicks; but as with any of these programs, put a little effort into customizing the results, and you'll end up with something more personalized and appropriate. [www.toontrack.com](http://www.toontrack.com)

**SPECTRASONICS STYLUS RMX: THE DRUM COMPOSITION TOOL KIT**

Stylus RMX takes more of a groove toolkit approach, as it can play back grooves, let you assemble multitracked combinations of grooves and mix/mute/solo them (the closest analogy I can think of is Ableton Live for drums), and what's more, you can create some pretty exceptional non-traditional, processed drum kits and use Stylus RMX as a tone module.

Although there are a lot of extremely creative and processed grooves, suitable for remixing, electronic, and urban forms of music, there are also standard sounds and several expansion packs. And Stylus RMX can load and convert REX files from commercial libraries; if you have Propellerhead



Fig. 4: The front window is the mixer for EZdrummer's drum sounds, while the back window is the groove library browser.



Fig. 5: The synth modules are on one page of the Stylus RMX interface. Below it, MIDI sequences have been dragged into the host program to create a drum part.





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Fig. 6: Session Drummer 2 brings drag-and-drop drum part creation to Cakewalk Sonar.

Software's ReCycle and some editing chops, you can create your own REX files as well and import those.

Another, less tangible factor is that Stylus RMX is an inspiration generator. A lot of drum software facilitates getting what's in your head into something you can hear, but Stylus RMX can also put things in your head in the first place — it's a great writer's block buster.

Loops or individual hits in kits can route to four effects buses, and there's a fine roster of effects for processing them. There's also a complete set of synth modules (Figure 5; LFOs, filter, and envelopes, as well as DSP like sample start, sample reverse, and the like) that can again process individual loops or hits. Still not enough? A "chaos" feature allows altering the loop patterns and timing so that the loops can live and breathe over time.

Although Stylus is based on using MIDI to drive digital audio, audio-wise the program uses the Recycle model of slicing up loops and issuing a series of notes to trigger each slice sequentially. The downside is that you can't use the resulting MIDI patterns to drive traditional drum sound programs, but you can do things like isolate specific hits for specific drums and process those.

Because of all these options, explaining how you would use Stylus RMX to put together a drum track is daunting, as there are so many ways you can do it. However, as the point of this article is putting tracks together fast, let's do it from that angle.

1. Each of the eight Stylus RMX "tracks" can be driven from a different MIDI channel, so start off by creating eight MIDI tracks.
2. After opening up Stylus RMX as a plugin, browse the collection of loops. When you find a loop you like, drag the MIDI file from the "drag and drop" box on the browser page into the MIDI track asso-

ciated with the Stylus RMX channel containing the loop.

3. Click on the next Stylus RMX channel, and browse another loop. Again, drag the

arrange your song using the MIDI files.

5. You now have the "outline" for your drum part. As the tune gels, it's easy to add variations to the patterns by shifting some of the MIDI notes around; for example, you can find the "slice" that corresponds to a snare drum hit, and copy it to add some additional hits — like a roll at the end of an otherwise straightforward part.
6. As the song evolves, you can continue editing the part — add effects within Stylus RMX or your host, use MIDI learn to create automated control of virtually any Stylus RMX parameter, and the like.

In addition to using kits instead of loops, yet another approach is to do a "live remix" using Stylus RMX. For example, you can load up multiple loops in Groove Menu mode, and trigger them in Next 16th or Next Beat mode from the MIDI keyboard in real

## A standout DrumCore feature is being able to import files and "tag" them with searchable metadata.

MIDI file over to a MIDI track in your host.

4. I'll generally pick a couple foundation loops, some fills, and some percussion. After selecting the loops you want to use,

time while syncing to existing tracks, and use the MIDI learn function to control each channel with a fader. Then, as Stylus RMX plays, you can vary the mix of the loops and record

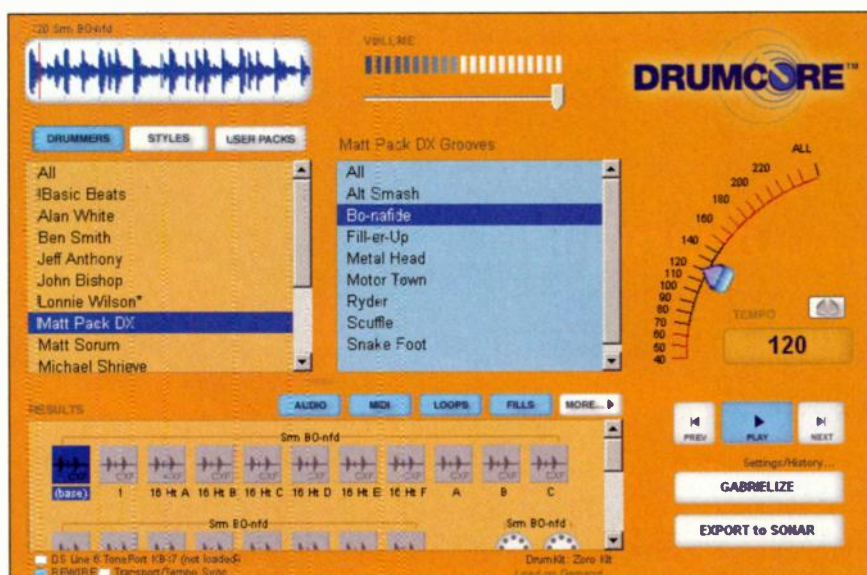


Fig. 7: DrumCore's interface is all about drag-and-drop, but you can definitely dig deeper into kit customization and databasing your files.



the faders moves as MIDI data. [www.spectrasonics.net](http://www.spectrasonics.net)

## CAKEWALK SESSION DRUMMER 2: SONAR'S ANSWER TO ROBOT DRUMS

Session Drummer 2 (Figure 6) is included in Cakewalk's Sonar Producer Edition 6 and Home Studio XL 6, but works with other Windows programs. It's basically a ten-channel drum module, but can also load eight MIDI patterns up to 32 beats long. You can play these in real time by clicking on them and if you want, cause them to loop; you can also drag-and-drop the MIDI patterns into your host to create a part, but drag-and-drop is bi-directional as you can also drag patterns into Session Drummer 2.

To create a part in real time, here's the basic procedure.

1. Load an appropriate program, containing a kit and MIDI patterns. Several come with Sonar, although expansion packs are now becoming available.
2. Each kit comes with a variety of MIDI patterns and sounds, but as mentioned you can also load your own patterns, as well as load different sounds for the pads.
3. Tweak the kit parameters (volume, width, stereo pan, and tune) if desired.
4. While Sonar is recording MIDI data, trigger the patterns from a MIDI keyboard playing notes 27-34 (one for each of the eight patterns). You can also play drum sounds with other notes to add fills and such.
5. On playback, Sonar will play back the patterns where you triggered them.

One very useful feature is that you can load pad sounds with WAV, AIF, Ogg Vorbis, or SFZ (multisampled) files. Also, you can load complete audio loops into the pads, thus treating Session Drummer 2 more like an MPC-style device where you trigger audio loops from your MIDI controller. [www.cakewalk.com](http://www.cakewalk.com)

## SUBMERSIBLE MUSIC DRUMCORE 2: REWIRING THE STARS

DrumCore 2 is not a plug-in, but a standalone or ReWire application. It contains both audio and MIDI files played by some of the truly heavy hitters in the music biz (Matt Sorum, Terry Bozzio, Alan White, and the like), which you can drag into into a variety of hosts (DrumCore does easy exporting to Acid, Cubase, Fruity Loops, Nuendo, Pro Tools, Samplitude, Sonar, and

Traktion; for others, you can export to a folder, and import into the host). Furthermore, several expansion packs are available with loads of additional files.

DrumCore comes with plenty of drum kits, which means a very flexible choice of sounds (acoustic, electronic, and percussion) if you're using the built-in MIDI grooves or simply using DrumCore as a tone module — a function it does very well. Furthermore, there's a drum kit editing section so you can customize it to some degree: For each sound you can mute, solo, change volume, edit panning, or re-tune with a pitch control, as well as swap kit sounds or even load your own AIF/WAV samples.

One standout feature is that you can import files (WAV, AIF, REX2, Acidized, or

the Gabrielize feature can often create a fill out of a standard part.

4. Keep building the part.

When you're done, you can turn off transport/tempo sync so you hear only the files you've used to create a part, not DrumCore.

A free player, DrumCore LT, does much of what DrumCore does and allows playing back the expansion packs, which really lowers the entry price. Also, a demo is available on the Submersible site.

DrumCore requires a little more work than some other programs; it doesn't do automatic fills, or automatic slight randomization over the course of a tune. Furthermore, the drum loops aren't multitracked. However, having files available in both audio and MIDI

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## None of these programs lock you into a particular sound: All have customization options.

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SD2), make them part of the DrumCore database, and "tag" them with searchable metadata. However, only Acidized and REX2 files will be tempo-stretched; other formats play back at their initial tempo. Note that you're not totally locked in to a file once it's loaded, as the "Gabrielize" function randomizes the loop somewhat. If you like what you hear, drag it in and if not, try again.

Creating a drum part is mostly a drag-and-drop process if you want to use audio or MIDI files. You can also use a combination of the two, but if you're planning on doing a mix and match from multiple artists, you'll probably want to use MIDI files as that way, you can maintain a consistent kit sound.

1. Set the host tempo as desired. If you're using MIDI files, choose an appropriate drum kit.
2. Use the DrumCore interface and browser to audition the various files, or search for files with particular attributes.
3. When you find something you like, drag it over into an audio or MIDI track, as appropriate. Note that fills are not a given; some drummers include them, some don't so this is where mix and match comes in handy. Otherwise, using

formats is extremely helpful, especially because you can customize the sound of the kits. The whole database management aspect of the program is also outstanding. [www.submersiblemusic.com](http://www.submersiblemusic.com)

### SO, WHICH ONE IS BEST?

Hopefully, you'll be able to come to your own conclusions after getting an idea of how these programs work. As just one example, some might gravitate toward DrumCore because of the database management aspects, while others might decide that Groove Agent is perfect for them because they just want to push play and see what happens. For those working exclusively in a particular style, sample CDs might be all you need. And don't forget that some programs can be chameleonic, like Stylus RMX: Although you can use it in traditional ways, it also lends itself to remixing drum parts. Or what might matter to you is realistic drum sampling, in which case BFD and EZdrummer are excellent choices.

In any event, these are all pretty amazing programs. Best of all, none of them lock you into a particular sound: All have customization options so once you get past laying down a basic groove, you can customize things in a variety of ways . . . welcome to the brave new world of robot drummers. EQ

# HANDY HINTS FOR THE SOLO RECORDIST

Tips, tricks, techniques, and theories for pulling double duty in the studio

by Bill Ring

**S**o you have your songs, your equipment, and are ready to record. Or are you? While you may be tempted to jump right in and start tracking (after all, you are an engineer and a musician, so why not?), it's important to get into the right headspace in order to be at the top of your game in undertaking both tasks simultaneously.

Working solo, you can sure do whatever you please. But the way you approach recording when you are playing and engineering is vastly different from just doing one or the other. You must learn to juggle tasks, and master efficient workflow, or else you'll never get anything done.

Study your recording software's transport control options and decide the best way to punch in, increment take numbers, set locate points on the fly, and so on. Often the first way you discover to do something won't be the most convenient, especially if shortcuts are built in, or you can assign these functions to external hardware. You can waste an awful lot of

time with awkward working methods if you are unaware of the alternatives.

## #1 DRUM IT UP A BIT

Gracie Allen once said that most of what she knew she had learned by listening to herself talk about things she knew nothing about. If you are a non-drummer programming your own percussion, embrace your ignorance and don't be afraid to experiment. Doing it "wrong" can sometimes result in a fresh idea that makes your music stand out.

Loops are essential for many modern music styles, but if you are trying for a more organic vibe take the time to edit variations in one or two verses of your basic track. Alter the fills, add a few extra lower velocity hits on the bass drum, vary the cymbal crashes . . . try to change it up a bit so that it feels more performed. If you do this in, say, only two verses, chances are you can recycle them later in the song with none of the listeners being any the wiser — it's unlikely anyone is going to notice that the fill at the end of verse four is the

same as the one in verse two. You can also carry this cloning process a bit further by cutting and pasting parts of a verse in a different order.

A lot of people make the mistake of randomizing time in order to make a track more "human." A better approach is to randomize velocity (but not too much), as it gives the track a less mechanical feel without disturbing the groove. Randomize note start time a little bit if you must, but be careful not to overdo it; "human" doesn't equal "sloppy" — if you wanted a loose drum track, you would just record one yourself. Try pushing the hi-hat forward a few clicks and/or delay the snare a bit. You'd be surprised how much of a difference even one or two clicks can make. But leave the kick drum alone initially, so it serves as an "anchor;" experiment by pushing the other components of the kit forward and backward a bit to get the feel you want.

## #2 SWITCH IT UP

Depending on your equipment, it may be possible to connect one or more foot

## SUPPLEMENTARY SECRETS FOR SOLO SUCCESS

by Craig Anderton

If you're wearing both the player and engineer hats, then . . . grow another head! But as (thankfully) genetic engineering isn't quite there yet, you might find it easier to follow these tips.

**Clutter: The Efficiency Killer.** People are generally more creative when there's minimal clutter, as the clutter competes for attention. But clutter also makes for less efficiency — and inefficiency is the kryptonite of solo sessions. If you have to move aside a pile of something to find something else, you've just lost time (and possibly interrupted your workflow). Clutter also applies to cables: Dress them under tables and along baseboards using cable ties.

**Wireless mouse and keyboards.** They sound like a good idea; after all, you could put one on top of your keyboard or in your vocal booth, and control your session from there. Careful, though: A few users have reported that enabling wireless devices in some computers interferes with FireWire interfaces, so after going wireless, make sure everything works as expected. (Incidentally, users of Frontier Design's Tranzport, including me, have not reported problems using it as a wireless controller.)

**Got space?** Before starting a session, check that you have plenty of space on your hard drive, *in addition* to the minimum of 10% free space for "storage overhead." You really don't want to get stuck in the middle of a session because there's no more room to write a file.

**Template files.** Virtually all sequencers let you specify a default "template" file, so create one that covers as many of your needs as possible (or create different templates for different projects). Do you sing? Then have at least a couple audio tracks built into your template and labeled "vocals." If you're a songwriter, have a "workstation" instrument, or any of the many multitimbral samplers with big libraries, inserted and ready to provide parts. When properly done, a template file can shave several minutes off of any session.

**Vocalists, bring in a bottle of water before you start recording.** At some point while singing, you'll want a drink of water. Have it ready to go so you don't need to interrupt the flow.

**The session isn't over when the session's over.** The best time to back up files, defragment hard drives, and update programs is after the session. You'll probably want to tidy up, grab a bite to eat, or whatever; so, set up your computer to do some time-consuming task, then things will be ready to go next time you fire up.

**Finally, remember that sometimes you *want* to interrupt your workflow.** If some problem crops up ("But the program didn't hang yesterday when I used it!"), give a shot at fixing it but don't beat your head against the wall. A short break may reboot your brain, and allow you to find the problem faster. And of course, a quick Google search might find the problem far faster than you would on your own.



switches and to program them to perform different transport functions. Personally, I use a Mackie HDR 24/96, which allows connecting one footswitch to the mainframe and another to the remote (Figure 1). This is enormously helpful when making an album all by your lonesome.

Footswitches can be your best friend when you're recording alone, but before you start doing sessions consider your options and experiment with different ways of programming and positioning the switches for maximum convenience. It's better to err on the side of overtly sturdy and grossly oversized pedals than to invest in something too small and light, as you want your switches to stay in place and be able to activate via big dumb buttons instead of dancing carefully across crowded pedal boards.

To avoid losing your groove when doing multiple takes, set your recording

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## To avoid losing your groove when doing multiple takes, set your recording software to increment take numbers and/or loop record automatically.

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software to increment take numbers and/or loop record automatically. The more you automate, the more you can concentrate on actually playing. Remember that with non-destructive digital recording you never really lose anything when punching in, so be smart and take advantage of that by setting your punch-in point much earlier than you actually need it so that way you can be relaxed and ready to play smoothly when it counts. Also, keep the editing and treatments to a minimum when tracking — get your tracks down first, then put the engineer's hat back on and clean up the start and the end times of the punch. You want to be fully in the zone for both duties; trying to jump back and forth between playing and producing will not do your tracks any favors in terms of getting soulful tracks.

Fig. 1. Four things that will save your solo session: closed headphones, a music stand, a recorder remote, and a footswitch (or two). Credit: Marlis Momber





DP 4 1 2 3 4	PRE BUZZ PUNCH CRUNCH DRIVE LOW HIGH LEVEL	TAPE: SONG: MIX: DATE:	
	INPUT ON ON REV OUTPUT +20dB GND PHASE NORM OUT NORM		
	EQ sliders: 12, 10, 8, 6, 4, 2, 0, -2, -4, -6, -8, -10, -12		
	B C O H M P GAIN REL THRESH RATIO ATTACK RELEASE CUF PEAK DUAL MICHO COUPLE GAIN REL THRESH RATIO ATTACK RELEASE CUF PEAK		
A P H X 6 BY IN SPR IN THRESH CUF SLOW FAST MANN AUTO SOFT RATIO ATTACK REL LOW CUT RATIO FREQ UNLINK LINK SLAVE			
A P H X 1 Thrash Att Hold Rel 90 dB Thrash Att Hold Rel 90 dB Thrash Att Hold Rel 90 dB Thrash Att Hold Rel 90 dB			
NOTES:			

Fig. 2. "Recall sheets" can help you re-create vital session details in the future, as well document particularly useful settings.

#3 CLICK IT GOOD

Sure, you can configure your software to output a click track, but another route to take is to set up a MIDI track and use a drum sound from a module instead. This is a little more troublesome, but it can be really helpful when tracking alone. The two key points are:


- Use a sound that is as clearly different as possible, in terms of frequency and tone, from whatever instrument you are recording.
- Set the level low enough to avoid ear fatigue and leakage from your headphones (make sure you are using closed headphones, which mean less leakage and less chance of the click or drum track getting into your recorded track).

For example, when I first started recording acoustic guitar I found that the sound of the pick hitting the strings was so similar to the click that I could hardly tell them apart. When I got perfectly in sync with the click I could no longer hear it, and I would find myself drifting off the beat in order to be able to pick it up again — the exact opposite of what this

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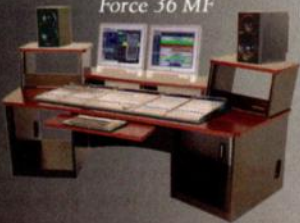
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exercise was intended to accomplish! Making the click louder hurt my ears, and it would sometimes be audible in the recorded track, even when I used closed headphones. No good.

The solution was to use a kick drum sound, which was not masked by the guitar. I could hear it clearly at a much lower level, so no worries about fatigue or leakage. When recording other instruments, I suggest possibly using a clave sound in preference to the ordinary click, simply because it is less piercing and more "musical." At other times you may find that a crude drum track consisting of kick drum and snare helps you get the feel you want better than a simple click. While this may take a bit more prep time —

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**If what you are recording has a wide dynamic range, there may be no middle ground at all without compression.**

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here as in every other case — when recording, the engineer (you) should be prepared to bend over backwards to accommodate the needs of the performer (you as well).

#### #4 COMPRESS IN

What did you just say to me? Calm down now. Split your signal so you're recording into two tracks, and apply compression to one of them just to normalize and to improve your signal-to-noise ratio. Trust me, being your own engineer while multitracking can be difficult enough without having to police your levels too heavily, and you want as steady and as clean of a sound as possible when you're overdubbing.

Of course, you don't have to use this compressed track for your mix, but you should try feeding it into your headphones so that the tracks you are listening to while laying down that next section more closely resemble how you feel they should sound. And

try to do this with a "real" compressor instead of a plug-in because if you feed an uncompressed signal into your A/D converter, you have to be careful to avoid digital distortion on the peaks and low bit resolution ("grainy" sound) in the quiet parts. If what you are recording has a wide dynamic range, there may be no middle ground at all without compression. Also, recording with compression helps to prevent blowing a take when you hit one very loud note.

#### #5 ENJOY THE SILENCE

Chances are you'll be cutting a lot of your tracks in your control room (or a room that's full of some pretty noisy computers and other equipment). This is especially a problem when recording vocals. Aside from unplugging everything, what can you do to help keep your tracks noise-free? The first thing you should do is check out last month's issue (June 2007) for tips and tricks relating to proper room treatment and noisy equipment workarounds; but there are a couple other



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approaches to lowering your noise floor that can be implemented in one-room recording scenarios.

If you can't place your equipment in a completely separate room away from your mics, try just setting up so that your mics point into the corner of the room farthest from the gear (preferably not towards a window). Then hang blankets or drapes in that corner, a foot or so from the wall, to create a dead air space. If you're in a bedroom, you can also try pointing the mics toward an open closet full of clothes. Make sure to use cardioid pattern mics. If you have a noisy fan on a piece of equipment, placing something (such as a pillow) directly in front of the vent can help a bit as well; but take care not to place this against the equipment in a way that blocks any airflow, or you run the risk of damaging your gear.

When it's time to record vocals, place your mic in one of the aforementioned positions to record a couple of minutes of room tone (what we wish was pure silence). Listen back and monitor your room sounds, identifying any problematic sources of the loudest noises. See if you can reposition or other-

wise dampen the sound of the worst offenders. If it is impossible to cut a track without extraneous noise, you can always gate your recorded signals when mixing, or just manually edit your way to

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**A drier vocal often sounds more intimate, and can be cranked up louder without turning the mix to mud.**

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a cleaner vocal take. Applying a high pass (low cut) EQ on your vocal tracks, setting the knee just below the fundamental pitch of the lowest note in the vocal, can get rid of a lot of low-pitched

noise without doing much damage to the vocal. Remember to go easy on the compression when treating a track that was recorded in a noisy environment, as excessive compression will elevate a slightly annoying noise floor to the level of totally unacceptable.

You can also use this room sound sample in conjunction with noise reduction processors (as found in Sound Forge 9 and Adobe Audition) that subtract noise from a signal to give a cleaner sound. Just don't apply *too* much noise reduction, as it may alter the main sound.

**#6 CAREFUL WITH THAT EFFECT, EUGENE**

A fundamental mistake made by many performer/producers is that they try to compensate for what they perceive to be a lack of personality inherent in performing all of their parts by drowning everything in effects, in some misguided attempt to make themselves not sound so much like themselves.

I've noticed that every time I see a singer try their hand at a mix, invariably the track ends up with too much reverb on it. In the case of reverb/echo, less really is

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more. A drier vocal often sounds more intimate, and can be cranked up louder without turning the mix to mud. But if you don't want to turn the reverb send down, you can always just use a shorter reverb on the vocal. This will help clear up the mix a lot.

As mentioned before, compression is not going to crush away your problems — more often than not it will just amplify them, especially with vocals. This may be common knowledge, but one trick to getting your vocals louder, and to cut through the mix without excessively altering sound quality, is to apply a judicious amount of technical and aesthetic compression. I hear a lot of complaints about digital compression being too "clinical," but by pairing digital compression with a hardware compressor that "warms" the vocals up, you can avoid changing the sound for the wrong reason. Remember, get the color and warmth from your hardware compressor, and then apply the "clinical" plug-in last in the chain to fine tune and possibly, provide some degree of limiting.

If you're trying to bring your vocal track more forward, set a midrange parametric EQ for a 2dB boost with a moderately sharp bandwidth, then slowly adjust the frequency control up and down until you hit a spot at which the track seems to jump out at you. For a female vocal, this is often a little over 2kHz. Male vocals are usually roughly an octave lower, although in both cases, boosting the sibilance frequencies around 3–4kHz can increase intelligibility. Once you've found the critical frequency, adjust the boost and bandwidth to taste. Conversely, if something else seems to be getting in the way of your lead, go through the same procedure on that track with the EQ cut instead of boosted. If you aren't sure what is causing the problem, identify the offender by cutting the other tracks one at a time. In general, when one instrument is getting in the way of another try this "notch and sweep" trick on the problem tracks. The natural tendency is to boost whatever you can't hear, but if you're not cutting about as often as you are boosting with your equalizers, you will probably have a muddy mix.

#### #7 WRITE IT DOWN

Whenever you record or do a mix, keep meticulous notes so you can recall your settings and recapture your sound as easily as possible (see the related article on session documentation in this issue). Of course you can — and should — save

everything possible in your computer or digital workstation, but things like mic placement, settings on outboard gear, and so on need to be written down; this goes for pedals, effects units, and in fact, anything with a knob or a slider (Figure 2). Just because you were involved every step of the way doesn't mean that you will remember it all. Suppose you finally get around to mixing a song you recorded several months ago and you belatedly discover a really bad note, or maybe you want to change a couple of words in the

third verse. You would like to duplicate your microphone setup and compressor settings so that the overbuds will blend in; if you have good recall notes, you're good to go. If you don't, you're screwed.

You can draw your own recall charts, or find them relatively easily online. Many manufacturer sites offer free recall sheets for their gear, but there are also a variety of user sites that offer downloadable recall sheets as well ([www.barryrudolph.com/pages/recalldirectory](http://www.barryrudolph.com/pages/recalldirectory) is a great resource, for instance).

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# ERGONOMICS FOR ENGINEERING AUTONOMY: SEVEN STUDIO DESIGN SOLUTIONS FOR THE SELF

From swing wings to cool closets, here's how the pros have made work less of a chore

"A man's reach should exceed his grasp."  
—Robert Browning

IR

Robert Browning may have been a great poet, but he would have worn himself out in the studio.

by Dan Daley  
Thirty years ago, recording studios were designed around a substantially different workflow dynamic than music commonly uses today. Multiple people were dedicated to specific tasks — engineering,

producing, assisting, playing instruments, and so on. Digital-era music productions will see its citizens wearing two or more (or all) of those hats simultaneously, as well as a few new job descriptions, like programmer and network engineer.

Despite such a sea of change in how we work, the kinds of places in which we work haven't changed as much. Perhaps it's a longing for the old shoebox studios designs of decades ago, which produced so much of the music we still listen to. More likely, though, as change comes

slowly on all fronts, digital may have come to dominate the technology but we often still find we work with vintage ergonomics.

Seven of sound's best studio designers run into this all the time, and here they recall some of their ergonomic challenges and solutions in ways that can apply to many recording scenarios.

## SWINGING WINGS

When designer Fran Manzella, owner of FM Design Ltd. in New York, met 2Hard



In addition to the room, Todd Beeten designed all the furniture for Clint Black's home studio [pictured here]. For Black's Yamaha DM200, Beeten increased

the rake of the console furniture for a user-friendlier, custom-tailored, work area to accommodate the artist/engineer.





Composer/producer Scott Freiman needed a keyboard composing area as well as a surround sound recording and mixing position, facing a small instrument live room, in his upstate New York home. Pictured is the final shot of Freiman's project studio, as designed by John Storyk.

Records owner and Sean Paul producer Jeremy Harding at the space that would soon be his studio in Kingston, Jamaica, Manzella knew that ergonomics would be a meaningful factor in accommodating the six-foot, four-inch Harding. Just as important as size, though, was dimension. The available space was 30 feet wide; nearly three times that of its depth. The dimensions indicated a long work surface centered on the console. However, like many producer/engineers now, Harding likes to work alone, doing his own programming and playing while he engineers. Asking a really big guy to have to move between workstations is not efficient — or particularly smart, for that matter. A conventional solution would be a U-shaped work area; however, that would have wasted much of the space on either side of the room.

The solution was to build a work surface with pivoting wings. With the 24-fader Digidesign D-Command console as the center point, Manzella loaded Harding's MIDI and keyboard gear on one wing and positioned outboard equipment and patch bays on the other. When Harding works alone, he pulls the wings in close to his chair and can simply pivot himself to face whichever bank of gear he needs, without moving far from the speakers' sweet spot or the

console. When the studio has musicians, artists, and others in it, all working at various positions, the work surface is swung open and everyone has plenty of elbow room.

"A key point is to connect the cabling harnesses at the pivot point, as well," says Manzella. "That way, the cable lengths from there to the equipment never vary."

## Digital may dominate the technology, but we often still find we work with vintage ergonomics.

### ELEVATED THINKING

Todd Beeten, owner of Sound Construction & Supply in Nashville, plays the angles. When he built studios at Soundtracks in New York and Clint Black's home in Nashville, he factored the angles of virtually everything into both his acoustical and ergonomic calculations. "A Neve console has 14° of elevation [from front to back] — that's no accident," he says, underscoring how well-thought-out

many classic pieces of gear are. Newer mixers tend to lie flatter, such as the 4° of rake on the Digidesign Pro Control mixer. Beeten's response is to increase the rake implicitly in the furniture he builds to hold mixers. Black's mixing surface has an additional 3° of rake built in, giving the mixer surface a total of 7°. This also has a subtle but perceptible and positive effect on reach and the ability to visually check metering and other cues.

Good ergonomics requires three-dimensional thinking, Beeten stresses. "The world isn't flat and neither is your work area," he says. Elevation considerations go beyond the console and extend to speaker and outboard placement. One of the byproducts of the proliferation of digital technology is work-area clutter — even some desktop video editing stations now routinely have two flat-screen monitors. This, says Beeten, compels the entire body to constantly adjust itself within the space, which in turn distorts the relationship between the aim (thus, the accuracy) of the monitors and the listener. Beeten is a builder with a high level of acoustical awareness, and as such seems more willing than more traditional acoustically-oriented studio designers to propose compromises between ergonomics and sonic perfection. He suggests flexible armature supports for monitors that allow them to be adjusted quickly according to the user's position in the workspace. "Bring the monitors to you rather than adapting your physical position to accommodate them," he says. "You'll last longer."

### I GET AROUND

Stevie Wonder's ability to navigate a recording studio without sight is legendary, but music sets no boundaries on physical limitations. That's why studio designer Steve Durr has built facilities for two wheelchair-bound studio owners so far. Both Dockside Studios in Lafayette, LA, and On Fire Productions in Raleigh-Durham, NC, have mobility-impaired owners. The solutions are to provide for a



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- Joe Barresi

(Producer/Engineer: Tool, Queens of the Stone Age, Pennywise, Bad Religion, Clutch, The Melvins)

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Laid out for a musician/engineer who desired a space to pull double-duty, designer David Frangioni optimized this project studio space to accommodate his client by placing his gear in a proximity that allowed the individual to both play and record simultaneously.

larger turning area within the workspace for wheelchairs, larger entry portals between rooms, completely flat floors and lowered heights on work surfaces — but not too much lower.

“One thing these kinds of clients have in common is that they are adamant that any accommodation of their situation not impede how anyone else uses the studio,” says Durr. This entails compromise, and as in a chess game, every move produces a new situation. Durr will keep soffited speakers at the same height, but will lower their aim slightly. That generally means more high-frequen-

is generally a matter of two to three inches, a compromise between the seated stature of those in wheelchairs and the standard height.

“Acoustics always seeks perfection; ergonomics acknowledges the reality that because people are involved, you're not gonna get it,” says Durr. “That's why everything has to be a common-sense compromise to each unique situation.”

#### BUILDING BRIDGES

The need to put a lot of stuff in a small space and still make it workable is a common project studio quandary. When

## Acoustics always seeks perfection; ergonomics acknowledges that you're not gonna get it.

cy energy will hit the rear of the console (which has already been moved further forward than usual to allow wheelchair access), necessitating an absorptive baffle, composed of Owens Corning 703 fiberglass batting material and 1/4" peg-board, that extends to the finished floor on that aspect of the console.

The console is lowered from the standard 32 inches from floor to bottom of the work surface, and gauging the drop

John Storyk saw the attic space that composer/producer Scott Freiman had for his Second Act Studios in upstate New York, he realized that quite a task lay ahead. “We quickly realized that there would be a challenge to meld the attic space's architecture with a very intense ergonomic requirement and still have for the necessary acoustic specifications,” he explains.

Freiman's requirements, like those of



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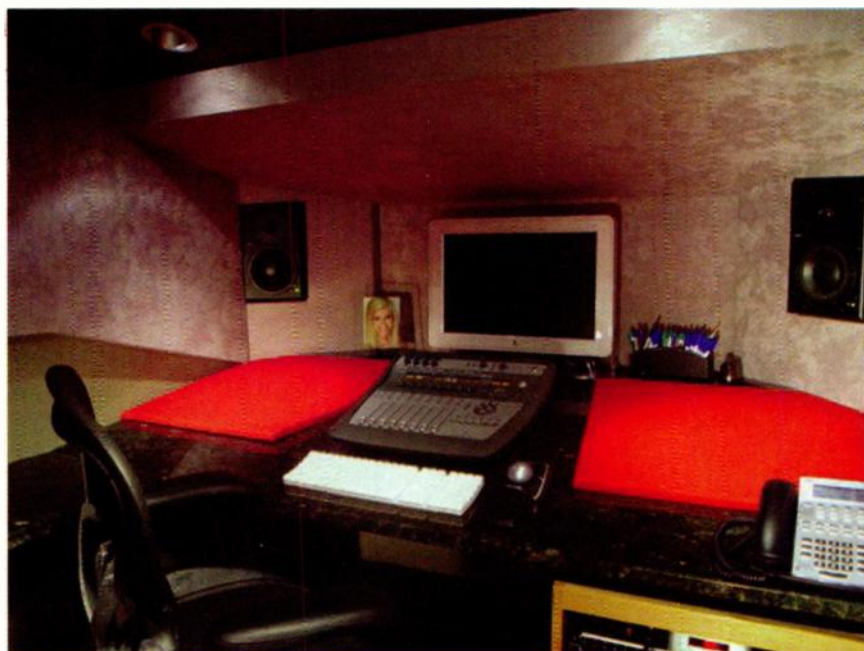
## Ryan Hewitt

### On Recording with the Mojave MA-200

*"The MA-200 instantly became an integral part of my drum sounds. From the moment I first put a pair up, they have continued to impress me with a wide open and balanced sound. I've tracked great sounding vocals, drums, guitars and bass through these mics, and my clients are consistently blown away by the results."*

#### Ryan Hewitt

(Engineer/Mixer: Red Hot Chili Peppers, blink-182, Alkaline Trio)



Jay DeMarcus, bass player for Rascal Flatts, wanted to turn a closet-sized space at his home into a programming suite. Designer Carl Tatz came to the rescue, customizing the area to allow for DeMarcus' projects by taking both ergonomics and acoustics into account.

many composer/engineers, called for both a keyboard composing area as well as a surround sound recording and mixing position, facing a small instrument live room. Additionally, he needed a large writing and work surface and if all of this was not enough, he wanted to take advantage of a spectacular view.

"Many studio configurations with this requirement will have U-shaped layouts," Storyk says, "but these traditional configurations would not work for Scott — there were simply too many (discrete) surfaces."

The key component to the ultimate solution, says Storyk, was developing the geometry that allowed the main listening monitors for the composing station to become the rear surround monitors in the mixing position. The third position — his writing surface (mostly for large music and scores, and sometimes an additional keyboard) — became the "bridge" between the composing and mixing stations, which were positioned 180° opposite to each other. It's also from this position that he can look out over the Hudson River.

#### DOUBLE DUTY

Designer Mark Genfan of Acoustic Spaces in Austin, Texas, scans his ergonomic eye across a design looking for ways to combine functions where possible and feasible. A good example of an outcome is at the new post house

Frames Per Second in Dallas. There, large diffusers make up a booth wall, with drawers inset in the bottom of the array and a video monitor set in the array, at eye level. The quintessential piece, though, is the application of RPG diffusers to the doors of the studio's microphone closet. "As there is never enough storage in a studio, and wall space is at a premium, many times we have combined a closet or storage unit with a custom exterior surface of diffuser," says Genfan. "Since we like to have some diffuse surfaces in a recording room, applying RPG Flutterfree, with a very thin profile, to the doors of a mic closet can make it look cool and be the start of a larger diffuse wall area."

It's best to find these opportunities early on. "When we're in the initial design phase of a facility, we ask our clients to look at the plan or 3D rendering and visualize every task and action in a work day," Genfan explains. "If they go through this exercise, we can find ways of simplifying and optimizing their chores, by strategic placement, by combining functions where possible, and often getting a good custom wood or metal worker to fabricate what we need."

One point to be aware of, though, is the need to test the integrity of these multi-function assemblies. A diffuser's purpose is undermined if it's attached to an unstable surface. A door, for instance, can resonate or rattle. In the process of



ringing out the room, you can check for these issues by running a steady stream of pink noise down to 20Hz, listening for vibrations and rattles, or hitting assemblies such as this one with blasts from an amplified kick drum through a speaker.

#### ROUND & ROUND

Designer David Frangioni has seen the trends of more complex multi-purpose studios and one-person operations in small spaces converge in recent years. At one of these, a private facility in South Florida, the user needed to be able to access a video editing system using Apple's Final Cut Pro, a large Pro Tools system, and an array of instruments including keyboards and drum machines, and move among them seamlessly.

This project also added another increasingly common challenge. "You could describe this client as 'technical, but not a technician,'" Frangioni says, a description that could define much of the project studio cohort as digital systems become more sophisticated and numerous. This required a solution that would allow the client to access easily an array of gear set up in a highly personalized configuration, yet would still be "neutral"

systems he designs. "He can have any setup he wants as a preset, such as a CD player and an instrument to play along with. We were able to simplify the access to the equipment using a piece of gear not usually used in a recording studio."

Indeed, that's using a box to think outside the box.

#### BUILDING A BETTER BOX

Speaking of boxes, Rascal Flatts' bassist Jay DeMarcus was planning on turning what had been a walk-in closet in his Nashville home into a small office, as it was located directly off of where the control room would be. Studio designer Carl Tatz instead saw an opportunity to add to the studio's productivity by making it into a programming suite. At seven-by-nine feet, the space is relatively tight, but by soffiting the Dynaudio M-1s speakers into the Masonite-covered 3/4" plywood and positioning a pair of NHT U-1 subs on the floor beneath the built-in marble work surface, a closet became an acoustically valid alternate workplace. Soundproofing with Owens Corning 703 batting material provided diffusion and absorption, which allows the programmer to work without interacting acoustically

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## Customizing a workspace for your own particular needs can't help but improve the outcome of your sessions.

---

enough for any outside engineer to come in and feel immediately comfortable.

The answer lay in a combination of a patch bay that acts as a locus for all audio, video, and MIDI systems that normals key components for the owner but gives other engineers lots of flexibility (a layout that puts all of the equipment into a 270° in-the-round arrangement and all within reach from a central Aeron chair), and the inclusion of a Lexicon MC-12 surround audio processor.

That last idea is particularly noteworthy. The surround processor is used like a powerful matrix, allowing macros of the video and audio equipment to be pulled and routed to the main monitors in the center of the layout. "We used the Lexicon as a high-resolution processor and digital audio-video switcher," explains Frangioni, who regularly uses surround processors in the upscale home theater

with the rest of the studio. Instead of trying to float the entire floor, the subs were placed on individual sand-filled plenums, minimizing mechanical coupling with the rest of the room. A wireless keyboard and mouse for the Apple computer on the counter completes what Tatz calls "a little miracle."

Customizing a workspace so that it fits your own particular needs can't help but improve the outcome of your sessions. Adopting an ergonomic mindset, taking into account the way you *do* work as opposed to adhering to theories about how you *should* work, minimizes the obstacles between your ideas and the execution thereof. We all know that modern gear is a powerful toolset for musician/engineers — but without a logical and efficient layout, it can become powerfully cumbersome. EQ

## HERE'S THE HYPE ON NO HYPE



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Sonic Alternatives for Recording Musicians

# BETTER LIVING THROUGH DOCUMENTATION

Your session isn't really done until it's documented

by David Miles Huber

**M**ost of us don't like to deal with housekeeping. But when it comes to recording and producing a project, documenting the creative process can save your butt after the session dust has settled — and help make your post-production life *much* easier (besides, you never know when something will be re-issued/remixed). So let's discuss how to document the details that crop up before, during, and after the session. After all, the project you save might be your own!

name a specific synth patch, note the mic used on a vocal, and include other info that might come in handy after the session's specifics have been long forgotten.

Markers and marker tracks can also come in super-handly. These tracks can alert us to mix, tempo, and other kind of changes that might be useful to the production process. I'll often place the lyrics into a marker track, so I can sing the track myself without the need for a lead sheet, or to help indicate phrasings to another singer. Also consider creating a "narration" track, where you describe details of the session verbally.

their roles, musician costs, address info, etc.)

- List any software versions and plug-in types, as well as any pertinent settings (you never know if they'll be available at a future time, and a description and screenshot might help you to duplicate it within another app)
- Listings of budget notes and production dates (billing hours, studio rates, and studio addresses . . . anything that can help you write off \$\$\$)
- Scans of copyright forms, session contracts, studio contracts, and billings
- Anything else that's even remotely important



Fig. 1: Cubase (foreground insert) and Sonar (background) are just two of many DAWs with a notepad/info function for documenting sessions.

## DOCUMENTING WITHIN THE DAW

One of the simplest ways to document and improve a session's workflow is to name a track *before* you press the record button, as most DAWs will use that as a basis for the file name. For example, by naming a track "Jenny lead voc take 5," most DAWs will automatically save and place the newly-recorded file into the session as "Jenny lead voc take 5.wav" (or .aif). Locating this track later would be a lot easier than rummaging through sound files only to find that the one that you want is "Audio018-05." As some DAW track displays are limited to about 8 characters, consider putting the easily identifiable text first (*i.e.*, "leadvoc-jenny take5," which might display as leadvoc-j...).

Also, make use of your DAW's notepad (Figure 1). Most programs offer a scratchpad function where you can fill in information relating to a track or project; use this to

## MAKE A DOCUMENTATION DIRECTORY

The next step towards keeping better track of details is to create a "MySong Documents" directory within the song's session, and fill that folder with documents and files that relate to the session such as:

- Your contact info
- Song title and basic production notes (composer, lyricist, label, business and legal contacts)
- Producer, engineer, assistant, mastering engineer, duplication facility, etc. (with contact info)
- Original and altered tempos, tempo changes, song key, timecode settings, etc.
- Original lyrics, along with any changes (changed by who?)
- Additional production notes
- Artist and supporting cast notes (including

In addition, I'll often take screenshots of some of my more complicated plug-in settings and place these into this "time capsule" folder. If I have to redo the track later for some reason, I refer to the JPG screenshot and start reconstruction. Photos or movie clips can also be helpful in documenting which type of mic, instrument, and specific placements were used within a setup. You can even use pictures to document outboard hardware settings and patch arrangements. Composers can use the "Doc" folder to hold original scratchpad recordings that were captured on your PDA, cell phone, or message machine (I do this for copyright purposes).

Furthermore, a "MySong Graphics" directory can hold the elements, pictures, and layouts that relate to the project's artwork . . . a "MySong Business" directory might also come in handy.

## DAW GUIDELINES

The Producers and Engineers Wing of NARAS (the Grammy folks) are nailing down a wide range of guidelines that can help with aspects of documentation, session transfers, backups, and other techno issues. At present, the P&E is offering general DAW guidelines for Pro Tools; although a non-platform specific version is in the works, the information's still general enough for everyone. It's well worth downloading a copy (as well as the material on surround and mastering) from [www.grammy.com/recording\\_academy/producers\\_and\\_engineers/guidelines/](http://www.grammy.com/recording_academy/producers_and_engineers/guidelines/). EQ

David Miles Huber's music can be seen and heard at [www.MySpace/51bpm](http://www.MySpace/51bpm).



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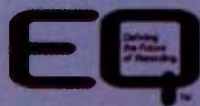
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# SSL XLOGIC G SERIES COMPRESSOR

## The famed 4000 G sound in a single rackmount unit? Really?

by Jeff Anderson

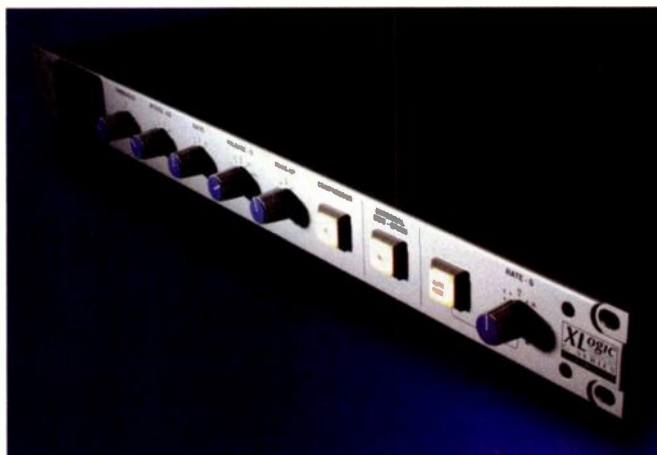
There's no denying that the SSL 4000 G is one of the recording industry's crown jewels, serving time on some of the best-sounding albums in recent memory. But it (along with all SSL consoles) is a piece most of us will never be able to hold as our own — it's just too expensive. And this has made us all so very sad for so very long.

Fortunately, SSL took the same center section compressor from this legendary console, added a few features (primarily in the input and output sections), and turned out a box that supposedly achieves the same gloss, smoothness, and thump that comes from mixing on the real deal. But as we are always ones to pick "dare" at the party, we decided to see if SSL's claims were for real or for hype.

### OVERVIEW

The front panel offers the controls you'd assume for a compressor of this type: Gain Reduction meter calibrated from 0 to 20dB in 4dB intervals, Threshold knob that goes from -15 to +15dB, Attack with points at 0.1–30, Ratio settings from 2, 4, and 10, and Release points from 1–1.2 (or an Auto setting). The XLogic G also has a Make Up section to adjust gain from -5 to +15dB, and a compressor in/out switch.

In addition to the standard controls, this unit also features an in/out button for an external side chain (when selected, the rear panel "Key Input" functions as the compressor's sidechain source). There's also an in/out button for an automatic linear fade in/out, with a rotary knob to set the fade length anywhere from one to 60 seconds. The back panel has two XLR ins and outs, a female XLR jack for key input, a nine-pin slot for a remote to control the auto fade, and a voltage selection switch (110/120/230/240V). Good? Good. Great, even. Time to go from theory to practice.



### APPLYING THE XLOGIC G

I've been using the XLogic G on a lot of my projects lately — all of them, in fact. As I'm building the mix, patching the compressor across the stereo mix insert points makes everything sound really good the second I hit the "in" button. My typical setting is Threshold dialed up the middle at 0, Attack at 3, Ratio at 4, and Release on Auto. (Note: By adjusting the Threshold you can "grab" as much of the sound as you want, and then by adjusting the Attack and Release you can really get this compressor pumping to build a very dynamic mix.) Even with this "go-to" setting, you still have to mind the amount of gain reduction. Though it may sound good at first to compress the hell out of everything, be careful — leave some room for the mastering engineer.

Also, bypass the compressor from time to time to make sure your actual peak volume readings are the same whether the compressor is in or out. Mixes tend to sound better loud, and you need an equal reference for comparing your source. By using the Make Up knob, you can easily turn the processed sound's volume up or down. Watch the output section of your console or workstation as you adjust the "compressed" sound, then bypass the compressor to make sure the peak levels match those with the compressor inserted.

One workaround for having only one G series compressor when I feel the need to have many, many more is, while I'm building a mix, to make a sub group of the drums, send the entire group through the compressor, and smash them accordingly. Then, to free up the compressor for the overall mix, I record the drum submix back into the recorder. Sure, you can't change the submix once it's recorded, but I've been okay with that. By having the smashed sub-

mix, I can in turn adjust the volume of the "normal" drum tracks, mix them together, and beef up/fill out the drum tones.

### CONCLUSIONS

I feel confident in applying the XLogic G across the entire board, much as I would feel confident in applying a 4000 G console across an entire band. From submixes to single instrument tracks, from using one channel while recording as an insert on vocals and bass to glossing and polishing an entire mix, the XLogic performs spectacularly. Even the Auto Fade feature (which struck me as stupid at first) adds something to my mixes, and for some reason sounds better than the linear fades in Pro Tools. As someone who's always lusted after that SSL sound, the XLogic helps me achieve that sound — without having to afford an SSL console. **EQ**

**Product type:** Two-channel stereo compressor.

**Target market:** Mid- to pro-level studio owners searching for that SSL sound without having to buy an SSL console.

**Strengths:** Great sound. Easily manipulated settings. Durable casing.

**Limitations:** None.

**Price:** \$3,795(list)

**Contact:** [www.solid-state-logic.com](http://www.solid-state-logic.com)



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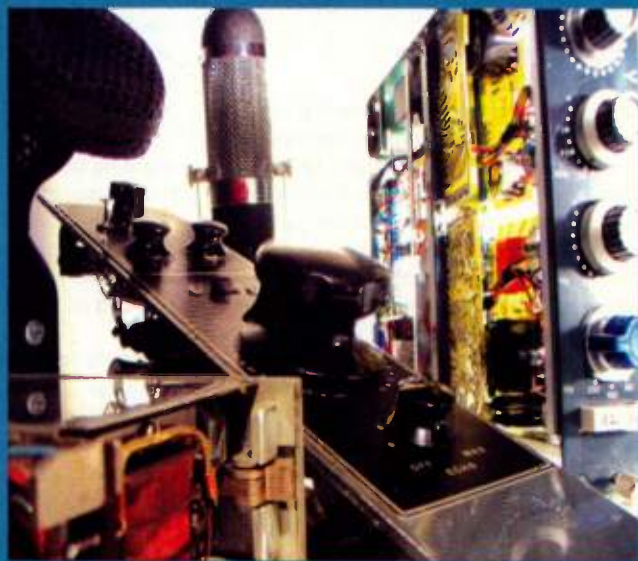
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# DIGITECH VOCALIST LIVE 2

Even if we can't live in harmony, at least our vocals can

by Craig Anderton

I know, I know . . . it says "Vocalist Live," not "Vocalist Studio." But don't turn the page. When you're a vocalist working alone in the studio, unless you have polyphonic vocal cords or have taken throat singing to a new level, you're a monophonic instrument. The VL2 lets you run a vocal track through it and get two realtime harmony lines, or you can sing through it while tracking if you want a little kick of inspiration — all with an incredibly simple interface.

Until now, you needed to enter a key and scale to tell a vocal harmony generator what to do. No more. Instead, the VL2 parses the notes from a guitar plugged into the box (a patent-pending technology from 3dB Research that DigiTech calls MusIQ), and generates the harmonies based on the chord you're playing. No, I'm not making this up.

So ignore the name, and let's check out what the VL2 can do in the studio.

## GOZINDAS AND GOZOUTAS

Input-wise, there's an XLR in with phantom power for your vocal mic, line input in case your mic is going through a fave pre-amp, and guitar input. There's a level control for the mic/line in, but not the guitar; the VL2 assumes you'll plug your guitar straight into the box (processing could screw up the pitch detection), and use the Guitar Thru jack to feed your amp, signal processor, or whatever. For outs, there are stereo line outs, and a mono XLR out if you want to feed an input like your mic would normally feed.

## EFFECTS, TOO

A single knob selects more or less compression. Reverb also has a single control for more or less reverb, with a choice of Studio, Room, or Hall effects. An "Enhance" control (basically EQ) also offers



three options: Resonance, Clarity, or Shine.

The Harmony Mix is a little more complex. A single knob controls the amount of all harmonized signals, but each harmony line has three buttons. The first line can be a third above, third below (whether it's major or minor depends on the guitar's input), or set to unison for detuning effects. The second line can be a fifth above, fifth below, or unison. Any two options (one from each line or two from one line) are available simultaneously; choosing Unison 1 and Unison 2 creates a thick unison effect.

Finally, there are two footswitches. One enables/disables the effects, and the other turns whatever harmonies you've selected on or off.

## APPLYING THE VL2

You begin by tuning your guitar with the built-in tuner, so the VL2 can recognize what you're playing. Then you play, you sing, and harmonies come out. That's it. But pay careful attention to your voice's pitch — if you're a bit off, then you'll have two harmony lines being a bit off as well, which is not pretty.

The chord detection stays on a chord until changed. So if you hit a chord and

sing a *capella*, no problem. But if you want to change key, you'll have to hit a chord first.

By the way, although all the literature about the VL2 refers to using guitar with it, that's apparently not an absolute. I fed in various synth sounds, from kalimba to bass played an octave higher, and the VL2 worked perfectly (even when I was really sloppy about levels).

## CONCLUSIONS

The first time I heard my voice through a harmony generator blew me away. The only downside was taking the time to choose the correct scale and key, and for live use, changing presets when switching from

one song to another. The VL2 takes away all the work — but leaves the harmonies. Still, this is the kind of thing that has to be heard to be believed, so check out the audio example at [www.eqmag.com](http://www.eqmag.com).

Sure, you'll get a more human vibe if you overdub your own harmonies. But if you mix the harmony lines so they support rather than overwhelm, and use the effect sparingly, the VL2 can wrap harmonies around your voice you can't get with "real" voices. I wasn't expecting the VL2 to work as well as it does, but put the laws of physics on hold: This box rocks. **EQ**

**Product type:** Vocal signal processor and two-voice harmony generator.

**Target market:** Live performance or studio use with vocalists who need harmonies and/or multiple vocal effects.

**Strengths:** You don't need to specify a key or scale, just play chords into it. Useful effects. Totally painless user interface. No matter what DigiTech says, works with more than just guitar.

**Limitations:** It's too easy to hit the phantom power switch accidentally. No main power switch.

**Price:** \$499.95 (list)

**Contact:** [www.digitech.com](http://www.digitech.com)







# AKG PERCEPTION 200

## To cheap condenser or not to cheap condenser: That is the question

by Jeff Anderson

Having been a long-time user of the 414, the famed C12, and the C3000, I was excited when the Perception 200 showed up on my doorstep. I had heard through the grapevine that, due to its ability to handle enormous SPL, the Perception 200 was a good all-purpose mic on pretty much everything from snare to vocals. Nevertheless, I'm a bit wary of mics in this price range, so I didn't have huge expectations coming in. Maybe the Perception 200 would prove that perfectly good condensers exist for less than a mortgage payment? Maybe it would simply reinforce the opposite opinion. There was only one way to find out. . . .

### OVERVIEW

Housed inside an all-metal body with a 1", gold-sputtered, large diaphragm true condenser capsule, the Perception 200 is essentially the same as its kid brother, the Perception 100, save for the addition of a bass cut filter (which rolls off at 12dB from 300Hz down) and a 10dB pad. The Perception 200 is fixed in a cardioid pattern, and handles an SPL of 145dB with the pad on (135dB with the pad off).

As with all AKG mics, the signal reduction takes place before the diaphragm, a design that ensures less distortion throughout the mic's circuitry, not just the output. Additionally, the Perception 200 is packaged in a solid metal flight case that also packs a spider shock mount. So far, so good . . . right? Now let's see how it holds up in a real-world scenario.

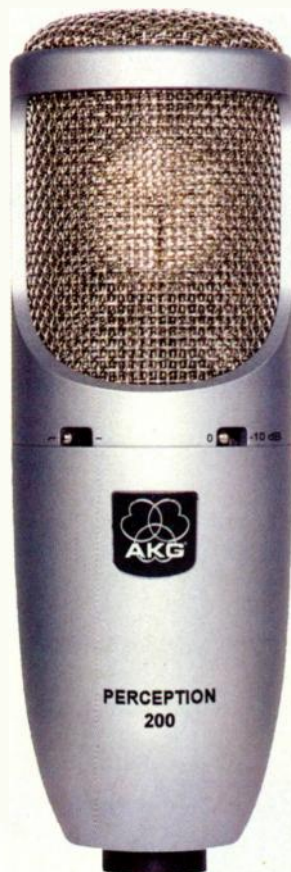
### APPLYING THE PERCEPTION 200

First up was a drum tracking session, where we decided to try the Perception 200 on the inside of a kick, about 3" from the beater. My first impression was that the mic was a bit too "woofy" for my taste, but engaging the roll-off switch rectified that, giving us a much more focused, direct sound. Moving over to the snare, I was prepared to deal with the

age-old bleed problem resulting from using condensers on this source. I wanted a very isolated snare track, so I was pleasantly surprised at how "directional" this mic is. Still, moving the mic even 1/4" made a huge difference in how much hi-hat was picked up in the track — but as the drummer was a heavy hitter, that wasn't too surprising. Engaging the pad, we got a very clean, non-distorted signal even though the mic was less than an inch from the snare.

Next was a guitar track I was cutting for a rock band. Setting the Perception 200 up with a Neumann U47 FET on a Marshall half-stack cranked loud as could be, we were pleased to find the Perception 200 handled the SPL like a champ. With the U47 about 15" back from the cab, and the Perception 200 right on the grill, off-axis from the cone, we got a strong, direct sound that complemented the somewhat darker-sounding Neumann.

Finally, we used the Perception 200 for a vocal overdubbing session. Shooting the mic out against its own brethren (414 and C2000b) and a Rode NT-2 (one of my favorite all-purpose mics), we ran the mics through the No Toasters Nice Pair pre into Pro Tools. The NT-2 produced subtle warmth around 200Hz and a clear top end, but was a bit muddy/overtly beefy for this particular vocalist. The C2000b was the exact opposite: It dipped around 200Hz and peaked around 16kHz. The 414 was incredibly accurate, perhaps a bit too much in this case. The Perception 200 had



serious output. Mind you, the pads were off on all the mics we compared, but just looking at the monitor showed a noticeable increase in volume from the Perception 200.

There was a nice bottom end, edging on "boomy," an accurate midrange, and the top end felt like it had a small bump around the sibilant area. We opted to roll off the Perception 200 and use a Teletronix LA2A to compress the sound back around 4dB. Perfect. We had a keeper.

### CONCLUSIONS

Given the price, I wasn't expecting the Perception 200 to stand up to other AKG mics, or to hold its own in situations where I usually employ much more costly pieces of gear. But it did a good job — good enough that I would recommend it for budget studios that are looking for an

all-purpose mic to add to their arsenal. The Perception 200 sounds good, can handle serious SPL, and is surprisingly directional, making it perfect for snares, cranked amps, bazookas, etc. And for less than a nice pair of shoes, how can you really go wrong?EQ

**Product type:** Large diaphragm true condenser microphone.

**Target market:** Budget-minded studio owners looking for a good all-purpose mic.

**Strengths:** Great value. Accurate response. Handles high SPL. Nice shock mount.

**Limitations:** Considering the price — none.

**Price:** \$319.99 (list)

**Contact:** [www.akg.com](http://www.akg.com)



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# M-AUDIO BX5A AND BX10S

## Monitoring solutions for the midnight mixer



by Robert Martirelli

Ah, the scourge of reviewing monitors. There are so many on the market, and at such a disparity of price (and yet price doesn't always correlate into value), that you might not know where to begin. Many swear by Yamaha NS-10s, for example, for their unflattering sound and ability to help you make a mix that translates well on just about any system. ADAM monitors are praised by many and reviled by a few for having a certain quality that is, far as I can tell, the same for both camps. They say that, like a Cadillac, everyone loves a Genelec, but I know those that would much rather use Mackies, Tannoy, Dynaudios, etc. any day of the week.

Point is: Monitor shopping is hard. This is why most people settle on one, or two, or three sets of monitors, and then stick with them. Monitors are not like mics or preamps, they're more like consoles — you don't want, or need, a hundred of them to choose from.

So this makes monitor reviewing a maddening process. It's difficult to pass a value judgment provided a pair of monitors doesn't just flat out suck. Such is the cross I bear, being a gear reviewer. So I happily brandish the burden here. Now. For you. Amused? Good . . . continue being that, and read on.

### OVERVIEW

Alright, so what we're dealing with here is actually two products that sell separately, but complement each other perfectly. The BX5a speakers are two 70-watt

bi-amplified studio monitors, while the BX10s is, as Gary Busey once described, the BX5a's dark-sided lower companion monkey [*Translation: Complementary active subwoofer*].

The two-way magnetically shielded BX5as sport 5" Kevlar low-frequency drivers (far superior to polypropylene and other cheaper speaker materials), 1" natural silk high-frequency drivers, and have XLR balanced and 1/4" balanced/unbalanced inputs around back.

The BX10s is comprised of a 10" composite driver, a 240-watt internal amp, and a variable 50–200Hz crossover. There is a handy "sleep" function, phase switch, and balanced XLR and 1/4" TRS ins and outs. Additionally, a sustain pedal-controlled subwoofer bypass function helps even out your mixing judgments.

"But how do they sound," you ask?

### APPLYING THE BX5A AND BX10S

The first thing that strikes me about the pair is that they are perfect additions to a small studio — they're compact, and the magnetically-shielded design makes them safe and sound right next to your computer monitor.

Although the two items are priced separately, they work best as a set. The only time I could see foregoing one or the other is if you already have one or the other. The BX10s is a great companion to the BX5a, as there is nothing worse than putting a mix that sounded supremely bassy and powerful in the studio into your car stereo

and having it fall flat. Referencing your mix by bringing the subwoofer in and out of the fold definitely allows a better view as to where your mix really sits.

The BX5a's bi-amplified design is welcome, as it takes the virtues of using powered amps one step further by dedicating an amp to each respective driver. This is what allows the BX5as to sound as good they do — the 5" drivers handle only the lower frequencies, while the 1" drivers deal solely with the highs.

The result is a pretty focused, detailed, and neutral monitoring system that responds accurately. My only gripe is that they just aren't very loud, though this does change a bit when the sub is engaged. Still, given the obvious utility of these monitors, I suppose it's a good thing they err on the side of being a tad quiet as opposed to overbearingly loud — you wouldn't want the latter if you were mixing a track in your apartment at 1:00 A.M.

### CONCLUSIONS

If your monitoring space is very intimate, you're golden with the BX5a and BX10s. The triple package outputs very high quality sound, especially considering the price. However, I can't see these being the best possible solution outside of the home/project environment, as they just don't push enough volume to contend in a large studio situation. Then again, most large studio owners aren't likely to be even reading this far — I'm sure they're happy with their \$10,000 monitoring systems. But for those mixing in a cramped apartment in the middle of the night, the BX5a and BX10s combo delivers. **EQ**

**Product type:** Bi-amplified studio reference monitors, active subwoofer plus sustain pedal.

**Target market:** Small to mid-sized studio owners.

**Strengths:** Great price point. Solidly built/durable. Compact design makes them useful in crowded locales. Good sound.

**Limitations:** Could be louder.

**Price:** BX5as \$399 (list); BX10s \$499 (list)

**Contact:** [www.m-audio.com](http://www.m-audio.com)



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# LINE 6 KB37 TONEPORT

## An interface for the solo studio — but with a major surprise

by Craig Anderton

I like anything that simplifies my life, hence this review of the KB37. It's a USB 1.1 audio/MIDI interface with one instrument in, two line ins, two XLR mic ins (with phantom power), and a 3-octave keyboard. In terms of controllers, it has pitchbend, mod wheel, five transport buttons, four knob controllers, and four switch controllers (all of which are reassignable).

Given the cost, don't expect boutique mic pre fidelity — but don't expect consumer soundcard level, either. Perhaps more importantly, you can process the sound to get a variety of tonalities and character you couldn't get from a straight preamp anyway. I've used the KB37 for income-producing projects, and it's done an admirable job. The KB37 performs better than expected, and gives serious value. But there's more to this than meets the eye. . . .

### APPLYING THE KB37

And how many times have you seen on forums "I dunno, I think I was more productive back when I just had a four-track and some processors"? Interestingly, the KB37 brought those days back to me; here's why.

An integral part of the package is the GearBox software, which contains a bunch o' amp models and guitar, bass, and vocal processors, all derived from Line 6's Vetta line. These are not plug-ins, but instead, processors where you get your sound on the way in to your DAW. They also use Line 6's ToneDirect monitoring process. This implements processing at the driver level, essentially bypassing all the overlays of Mac/Windows operating systems, so you can sing or play guitar with processing and hear *no* annoying delay.

Okay, that's cool, but as you're recording the processed signal — not a dry one processed by plug-ins — once you commit to a sound, that's what gets recorded. The only way to change it after the fact is with EQ, reverb, and other standard mixdown-oriented processors.



The KB37 superimposed on the GearBox software. This shows the software's effects chain and part of a mic preamp model above it.

That sucks, right? Hold on. For \$199.99, the Line 6 website has an option where you can activate RTAS, AU, or VST (Windows) plug-in functionality for the GearBox software. *But don't buy it.* At least, not yet.

Like so many other modern musicians, I can fall victim to "option overload." I try to keep it under control, but sometimes it's hard to commit to a sound when you know you can change it at any time. After working with the KB37 and GearBox, though, I re-discovered that *commitment is good, because it lets you move on to the next part and keep the flow, just like you had to do with tape* — and an inspired song beats a song where each part went under the microscope. Besides, I'm a decent player. If I really blow it in terms of the committed sound, I just re-cut.

The only bump in the road is I wasn't thrilled with the patches that come with KB37, because they weren't designed for *my* voice and *my* guitar. So I called up some that came close (once the Tone Select menu has focus, you can use the computer up/down arrow keys or KB37 buttons to scroll through them), tweaked them until I was happy, and saved them. So now, whenever I'm doing (for example) a video project, I plug in my mic, call up the "Craig's Narration" vocal

preset, and I'm laying down narration within minutes, if not seconds. Simple. Same with guitar: I have a library of about 12 fave patches, and when I need guitar, bingo — it's there. Bass? Ditto (but I use the keyboard for MIDI synth bass parts too, as well as lots of other synth parts).

Yes, I activated the plug-ins because I use them for other purposes. But 98% of the time I just call up a patch I've created, tweak if necessary, and play.

### CONCLUSIONS

You can read the KB37 specs all day — but that won't tell you about the workflow, and how much the KB37's philosophy speeds up a project, while preserving inspiration. Sure, I'd rather have world-class mic pres, a five-

octave controller with aftertouch, and better controllers (the feel of the knobs isn't great). Then again, I'd like a vacation home in Hawaii, too.

The bottom line is that I can truly say the KB37 has changed the way I do recording. I can't quite believe this one piece of gear has made my sessions so much faster and more inspired . . . but it has. **EQ**

**Product type:** Audio/MIDI interface with multiple I/O and integrated processing software.

**Target market:** Solo musicians and small studios needing versatile, cost-effective interfacing and processing.


**Strengths:** GearBox software (also includes Live Lite 6). Speeds up sessions. At least for me, encouraged committing to sounds and therefore kept the inspiration factor up. Zero-latency monitoring even with processed signals. Adequate keyboard feel. Some useful controller options. Two footswitch inputs and expression pedal input.

**Limitations:** No aftertouch. Controller knobs feel cheesy. True plug-in functionality is available, but optional at extra cost.

**Price:** \$399 (list)

**Contact:** [www.line6.com](http://www.line6.com)





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# UEBERSCHALL ELECTRO ID

## Virtual instrument meets big electro library

by Craig Anderton

Over the past few years, sample libraries have become increasingly wedded to virtual plug-in/stand-alone instruments. No longer do library developers have to be concerned about being compatible with a particular sampler format; all they need is something that works with most, or all, major plug-in formats (VSTi, AU, RTAS, DXi).

Ueberschall's *Electro ID*, for their Elastik virtual instrument platform, contains 100 construction kits of German underground electro music, verging on techno and hardcore. The typical kit includes drum loops, bass, synth, various effects, and they're smokin': This is the real deal. But you can't really consider the sounds without the instrument, so let's do go there. (By the way, Ueberschall has multiple products that use the Elastik engine — not just *Electro ID*.)

### THE ELASTIK BAND

You install the program first (VST, RTAS, AU), then copy over the nearly 1GB library of content. After telling Elastik where to find the content, it needs to be authorized. This is handled by a simple challenge/response system that can be done on a different computer if you want.

Referring to the screenshot, going from top to bottom there's a browser to choose the various kits and to its right, a tempo indicator (stretching is handled automatically). This includes a sync-to-tempo option, but this option must be invoked whenever you change tempo on the host. As a result, the Elastik engine can't follow host tempo changes automatically.

The field below selects a particular sample from the kit (or choose it by hitting a key), and here you can stretch, choose a different transposition algorithm, reverse direction, assign plug-in outputs, and set



The Loop Eye provides a different way of defining loop start and end points.

a snap point for the "loop eye" (more on this later). Furthermore, there's resonant filtering (hipass, lowpass, bandpass, notch) with filter slopes up to 72dB/octave — this is a seriously versatile and fun filter unit.

### APPLYING THE ELASTIK ENGINE

The interface threw me for a loop at first, because it doesn't follow other paradigms: It seems built from the ground up for loop-oriented applications. For example, the "loop eye" is a different way of representing a waveform, and has loop start and end points that can park at various points around the eye (or be locked, so that moving one moves the other). Changing these alters the loop length seamlessly, and it's cool that you can alter these to offset or shorten the loop compared to other loops.

You can use the two virtual keyboards toward the bottom to trigger samples in the various construction kits, but more importantly, you can pick samples from the lower keyboard from any of the construction kits, and drag them to the upper keyboard to create your own presets. As each construction kit includes loops of varying lengths and functions, and each sample can have its own loop eye, filter, etc. settings, you can create some pretty customized presets. As you can assign up to eight parameters to MIDI con-

trol, and the same sliders in different presets can have different controllers, Elastik ends up being highly playable. In fact, I'd say that if you just use *Electro ID* as a loop library, you're missing out on what makes it cool: This baby was born for real-time tweaking.

There's more to the story. For example, adjustable attack and release times are handy for tailoring fades (in and out), you can bounce one preset over to the "secondary" keyboard in slices, there are mapping tools, you can save original or modified loops as audio files, and the Elastik engine is pretty CPU efficient if you need multiple instances. There's more, too... but that's enough for now.

### CONCLUSIONS

I found Elastik confusing at first, and that kept me from getting deeper into it. My mistake; once I realized this was an *instrument* more than a loop library, everything fell into place and I started having a major blast. If you want an instant electro construction kit where you can do a whole lot more than with simple static loops, consider making the stretch to get Elastik. **EQ**

**Product type:** Virtual instrument with electro-oriented sound library.

**Target market:** Electronica-oriented studios, DJs, remixers, dance music producers.

**Strengths:** Solid sound library — with an attitude. High quality stretching. Exceptional filter. Loop eye makes it easy to customize loop start/end. MIDI control for important parameters.

**Limitations:** Can take a while to get used to the non-standard interface. Doesn't follow host tempo changes automatically.

**Price:** \$119.95 (list)

**Contact:** [www.bigfishaudio.com](http://www.bigfishaudio.com)



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## SONY POPTRONICA

**Contact:** Sony, [www.sonycreative.com](http://www.sonycreative.com)

**Format:** CD-ROM with 292 Acidized WAV files (531MB); 16-bit/44.1kHz

**Price:** \$39.95 list

These 15 construction kits are tough to describe, although I guess "poptronica" does come pretty close: They have the processing and vibe of electronica, but with a lighter touch — not that you'll find these on the next Hilary Duff album or anything. For easy auditioning, each construction kit has an Acid-compatible project that uses the various loops in context; a free version of Acid Xpress (Windows only, though) is included so you can play them back.

The construction kits have kicks, hats, drum loops, basses, guitar figures, pads, arpeggios, and the like. One very useful

feature is that most kits have several variations for, typically, bass, kick, and hats, so you needn't dip into a different kit to add variations. Another nice touch is that some loops also have "outro" versions, which are similar to the looped version but have an ending, and can be treated as a one-shot (although they also stretch to tempo, like a loop).

I did feel that some of the loops, in particular the synth leads, went on for too long; but as you'll hear on the example I put together at [www.eqmag.com](http://www.eqmag.com) (there are also examples of demo projects that come with the CD-ROM), they're prime material for cutting up into phrases and scattering throughout a piece. As a result, I'd say this library takes a little more editing work if you want to go beyond the intention of particular kits, but that's part



of what makes this CD useful: There's lots of raw material if you're willing to mine it.

The main value these loops offer is that they're not another me-too set. Sometimes quirky, at times humorous, sometimes dark, but definitely innovative, these are the spices you add to a main course. You may use only a few loops to augment an existing project, but they'll add a provocative — and creative — touch you likely won't find elsewhere. —Craig Anderton **EQ**

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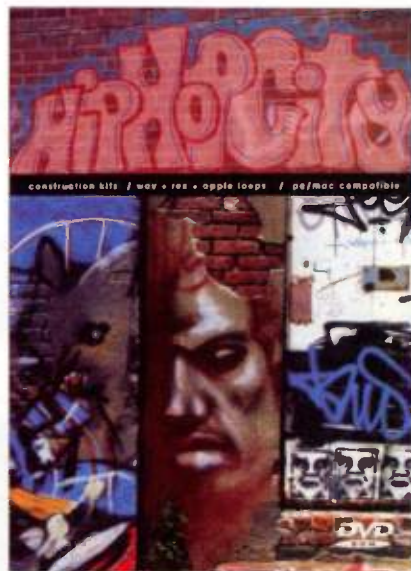
**Contact:** Big Fish Audio,  
[www.bigfishaudio.com](http://www.bigfishaudio.com)  
**Format:** DVD-ROM with 50 construction kits duplicated as WAV, REX, and Apple Loops files; 24-bit/44.1kHz  
**Price:** \$69.95 list

Something about this DVD-ROM really works. It's not that all the loops are amazingly spectacular; it's that they work together well, provide a solid foundation, and there's no filler. You can use the construction kits as is, but I mix and match a lot — although the kits are in various keys, much of the best material (drums, percussion, scratches, etc.) isn't key-dependent and adds different flavors to other kits. Speaking of scratches, there's a ton of good ones; there are also selected one-shot hits in each kit. Tempos range

from 70 to 140BPM, but hover mostly around 100BPM.

As to quality control, some drum loops end with a fraction of a second of attack, while some other types of loops end abruptly, with a click. Still, a quick exponential fade solves either problem, and what really counts — musical, muscular, and useable loops — is in place.

Again, let me emphasize this isn't ground-breaking material, but that's also its strength: *Hip Hop City* is like the bass player who always shows up on time, plays in time and with feeling, is grateful for the paycheck, and smiles a lot . . . in other words, the bass player you keep calling back. The fact that this collection has a good attitude, lots of variety, strong playing, and still weighs in for under \$70 is impressive — check out the example at [www.eqmag.com](http://www.eqmag.com). —Craig Anderton **EQ**



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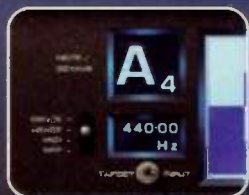
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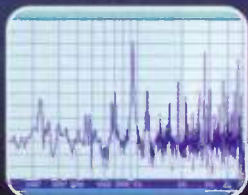
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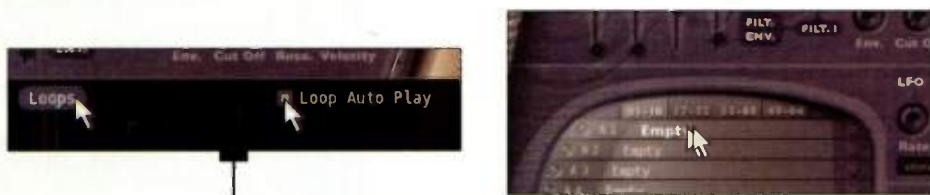
by Craig Anderton

## MOTU ETHNO INSTRUMENT

### Export Ethno Instrument's loops to any host, at any tempo

**OBJECTIVE:** Insert loops produced by Ethno Instrument into a host as digital audio.

**BACKGROUND:** MOTU's Ethno Instrument has traditional sampled instruments where you trigger individual notes, but also contains loops that can stretch over a wide range of tempos. You can export these loops into a host as digital audio at the host tempo, thus allowing you to open more sounds in Ethno Instrument, or close it to free up computer resources.



### steps

1. Double-click on an instrument slot in Ethno Instrument to open up the browser.
2. Click on Loops in the Browser and also click on Loop Auto Play (this lets you hear a loop as soon as you click on it).
3. Navigate to the type of loops you want to audition, then click on various loops to audition them. After selecting a loop you want to export, click on OK in the browser.
4. Set the tempo as desired in your host program, then click on Ethno Instrument's Sync to Host button.
5. Ethno Instrument's BPM indicator should match the host tempo.
6. Click on Play to verify that you have selected the right loop, then click on Stop to stop loop playback.
7. Click on the Drag & Drop button, then drag to an audio track in your host.

### tips

- Any processing you add within Ethno Instrument (filtering, convolution reverb, etc.) is not reflected in the part you drag to an audio track.
- You can keep double-clicking in the same instrument slot, browse for and audition new loops, then drag them over into your host software.



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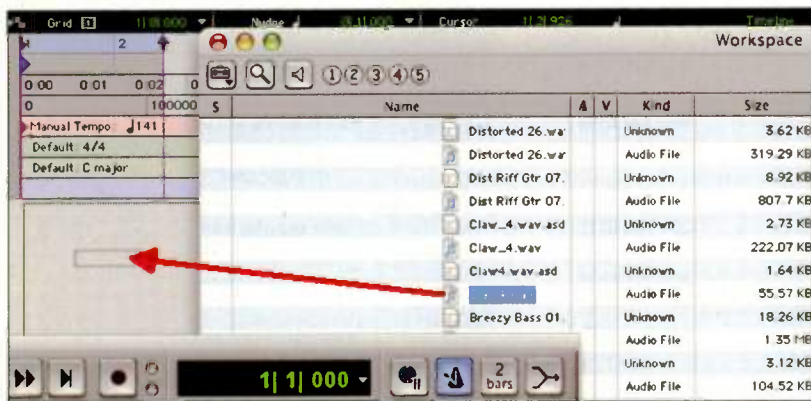
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# DIGIDESIGN PRO TOOLS 7.3

## Improve workflow while working with loops

**OBJECTIVE:** Use Pro Tools' new features for easy importing, stretching, and looping of audio files.

**BACKGROUND:** Starting with version 7, all Pro Tools editions made it easier to import loops into a session. However, version 7.3 adds some new tools that can improve your workflow by making it easier to adjust the loop to the project's tempo, as well as extend it for as many iterations as desired.



### steps

1. With an open session in Pro Tools, drag-and-drop a loop (or any audio file in WAV, MP3, or AIFF format) into your session from Pro Tools' Workspace window (the project tempo doesn't matter). You needn't create a new audio track, as it will be created automatically upon dropping the file in your session.

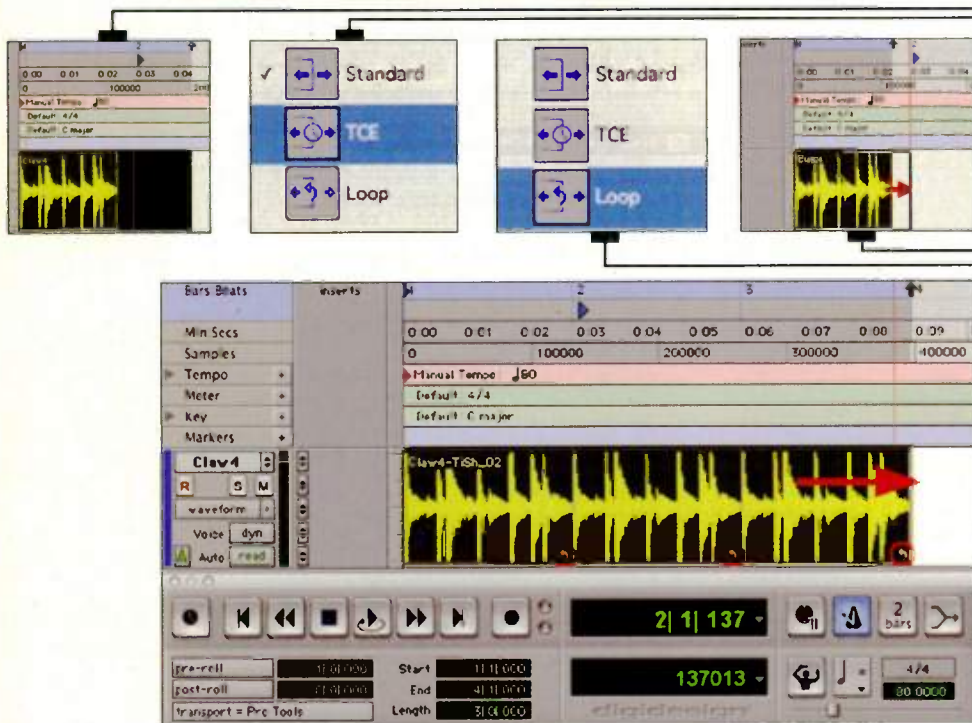
2. If you did not import the loop's tempo, it will likely need some editing to match the project's tempo. You can check this visually by seeing whether the loop ends on a measure boundary (in this screenshot, the loop is shorter than a measure, so it's faster than the project tempo).

3. Click on the "Time Compression/Expansion Trim Tool" and select the TCE (Time Compression/Expand) tool.

4. Position the mouse over the loop's right edge. When the pointer changes to the TCE tool, expand (or shrink, if the loop is slower than the project tempo) the loop by dragging the edge to the nearest full bar.

5. Once the loop is in time, to repeat the loop you can either "duplicate it" with standard Pro Tools shortcuts, or use the new "Loop into the TCE Trim" tool.

6. After selecting the "Loop" tool, position the mouse over the right edge of the audio file until the "loop" pointer appears, then extend the loop as desired across your project. You will see the loop points marked within the wave file (circled in red for clarity).



### tips

- You can import the first loop's tempo so other loops can follow it without needing to use the time compress/expand feature.
- You can import loops and audio files straight from the desktop/finder into the session.
- In version 7.3, you do not need to stop the audio engine to import new audio material into the session.



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## BLUMLEIN PAIR STEREO MIKING

**For some applications, this venerable mic technique still can't be beat**

While working as an electrical engineer for a Bell Labs subsidiary, and later for EMI, Alan Dower Blumlein (1903-1942) had a profound effect on the fields of telecommunications, TV, radar, and audio recording and reproduction. He developed the first "weighting networks" to compensate for the non-linearity of our ears, designed moving coil mics, and much more.

But probably Blumlein's biggest impact was that he essentially invented stereo recording and playback. Back in 1931, he also created the Blumlein Pair, one of the most useful stereo mic techniques ever (UK patent 394,325; "Improvements In and Relating to Sound-Transmission, Sound-Recording and Sound-Reproducing Systems").

### THEORY

The Blumlein Pair is a crossed coincident pair of figure-8 velocity (ribbon) mics, each placed 45° off-axis from the sound source, while 90° off-axis from each other — similar to setting up two cardioid mics in an XY stereo configuration. Placing two figure-8 ("bi-directional") mics in this "X" position provides a very detailed stereo image, and the rear lobes of the two figure-8 mics pick up a significant amount of "room tone" or ambience and reflections. As with the Mid-Side technique (Studio Trenches May '07), you place the mic capsules as close together ("coincident") as possible; but unlike M-S, no polarity inversion or decoder is required.

A Blumlein Pair requires two closely matched figure-8 mics to insure balanced stereo recordings. While the patent calls for a pair of bi-directional ribbon mics like the two RCA 74b Junior Velocity mics shown in Figure 1, two identical, multi-pattern condensers with each set for figure-8 polar patterns are often used instead. While preferred, you don't have to have a factory matched mic pair; you can use any two mics of the same type and model, as long as each has (or can be set to) a bi-directional polar

pattern. If you already own one multipattern condenser mic, or one bi-directional ribbon, consider purchasing a second mic of the same model so you can exploit the Blumlein Pair technique.

### PRACTICE

Set one bi-directional mic so it's aimed 45° to one side of the sound source's center ("aim point"), and place the other mic directly above the first, aiming it 45° to the other side of the sound source. Make sure each mic's front side points forward, toward the sound source, so that each is in phase. Referring again to Figure 1, orient the mics so they're "aimed" at the sound source; the camera that took the photo is positioned at the sound source location.

Route each mic into a separate mic pre and record each to a separate track, or to a single stereo track in your DAW, and pan the two tracks hard left/right. As with M-S recordings, you'll pick up a significant amount of room ambience, so adjust the mic placement for the desired ratio of direct sound to room ambience (closer to the sound source for more direct sound, further back to pick up more reflections and reverb).

Despite its age, the Blumlein Pair technique still has significant advantages. Unlike spaced pair stereo recordings, phase issues are generally not a problem due to the coincident placement of the two mics; and as Blumlein Pairs rely on amplitude differences as opposed to differences in wave phase to generate stereo information, mono compatibility is quite good. Blumlein Pairs also provide "realistic"-sounding stereo techniques, where the stereo imaging is very similar to what you hear if you stand where the mics are placed. In fact, one of my favorite applications is to set the pair just behind and above a drummer's head, pointing forward toward the kit. This captures an "as the drummer hears it" perspective of the entire drum kit, along with a healthy amount of room reflections.

Blumlein Pairs are also suitable for live ensemble recordings, brass sections, and stereo recordings of individual instruments (e.g., acoustic guitars and classical piano) — basically any situation where more ambience is desired than what an XY stereo configuration or close miking provides. So the next time you're looking for a sense of space and ambience in a recording, say hi to Mr. Blumlein. **EQ**

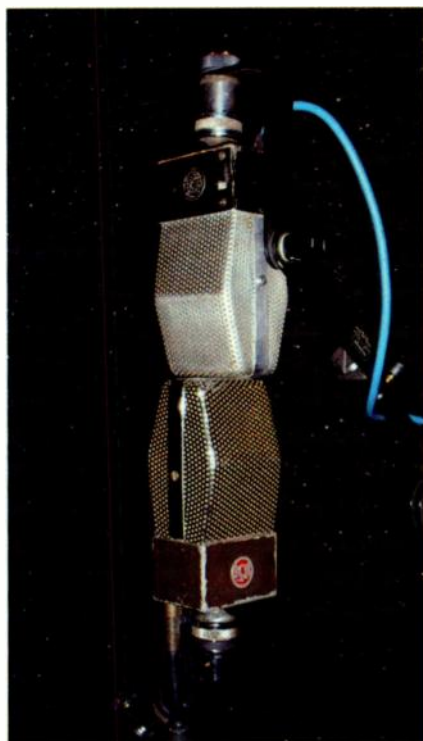


Fig. 1: Two RCA 74b Junior Velocity mics configured as a Blumlein Pair.



Phil O'Keefe is a producer/engineer, and the owner of Sound Sanctuary Recording in Riverside, California. Contact him at [www.philokeefe.com](http://www.philokeefe.com), or via the Studio Trenches forum at [www.harmony-central.com](http://www.harmony-central.com).



## BUSTING HEADS

### Make your solos absolutely impossible to ignore

Solos. Every guitarist takes 'em, and every other guitarist thinks he or she can wax your pitiful little numb-fingered note seizures like a Sherman tank pulverizing a butter sculpture. In my case, such assessments are usually right on the money. But while I may not be able to humble other players with my fleet digits, I always try to concoct a solo that sounds unique, musically empathetic, and, most important of all, ferociously beguiling. It's all about catching a listener's ear, and if you can't conquer someone's auditory senses with technique, then you'd better grab their attention with sound design. And even if you are an accomplished soloist, it certainly doesn't hurt to sweat the tonal details to further enhance the impact of a brilliant guitar lead. Here are some ways to inject bits of wonder into your solo excursions.

#### DOUBLE DOWN

On John 5's latest musical shredfest, *The Devil Knows My Name*, he double-tracked every single one of his 500 mile-per-hour solos. This is high insanity, but it really sounds amazing when two nearly identical note flurries explode simultaneously from the right and left speaker channels. John wanted most of these doubles to sound fairly similar, so he typically used his custom Telecasters and switched amps or pickups to expand the tonal spectrum a tad. I get a kick out of devising completely different colors for the doubles, mating a Strat with a Les Paul, a Marshall half-stack with a tiny Pignose amp, or a saturated tone with a clean sound. I've also mixed a dry, direct tone in one channel, and an Edge-style delay-washed signal in the other to really animate a solo's stereo perspective. The options are practically endless.

#### FUN WITH FILTERS

Mick Ronson's steely, soaring, and beautifully aggro leads on albums by David Bowie and Ian Hunter (as well as his own solo projects) were often crafted by plugging into a wah-wah, working the treadle to get a desired midrange timbre, and then parking the pedal in that one position. Ronson was also a master at producing exciting solo crescendos by snapping the wah to a bass or treble position to punctuate specific notes. This is a different approach than simply wagging the pedal throughout a performance; the wah *becomes* a major part of the performance.

Adventurous players can expand Mick's method using an expression pedal to change the parameters of virtually any effect to punch up the intensity of a solo. Ramp up the speed of a rotary-speaker simulator, or increase the depth of a tremolo, or lengthen the decay of a reverb. When you match the effect to the emotional impact you're trying to achieve with your note choices and attack, the result can drop the jaws of even the most jaded 6-stringers.

#### TRANSISTORIZE

Dare you bail on your amp tone? Can you abandon that amp-

modeling plug-in? Then plug a common distortion, overdrive, or fuzz stompbox directly into your recording rig and dig the one-dimensional fizzy fury of transistorized saturation sans speaker coloration and ambience. Sometimes, a dry, bizarre timbre is just what you need to spike a solo out of the band mix and command attention. Also, playing to the direct, boxy tone can inspire some interesting solo ideas.

#### FADE AWAY & RADIATE

For a film-esque, sound-design-style mood, run a massive echo, reverb, or modulation effect pre-fader (full wetness), assign the effect to a separate mix channel, and blend the madness almost imperceptibly in the background of the track. You get all the impact of a relatively dry solo, but there's all this "stuff" swirling around deep in your mix like a distant tornado. This approach won't be very evident when your song is played on a conventional stereo system, but the iPod gang (and other headphone listeners) will love it.

#### GARBAGE COLLECTIONS

Garbage guitarists/sonic wizards Duke Erikson, Steve Marker, and Butch Vig are masters at the time-honored tactic of comping a single solo or riff from various performances. But unlike '60s and '70s tape cutters who spliced the best bits from several attempts at a specific solo, those guys often employ digital workstations to mix-and-match note snippets from entirely different songs. This approach inspired me to save a collection of recorded ideas from months of disparate sessions. Occasionally, I dig into this "riff box" and just start chopping licks together — regardless of the guitar tone or key. Sometimes, this is a waste of time, but, other times, I discover totally wild combinations of notes, tones, and effects that can be pieced together into lead-guitar coolness.

#### GO FOR BROKE

The reason for writing this isn't just to fill up a page in a magazine. Let's just say I have a hidden agenda: Many of the recordings I hear these days are pretty safe and conventional. Nothing pops. Nothing surprises. Nothing astounds. And, hey, if you're going to shock and amaze anyone with anything, it should be a song's solo section. So if any of these techniques trigger your iconoclast neurons, then I'll consider the blather well spent — especially if you go and make some recordings that cause my brain to release a flood of endorphins. **EQ**



*Michael Molenda is a seminal San Francisco punk, multimedia artist, and producer who has recorded tracks for everyone from NASA to Paramount Pictures to various major and minor labels to hundreds of bands you've never heard. He currently co-owns Tiki Town Studios with producer Scott Mathews, and is signed to M15 Recordings.*

## TEN RECORDING TIPS FOR DIY BANDS

**Maximize the “band vibe” in your recordings, and exploit the freedom of DIY!**

**Pre-production, pre-production, pre-production.** It's become fashionable to track a lot of different instruments and takes, then cut them all together afterward to form the completed song. This is especially tempting if you have a home studio and aren't on the clock, but even so, pre-production is extremely important to the end result. If you're a band, or even just flying solo, it's often preferable to commit to the arrangement before you ever press “record,” and rehearse the song until you know it cold (better yet, play it live for an audience to gauge their reaction). This gives the musicians a chance to build tension and dynamics as the song progresses, which is more exciting for both the musicians and listeners.

**Don't spend time perfecting a mix or editing while you're recording.** One corollary to the above is when you're tracking, you're *tracking*. Spending time mixing, or doing anything other than the most basic edits, will likely make any live vibe disappear from the tracking process.

**Make technology serve you — not the reverse.** Use tools like Beat Detective to create a tempo map from a human drummer, rather than line up the drummer to the grid. Use pitch correction to revive a funky old instrument with bad intonation, rather than make every note of a vocal track perfect. And if you do use pitch correction, don't use it in “automatic” mode — tune the offending notes manually, and if there are too many of those, try another take. Use technology to capitalize on your strengths, rather than cover your weaknesses.

**Retire your patch bay.** Patching and re-patching is a pain, so get an interface (or mixer) with enough inputs that you can leave everything patched in and ready to go. Just remember to mute any inputs that aren't in use.

**Use effects and samples “in addition to,” not “instead of.”** Because you have virtually unlimited tracks in a DAW, you can use effects and samples on a copy of the original track, and then blend it with the original, rather than replace the original track altogether. If you have an anemic snare drum, rather than replace it with a sample, replace a copy of it with a sample and blend that with the original. If you want a heavily compressed vocal, compress a copy of the vocal track and blend in the original track to retain some dynamics.

**Object-oriented editing: the scalpel, not the machete.** Along the same lines as the above tip, it's so easy to process a track with an effect — maybe too easy, because sometimes you really just need to process a small part, but you leave the effect on because it's too much hassle to automate it in and out (if indeed it can be automated). With object-oriented editing, as found on Samplitude, Sonar, and some other programs, you can isolate just the section that needs to be edited and apply the

effect. This saves on CPU, too, as the effect uses CPU only when needed.

**Make eye contact.** Bands thrive on interaction; try not to record in an environment where you're isolated from each other. Put amps in amp booths if necessary, stand in the same room with the drummer, and make sure you can all see each other while tracking. It'll save a lot of frustration and/or editing time later.

**Let it bleed.** I've mentioned this before, but a little bleed can be a good thing. If you don't believe me, then why do some drum software instruments include “bleed” controls when they could just as easily have no bleed at all? Having the whole room sound in at least a few tracks tends to “glue” the whole mix together better. And if you're a solo musician, consider putting a mic in the room when the monitor speakers are cranked up, and recording a little bit of that on its own track. Sometimes it's the “secret ingredient” to making a song sound more real.

**Nail your sounds the day before.** If you're both recording and performing, there can be a tendency to tinker with the technical details so much that the performance itself suffers. Experiment with different drums, amps, mics, and so on *before* you start the “official” sessions, so that you have some idea in advance how things will sound — that way you won't kill the performing vibe by spending too much time messing with getting the sounds right. When you do your setup, get your sounds, and have everything ready to go the day *before* a session, then when everybody comes back the next day, they can just warm up and be ready to focus on the music.

**Don't make too many rules.** Note that all of the above suggestions are tips, not “rules” to be applied to every situation. Very rarely does *any* recording technique apply to every recording, room, band, or song. In fact, these very tips are simply attempts to counterbalance today's prevailing attitudes with some alternative ways of thinking, which I hope will spur even further imaginings and experimentation. You're DIY, you can do whatever you want and whatever sounds good to you . . . and that's a liberating thing! **EQ**



Lee Flier is a guitarist, songwriter, engineer, and producer. Her band, *What The...?*, is a fixture in the Atlanta, Georgia, area, has released two independent CDs, and lately has been performing in other states, countries, and even virtual reality. Contact her via the band's website at [www.what-the.com](http://www.what-the.com); she also moderates the “Backstage With the Band” forum at [www.harmony-central.com](http://www.harmony-central.com).





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## GET THE JOB DONE!

### How can a solo recordist get a project done without getting lost in the details?

In each of the conferences I host around Latin America, many questions focus on what a "producer" is — which I define as "someone capable of getting a finished product out of raw materials, with your own signature." But these days, a lot of people are choosing to be their own producers. You're probably familiar with how to get the raw materials (recording, using loops, sound design for synths, sequencing, etc.), how to add your own accents (processing, clever use of effects, mixing), and also, how to put this all together with affordable tools, *without* being in a full blown, multi-million dollar studio.

But how do you put on the "producer hat," and coax that finished product out of the raw materials? It's not for lack of other instruments. Today, as covered elsewhere in this issue, we have extremely powerful, realistic drum composers that can actually help you create a part. For guitars, when there's no guitar player around and we need something to support our tracks, we can use Steinberg's Virtual Guitarist 2 (or Virtual Bassist for the bottom end). We can create harmonies via hardware or software, and use automation to create — even if by trial and error — a decent mix. As a result, there are fewer excuses not to get a project done.

So, what are the details that can hang you up and keep this from happening?

#### EVERYTHING STARTS WITH . . .

. . . a good song! My keyboard player comes to me frequently with "demos" of tunes he's composed, and together we decide if it's worth writing lyrics for them or not. His main "details problem" is that he cannot stop adding synth tracks. To me, a chord structure and maybe a lead synth line is enough to have an idea of a whole tune, and that is basically what I ask him to play for me. If the song isn't happening, do yourself a favor: Move on.

As a rule of thumb, I start composing on piano, acoustic guitar, or with a very *limited* assortment of synths. True, you can get real inspiration for new tunes with some shiny new synth plug-in. But then, you can get lost in sonic details *before* getting into actual songwriting, and short circuit the process. The same happens when you start adding "that special FX" to the vocal track . . . or to an entire mix. Sometimes a signature sound can be the result of a happy accident, but I recommend doing your homework in advance so that your creative juices go into the composition, not designing a synth patch or processing chain. You can always go back and re-cut a track, but it's hard to return to the creative space you were in when a song started coming together.

All you need is good raw materials. Don't think about what you *don't* have; that detail will stop you for sure. Instead, take advantage of what you *do* have. Maybe you have already invested in a good quality condenser mic and

a good preamp. Or maybe not, but if you have a decent audio interface with preamps and a dynamic mic, don't worry. One of the vocal tracks on my band's CD was recorded with a SoundBlaster card, through the built-in mic connected to that "mic in" port. Maybe the experienced ear can tell which track it is, but I'm sure many will not notice the difference . . . what matters is we got a good take, so we kept it.

#### THE RULES FOR GETTING IT DONE

Part of avoiding details involves willpower: Don't touch that dial! But another important aspect involves the tools you use.

- Use a standard, trusted recording system you know like the back of your hand: Computer, audio interface, preamps, mics, MIDI controller, and monitoring system. These elements are so basic and important you don't want to have to think about them.
- Limit your sonic arsenal. Define a "composing set of tools" with a drum generator, possibly some loops, piano patches, and two or three well-known soft synths for specific purposes. You may be able to get by with just a workstation program, like Sonivox Muse, E-mu Emulator X, MOTU MachFive, NI Kontakt, IK SampleTank, and so on.
- Spend pre-production time to define "your own sound." Do not waste valuable time while composing a song to create some new type of sound or effect. Prepare that in advance, record your vocal/guitar tracks, and apply your saved presets to them. Leave the fine-tuning for the final stage.
- Recording is about capturing "the vibe." Leave "the sound" for later.
- Create a basic mix of the song within your personal DAW, but make sure you save it in OMF if you plan to open it into another manufacturer's DAW for the final mix. This way you can spend some more time polishing the final sound in, perhaps, a more sophisticated environment.

These guidelines apply to all kinds of music writing, whether you're using a computer-based DAW or a stand-alone recorder like units from Roland or Korg. Focus on the big picture, not the details, and get the job done in time — every time. **EQ**



Currently touring with his band WoM ([www.wom.com.mx](http://www.wom.com.mx)), Gus Lozada also hosts conferences and clinics in Latin America about music production. In addition, he moderates the "Nuestro Foro" and "KSS-Keyboards, Samplers and Synths" forums at [harmony-central.com](http://harmony-central.com). His email is [gus@guslozada.com](mailto:gus@guslozada.com).



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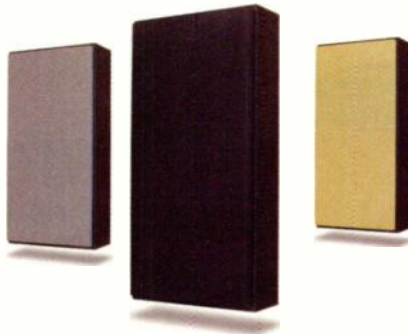
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by Matt Harper

# Room with a VU

**STUDIO NAME:** Talking House Studios  
**LOCATION:** San Francisco, CA  
**KEY CREW:** Peter Krawiec (Chief Engineer); Justin Lieberman (Engineer); Paul Ruxton (Creative Director/Producer)  
**CONTACT:** [www.talkinghouseproductions.com](http://www.talkinghouseproductions.com)  
**CONSOLES:** 80 input SSL XL 9000 K with Ultimotion (A); Digidesign ICON D-Control w/32 faders (B), ICON D-Control w/16 faders (C)  
**RECORDERS:** Ampex/MDI ATR 1" and 1/2"; Pro Tools HD3 (3) w/ 192 I/Os (14); Studer A827 (2)  
**MONITORING:** Genelec 1038 (mains), 8050 (surround), 7070 (subs) w/Dolby Lake Processors  
**PRES:** A Designs Reddi; Avalon M2 MKII; Focusrite Red 1 (2); GML 2 channel w/PSU; Hamptone HVTP2; Martech MSS-10; Millennia HV-3, HV-3D; Shep/Neve 31102; SSL XL Remote (24 channel)  
**MICS:** AKG D112 (2), 414BULS (2), 414TLII; Audio-Technica 4047; B&K/DPA 4003 (2); Brauner VM1KHE; Neumann KM184, 140, M149, TLM170, UB7 (2); Royer R121 (4), SF12; Sennheiser 421 (5); Shure Beta 98 (6), Beta 52 (2), KSM27 (2), KSM32 (2), KSM44 (2), SM57 (4), SM7, Sony C800G (2); Wagner U47w  
**COMPRESSORS:** ADL 1500; dbx 165A; dbx 902 de-essers w/rack (2); Drawmer DS201b (2); Focusrite 3; Neve 33609 (2); Universal Audio 1176 (2); Urei LA-2A (2)  
**EQS:** Focusrite Red 2; GML 8200, Tube Tech ME1A, PE1C (2)  
**REVERBS:** AMS RMX16; EMT Plate (Martech upgraded); Lexicon 480L, 960L; Sony S777 Digital Reverb  
**PROCESSORS:** Eventide DSP4000; Lexicon PCM42, PCM80, PCM91; TC Electronic Fireworx, M5000, TC1210; Yamaha SPX 990 (2)  
**KEYS/SYNTHS:** Baldwin Fun Machine; Hammond B3 w/ Leslie 122; Korg DW-8000, Karma, Trinity, Triton (2), TR Racks; Muse Receptor (2); Rhodes suitcase; Roland Juno-6, JX-3P, 880 (2), 1080 (2); Signal Transpor: Synth Driver 2; Speck XSum; Studio Electronics SE1; Wurlitzer 200A; Yamaha CS-15, DC-7  
**GUITARS/BASSES:** Alembic Custom; Fender Stratocaster (2), Telecaster; Gibson L5, Les Paul, 335 (2); Lowden hand-crafted

nylon, hand-crafted steel; PK Custom bass, Tom Anderson Drop Top  
**AMPS:** Ampeg SVT, V2; Fender Bassman, Deluxe; Marshall 2000, 50-watt Plexi; Peavey Classic 50, 5150; Roland JC-120; Torres Boogie-Mite; Trinity 18-watt; Vox AC30

**DRUMS:** Full kits from Camco, D'Amico, PK Custom, Yamaha; Paiste and Zildjian cymbals

**NOTES:** Disguised by a warehouse *façade* and hidden away incognito in San Francisco's SoMa district, the brainchild studio of a "who's who" producer collective of Bay Area musical movers and shakers (a.k.a. Talking House Studios) lies in wait to facilitate the sonic shaping of the next great project. Yes, Talking House was designed and built by famed architect John Storyk and the Walters-Storyk Design Group. Yes, it clocks in at nearly 9,000 sq. ft. And yes, that SSL 9000 K was pulled from the now tragically deceased Hit Factory in New York City.

No, building and operating a studio of this scope is not an exercise in futility in this day and age. Don't believe us? Just ask any of the many artists/groups that have been given the Talking House treatment. From The Trophy Fire to A Band Called Pain, all will attest that the Talking House team has aided them in making public their works, not just by merely tracking, mixing, or mastering their albums, but by functioning as a production company in the truest sense of the word(s) — offering comprehensive services that span from project development to marketing of the final products.

But enough of all that; what really floats our boat isn't the forward-thinking approach to studio ownership (as much as we do applaud it) but, rather, the godly gear housed with the walls. From the Klaus Heyne Edition Brauner VM1 to the EMT plate reverb (upgraded by Martech, of course); from the Ampex and Studer tape machines to the vintage array of backline equipment (Juno-6s, DC-7s, and AC30s oh my!), Talking House truly has some of the tightest in-house gear in the Bay Area and beyond. Seriously, take a look at that gear list and then try to convince us you don't want to freelance a session in Talking House.

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