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FEATURES

20 STONE TEMPLE PILOTS

After a nine-year hiatus from the studio, STP is back with a new album, recorded in three of the bandmates' own studios, and sans an outside producer.

30 JAMIE LIDELL

The one-man band experiments with distortion and echo on Compass.

32 AMP LIVE

Zion-l's DJ/producer talks about jagged editing and tweak-y effects on his solo release, Murder at the Discotech.

34 GREG LASWELL

The songwriter/producer hides out in a cabin to create Take a Bow.

TECHNIQUES

- 36 VOCALS 10 Recording Tips for Singers
- 38 PRODUCTION 5 Things to Ask Yourself **AFTER Every Session**
- 40 MIXING Fun with Stompboxes
- 42 TRACKING Home Brew ADR, Part Two

We invite all readers to share their recording tips, session shots, and gear reviews with the EQ community. Send your words and pictures to eqeditor@musicplayer.com, and we may publish them in a future issue.

PUNCH IN

12 The New Pornographers, Ellen Allien, Minus the Bear, Tech Tip, Tracey Thorn

STUDIO REVELATIONS

66 Less is More by Yaron Fuchs

GEARHEAD

- 48 GUITAR RECORDING MASH-UP From old skool to nu school, hardware to software, check out these hot new tools for recording guitar.
- 62 GADGETS Korg Sound on Sound SOS Unlimited Track Recorder, CEntrance DACport, Sanyo Xacti ICR-XPS01M
- 18 TOOL BOX 7 new gear previews!

POWER APP ALLEY

- 44 Avid Pro Tools 8
- 46 Steinberg Cubase 5

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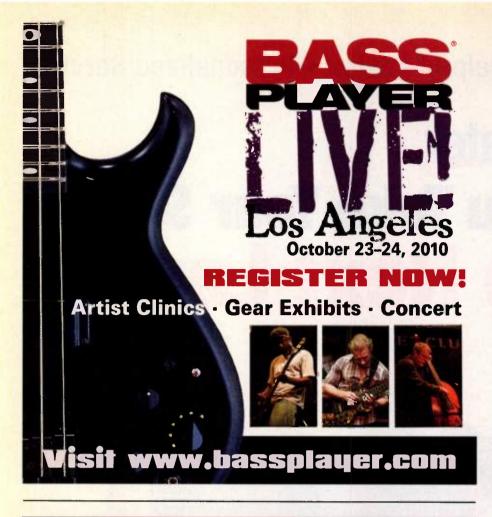
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A conversation with jazz/blues guitar legend Scott Henderson (Tribal Tech, Chick Corea, Jean Luc Ponty,

(Tribal Tech, Chick Corea, Jean Luc Ponty Joe Zawinul, Jeff Berlin, Victor Wooten)

Scott, tell us about your studio. It's a two room overdub studio - a control room and a room to mic guitar cabs, hom players, singers, etc...

What do you do there as opposed to in commercial studios?

I use commercial studios when there's a drummer involved, but I get the best guitar tones at home.

What were some of the problems you noticed with the acoustics?

Actually I never thought there were any problems, until I A/B'd the Primacoustic Broadway panels with what I was using before.

What type of panels did you have? I had a popular brand of foam and I needed to take it down because after 3 years it started to crumble and fall apart.

Did you do the set up yourself? I did it all myself. Primacoustic made it easy and fast. Believe me, if I can do it, anyone can. All you need is a drill, screws and a level.

How did you configure the panels? In the control room, because there's a lot of gear to work around, I just put them where they fit. The mic'ing room was just bare walls so it required planning. I

fit. The mic'ing room was just ba walls so it required planning. I configured them randomly to cover about 30% of the walls.

What improvements did you hear? A big difference! Tighter low end with more of it, plus a sweeter top end and a clearer, open sound.

How would you compare it to foam? The foam gave the guitar a bit of a nasal sound - more emphasis on mid frequencies, and not good ones in my case.

What would you tell someone thinking about acoustic treatment?

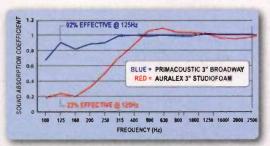
Whatever you do, don't use foam, especially attached with glue. The foam turns into dust after a while and is a total mess. Even worse is trying to get the glue residue off your walls. Mine had to be completely sanded and re-painted. Plus foam doesn't sound nearly as good as the Broadway acoustic panels.

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TALKBOX



This issue of EQ represents another evolutionary step as we fold in our new Community section and open up the layout a bit more. As a print magazine that's growing in circulation-imagine that!-we chained genius Art Director Patrick Wong to his desk, fed him a constant diet of pizza and Pepsi, and three weeks later he emerged with what you're holding in your hands. And kudos to the simultaneously super-talented Kylee Swenson, who dove deep into the EQ community and returned (alive, fortunately) with the Community section, which gives a voice to you-our loyal, quirky, and totally fabulous readers.

But enough about us. A redesign represents a much bigger concept, which is change. Sometimes welcome, sometimes detested, change is what renews us, challenges us, destroys us, and enhances us. It's the wave that sweeps us to greater heights, or drowns us. It's what keeps us young,

makes us old, and forces us to look in the mirror and wonder whether we like what we see.

Are you changing? Has your music changed with the times, or are you holding on to what was once new but is now familiar? Are you willing to kick the default button aside and start from scratch? And most importantly, are you willing to risk an epic fail because the reward just might be an epic success?

In a world where paradigms seem to shift faster than Japanese fashion design and vesterday's strangeness becomes tomorrow's familiarity, you need to navigate these changes with skill and daring. Your music needs to push the boundaries, as do your recording skills. It has never been more important to make a statement and stand out from the crowd, because it's a crowded field indeed.

Snakes shed their skin several times a year. Is it time for you to shed your skin and renew yourself? The answer is almost certainly "yes."

an And

STUDIO NIGHTMARE

I've been in the business since 1971. This particular disaster happened probably around 1979 and was with a Mexican mariachi band: two or three guitars, guitarron (bass), a couple of trumpets, and a violin. The guys spoke no English whatsoever, and I didn't speak Spanish. It was pretty obvious they were self taught, sitting around at night learning their instruments after working in the fields of Central California all day. They sounded pretty good!

Before we started to roll tape (Ampex MM-1100 2-inch 16-track), I asked them to check their tuning. They didn't understand me. I walked over to the Yamaha 7'4" grand piano. Taking guitar number one, I started tuning it. I couldn't believe how far out of tune it was. Then I took guitar number two and



did the same, and finally the guitarrón.

Everyone had their instruments back and started strumming while making these remarkable, contorted faces. They couldn't play them! Why not? They had learned how to play their own instruments, making up fingerings based on how the instruments were tuned when they bought them from the music store! No one had ever shown them how to tune or how to read a standard chord-fingering chart. Once I brought the instruments all back to standard tuning, they had no idea how to finger the chords they had learned the wrong way. Needless to say, the session immediately stopped! Eric Seaberg



It was 11 A.M., and the head engineer and I spent the last three hours setting up 14 mics on the drum kit, all lovingly and scientifically placed. We started with a Glyn Johns-style setup, with three U 87s for an open, natural drum kit sound. We added a Shure Beta 52 to beef up the kick, the obligatory Shure SM57 on the top and bottom of the snare, three Sennheiser e 604s on the toms to capture the stick attack, two Neumann KM 184s in a stereo pair and one on the hi-hat, and two AKG C 414s for room tone.

The kit was sounding huge. After soundcheck, we took a quick break and returned ready to start tracking. Upon hearing the drums in the control room, we knew something was wrong. The entire stereo image had changed. The head engineer furiously traced XLR cables from each mic to the wall, finding that they matched with the input list. I pored over the patch bay and checked all the functions of the preamp only to find it was set up and behaving correctly. We then spent 45 minutes in the Pro Tools

"We were faced with the grim realization that if we did not record soon, we would have nothing."

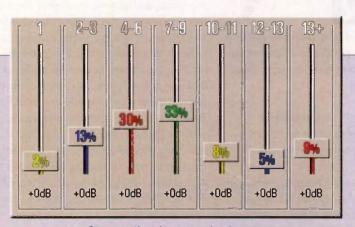
I/O setup checking that our 192s were set to the correct inputs and outputs.

It was now around 2:30 P.M., and we only had the room booked until 4. Only six of our inputs were functioning correctly. At this point we were faced with the grim realization that if we did not record soon, we would have nothing, and the eight hours would be a total waste. We decided to go with what we had, and in an hour, we had three songs down with three takes each. Upon playback I remarked, "There are our super-fat drums." We ended up using the three mics in the Glyn Johns arrangement, the kick mic, and the top snare mic, along with one 414 for the room, and the sound was just *epic!*

Ever since that experience, I learned that nothing in the studio is a problem; it is merely an occurrence at that particular time and place, and we can only choose how we react. Doug Fearnside

EQ POLL

How many mics do you like to use for drum recording?



Stats culled from reader input at eqmag.com

Share your studio stories, studios, and questions with EQ by emailing us at eqeditor@musicplayer.com.

READER'S ROOM



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MKII, Sonivox Mellotron Vintage Synth,

Waves Mercury Bundle

Notes: It's mainly used for my solo metal project, Autumns Eyes, but I work with other hard rock and heavy metal clients. In terms of gear, I lean more toward "whatever sounds good to you" rather than listen to pompous producers who say that, "In order to get a good sound, you have to spend at least \$10,000 and play guitars strung with unicorn hair." Dan Mitchell

EQ'S FACEBOOK JURY Is it important to record the real-deal instrument

Is it important to record the real-deal instrument, or is it possible to create a great-sounding album using samples and modeled soft-synths/plug-ins?

ASK EQ

The pots on my audio interface are getting scratchy, and I can hear clicks in the audio when I turn them. Do I need to buy a new interface? Archie Alvarez

EQ: Maybe, maybe not. Try these options: **1.** Turn each pot over its full rotation 20–30 times. If that fixes the problem, they just had

some dust in them.

2. Open up the box and see if the pots are hermetically sealed (so nothing can get in). If they are, you're hosed-proceed to step 3. But if there's a way to access the pot's innards, get some contact cleaner like Caig's DeoxlT (Caig.com). Attach the little tube that comes with the contact cleaner to

The space between the potentiometer terminals and cover provides an entry point where you can squirt in contact cleaner.

the nozzle, and spray some directly into a convenient hole or slot in the pot (see above)—a little goes a long way. Try to avoid getting it on any other components. Work the controls 20–30 times to distribute the contact cleaner over the insides of the pot.

3. If that doesn't work, you may be able to replace the pot with another one from Radio Shack or some other electronics supply store such as <u>Jameco.com</u>. But that's difficult unless you really know electronics and soldering, and can find something that fits in the same space.

4. If all else fails, you'll need to buy another interface. Might as well upgrade to a better one while you're at it!

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

Real deal. However, there is something to using some of that stuff as last resort. In my amateur world, I see a lot of drummers with poorly maintained kits. Sometimes replacement is good for the record. That's about it. I have yet to find samples of strings or horns that sound as good as the real deal. And amp simulators never stack up. Scot Gallup

Good music is good music. The means by which it is created and captured is not what's important. It's the end result that matters. That being said, there is still, to me, something magical about the sound of a well-played, high-quality instrument. Chris Cummings

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THE NEW PORNOGRAPHERS

Wall-of-Vocals Effects

There are a variety of software approaches for stacking vocal harmonies, but they were not an option for The New Pornographers' *Together* [Matador].

"Vocals are our strength," exclaims A.C. Newman, the band's primary songwriter.

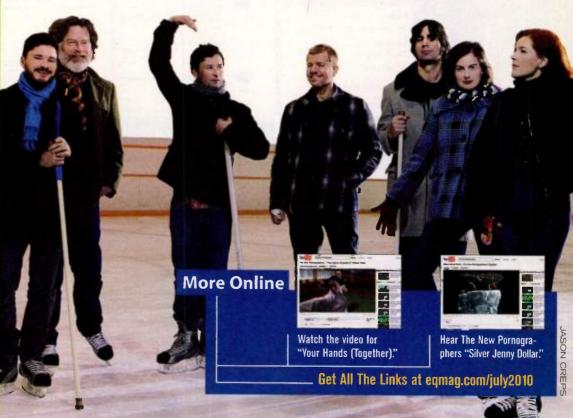
To capture a highly textured vocal sound, producer Phil Palazzolo used a Neumann U 87, an Electro-Voice 636 Slimair, a Telefunken Ela M 251, and a Shure SM57-along with an API 512C preamp and 525 compressor—to record Newman and singers Neko Case, Kathryn Calder, and Kurt Dahle doing multiple tracks.

"In 'Silver Jenny Dollar,' there are three instances where a big vocal swell that lasts just a couple of seconds occurs," Palazzolo says. "Carl [A.C.] and Kathryn overdubbed the part 25 times. The whistling in 'Crash Years' is Carl and I doing 15 tracks of whistles. Effects do work for layering vocals, but when you have voices that can consistently hit parts over and over, nothing substitutes for that."

To further enhance the naturally sung blends, Palazzolo employed some subtle sweetening

effects. "For 'Your Hands (Together),' I got a very intimate-sounding ambience by choosing a reverb with a short decay, and then putting two Lexicon PCM42 delays in front of it. The delay time was set to zero, and I turned up the modulation on one of the PCM42s to create this gently moving 3D effect. On 'Moves,' I intensified a monosyllablic, tremoloed vocal by adding a SoundToys Tremolator plug-in to the performance, and then stacking it 15 times. When you really pile it on like that, it takes on an otherworldly sound."

While the vocal walls of sound on *Together* were inspired by Queen and Sparks, Newman believes that finding a unique sound involves failure. "I've always thought a band's style comes from trying to sound like its influences and just failing," he says. "Hopefully, through your failures, you end up creating something original. It's like the early Beatles and their warped take on Little Richard—they ended up sounding exactly like the Beatles. We're not mind-blowingly original, but our style has come from my weaknesses." Ken Micallef



ELLEN ALLIEN

Parameter-Tweaking Experiments

German DJ/producer/techno artist Ellen Allien-and founder of the Bpitch Control label-has released six rather experimental and theoretical albums since 2000, but she wanted a warmer, more direct sound for her latest album, *Dust*.

"I had to find a producer who would not put his own loud volume of art on music," Allien says. "So I found Tobias Freund, who is very elegant and organized, but he doesn't push you into corners."

Freund's Berlin home studio includes a Mac G5 with Logic Pro 7, Lynx Aurora 16 converters, and an adt-audio ToolMod modular analog mixing console. For designing sounds, Allien and Freund used Native Instruments Reaktor, Absynth, FM8, and Battery, as well as SFX Machine Pro, and analog synths such as a Waldorf MicroWave, an Oberheim OB-Mx, and a Roland TR-808 and TR-909.

To add some interest to the pneumatic beats of "My Tree," the duo used MFB's Dual LFO to trigger the release times on a Cwejman BLD synthesizer. "I used a simple sawtooth waveform from one LFO that was set to a slow tempo to make the BLD's beats sound more alive and unpredictable," explains Freund.

In other experiments, Allien recorded her vocals into a portable flash recorder through either its internal mic or a Shure SM58, and then sent the signal through the adt mixer's EQ/compression and Logic's Vocal Transformer to craft effects such as the pitched female/male dancefloor flirtation heard on "Flashy Flashy." Freund also used a Lexicon LXP-5—controlled via Lexicon's MIDI Remote Controller—to process a piano sound from Logic's EXS24 sampler.

"I used the LXP-5 to change the piano samples pitch while simultaneously delaying it," Freund explains. "The more feedback you use, the more the signal changes pitch. For example, you can adjust the feedback so that a C5 note spirals down in pitch until it hits C1. So I used a certain feedback level to create harmonic textures that I could blend with the dry piano signal."

"Dust is a mixture between nightlife and my day life—a mix of instruments and voice with programming and effects," Allien says. "So this album was more about moving people, not just programming numbers." Tony Ware



MINUS THE BEAR on Recording "My Time"

"The first song on *OMNI* [Danger bird], "My Time," was based around a Suzuki Omnichord idea, says keyboardist/engineer Alex Rose. "We often like to find new toys for each new writing cycle to keep things fresh. It was one of the last songs we finished before going into pre-production with producer Joe Chiccarelli, and it was just so fun-sounding that we knew it was going to make the record."

"When we hit Avast! Recording in Seattle, we were intent on *OMINI* being an album with more of a live

feel, so we all played together. After call in take, Joe would make sonic and musical suggestions and dive into everyone's sounds, going so far as to have us kick in pedals at lertain times its we were tracking the basics.

"The Omnichord was plugged and [guitarist]
Dave Knudson's two-amp setup, which alternated between a Mesa/Boogie Lone Star Vision and a Fender Showman/Fender Iwin Reactor All the drum loops came from the Omnichord's built in loops, and were also run through the amps.



"The song's intro was acheived by running the Omnichord beats into a Dunlop Cry Baby and a Line 6 DL4 set to a stereo ping-pong patch. As the wah pedal was pushed down, the delay time was increased until it got to the chaotic point where the band enters." Alex Rose

TECH TIP OF THE MONTH

Using Live 8 s Grouves to Spice Up Stale MID1 Loops

A cool feature of Ableton live 8 is that you can take a groove from any audio or MIDI file and apply it to other audio files or MIDI clips. This is great for tightly synting audio files or just adding a little reel to a boring audio or MIDI 100p

- Take a fairly boring Min loop with a loth note hi-hat and sing the ck-share pattern on a Min look, and drag an audio file with a little more "feel" in it onto an audio track to apply to your Min 100p.
- Drag your audio file into the Groove Pool. Live will analyze the transients in the audio file to find its "groove."

- Click on the MIDI clip you'd like to apply the new groove to, and select the groove you've just analyzed in the Clip view (you can also just drag the groove file directly onto the MIDI clip).
- Press play. If you don't hear any changes in the newly "grooved" MIDI file, try switching the groove's "base" (i.e., timing resolution) between 8th or 16th notes.
- Experiment with the Amount setting for more drastic changes.
- Press the Commit button to see the results of your groove on the MIDI clip.

Thanks to Ableton's Jesse Terry for this month's tip.

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TRACEY THORN

It doesn't take a soul-crushing audition on American Idol to realize that the test of any singer's ability lies in what they can do alone on a microphone, without the frills and glitz. Not that Tracey Thorn has anything to prove; after 20-odd years and a dozen albums fronting Everything But the Girl (with producer/husband Ben Watt), she knows how to nail the essence of a song.

But with her third solo outing, Love and Its Opposite [Merge], Thorn continues to push herself. "I did half of my last album with other dance producers," she says, "but this time I thought I'd take a complete break from that and set myself to making a solo album that really is a solo album, in that I had to be responsible for the musical basis of every track. That meant working with a more limited palette to really create a mood."

So Thorn decamped to Berlin to record with one producer, Ewan Pearson. "Tracey wanted something quite under-produced and spare, so it was just going to be what we could play between us," he says. "That changed as the songs came forward because I'm a lousy keyboard player [laughs], but we never went further than we absolutely had to."

Thorn's mics of choice were mainly a Neumann U 87 and U 67, but her stunning cover of the Unbending Trees' "You Are a Lover" was done in one take on an AKG C 414 through a Focusrite Green preamp, accompanied by her Dl'd Telecaster.

On Limiting the Creative Palette

"Tracey wanted something quite under-produced and spare, so it was just going to be what we could play between us." —Ewan Pearson

The setup presented some challenges in the mix.

"Her performance on that was just too good to redo," Pearson says, so he and engineer Bruno Ellingham set up a separate stereo mix bus for the vocals, with a Fairchild 660 and Manley Massive Passive EQ for trimming highs and sibilance. Air Lyndhurst Studio's 80-channel SSL 8000 G console acted as a summing mixer back into the Pro Tools rig, lending a subtle frizz of harmonic distortion to some of the album's processed keyboards—especially the trippy SoundToys EchoBoy-drenched piano and Yamaha CS-60 in "Late in the Afternoon."

For all its contemplative beatitude, Love and Its Opposite simmers with surprises—including cameos from Hot Chips' Al Doyle (bass) and Leo Taylor (drums)—and Thorn revels in it. "Sometimes you just click with certain people," she observes, "because your tastes are similar enough that you're not constantly having to explain to each other why you like this sound and not that one." Bill Murphy

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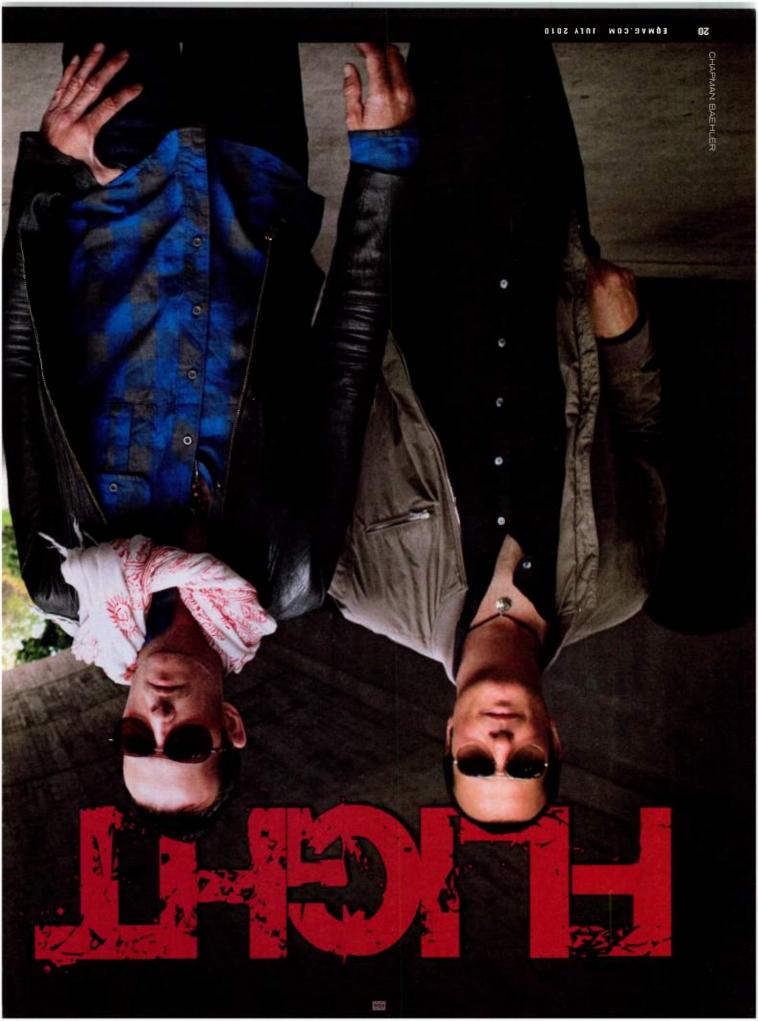
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How Stone Temple Pilots conquered the daunting task of self-production to write the most colorful and inspired album of their career by Richard Thomas

A lot can happen over the course of eight years, especially if you're a band like the Stone Temple Pilots. Multi-platinum forefathers of the postgrunge movement and one of the planet's last great rock 'n' roll bands, STP has stood on the proverbial precipice more times than they'd care to remember, but as any seasoned veteran will tell you, perseverance pays dividends. After a career racked with tabloid drama and a tenuous end to their 2002 tour, the band released a greatest hits collection, Thank You, before disbanding in 2003 to pursue other creative avenues. Five years later. after Velvet Revolver fired its last round into the big empty, Scott Weiland, drummer Eric Kretz, and the DeLeo brothers (Dean and Robert) announced a six-month, 65-date North American reunion tour. Stone Temple Pilots were back, but a new album was anything less than a guarantee.

In February of 2009, the DeLeos and Kretz convened at Kretz's Bomb Shelter Studios for three weeks to flesh out a select batch of new material. With so much time between albums, most of the songs came in fully arranged and developed. Weiland-who at the time was finishing up a bit of solo recording-laid down melodies and lyrics over the band's demos at his own Lavish Studio. The next few months were spent arranging and tracking the songs, with Weiland fine-tuning the vocals with the help of producer and friend Don Was. After a short summer tour, the band completed the final two songs sometime in November. The self-titled album, their first since 2001's Shangri-La Dee Da, had all the big hooks, epic solos, and scorching vocals that one would come to expect from an STP record, but with one

"I can't express how much of my soul I put into this."

-Robert DeLeo

WRH

glaring difference. Brendan O'Brien, the hard-rock wizard responsible for the production of each of their five LPs, did not man the boards.

"Some people look at you like you're crazy,"
Kretz says with a laugh. "'Why would you want to
produce yourself? Produce everyone else in the
world; just don't produce yourselves."

"We were very fortunate to have someone like Brendan show us how things could be done," says Robert DeLeo. "In some ways, I think we closed a certain chapter with Shangri-La. We took that production and that format to a certain level. This is definitely a new chapter. We've had some heavy people involved in our records, but I felt like it was finally time to take that on."

THREE'S COMPANY

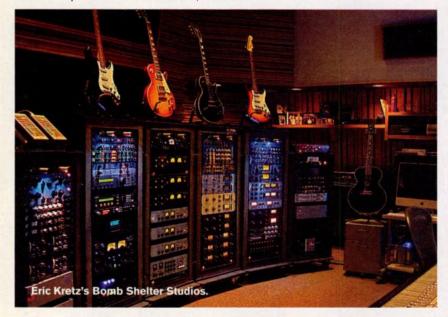
Located underneath the intertwined concrete freeways of downtown L.A., Kretz's Bomb Shelter Studios sits inside a 104-year-old brick building that once housed a candle-making company. Completely refurbished, the space features two separate iso booths, a 30x25-foot control room furnished with planks of Madagascar poplar, a spacious lounge area, and a live room big enough to house a batting cage.

Meanwhile, Robert DeLeo's HomeFry studio, overlooking the picturesque beach communities of the South Bay, is the result of six years of hard work. Packed to the gills with his vintage amp and microphone collection, HomeFry boasts a fully restored 1972 Neve 8014, a 16-channel board with 2254 stereo compressors, eight 1073 preamps, and eight 31102 preamps taken from a later model board. With four 1066's racked outside, it's the ultimate Neve package.

By contrast, Bomb Shelter's centerpiece is a 1997 SSL G+ 4048 with 48 returns, but Kretz's Neve Sidecar-outfitted with the classic 1066 and 1073 preamps-was used on everything from bass and guitar to select drum tracks. Meanwhile, Weiland's vocals were tracked through a Neumann U 47 and Sidecar of his own at Lavish.

Stone Temple Pilots [Atlantic], it should be noted, is the first STP album not recorded to tape, but a surplus of finely attenuated gear—coupled with an appreciation of classic studio techniques—made for a smooth transition. An avid reader and vintage collector, Robert DeLeo was inspired by recording stories he had read in books like Temples of Sound and Recording The Beatles, and with five hit records under their collective belts, STP were well up to the task of self-production.

"You have to wear a lot of hats," Kretz admits.



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"It's not just about the music. You have to deal with all the personalities, and there's always been a referee to come in and help settle any disputes. Now you have to settle those disputes and deal with the consequences and the emotional stuff that goes along with it. That's the only difficulty in producing yourself—the emotional side of it. There really isn't anything else. We've been doing this for so long, and it's all based around tried and proven ways of making records."

MIX & MATCH

When it came time to choose the right guitars and amplification, both Robert and Dean DeLeo agreed that a vintage, stripped-down approach would work best. For Dean, that meant a handful of reliable weapons like a '57 Strat, a black '78 Les Paul, a '67 sunburst Telecaster, and a '50s-era Danelectro double cutaway with three lipstick pickups that accounted for the buzzy crunch of songs like "First Kiss on Mars" and "Hazy Daze." For his acoustic, Dean used a Gibson J-50, which accounts for the acoustic guitar parts on most of STP's catalog.

Amp-wise, small vintage combo amps such as a '71 Ampeg GU-12 (for the solo on the epic "Dare If You Dare), a Gretsch 6159 bass amp (for "Between the Lines"), and a '64 Supro Thunderbolt were the order of the day. Most of the time, three mics were set up and ready to go for any given amp. The most consistent pairing was a Shure SM57 and a Sennheiser MD 421, with a Royer R-121, RCA BK5, or Neumann U 87 mixed in as a variable third option. On a few songs, engineer Russ Fowler miked the rear of an open cabinet and blended it with the front, placing the Royer about five or six

feet away from the speaker. Other times he would use only one mic for an extra tight sound.

"I try and align the capsules as best I can," Fowler says. "Sometimes I would use a coincidence pattern with the 57 and the 421, then sit the ribbon on top of that. Alignment of the capsules can make a big difference."

"We wanted to capture something that had a little age to it, but in a modern way," seconds engineer Bill Appleberry, who doubled as the album's keyboard player for standout tracks such as "Mayer" and "Take a Load Off."

Considering that Dean tracked most of his guitars in the control room, extra-long cabling was

needed. To combat the delay and loss of high-end, guitar tech Bruce Nelson outfitted a 12x12 board with a Sonic Research Turbo Tuner and a Fryette Valvulator tube buffer to take the signal from high to low impedance. The 50-foot cable was manufactured by Elixir, a company that once made bomb detonation cable for the military. Once a certain tone was achieved and the part laid down, Dean tracked it again with a different guitar and amp combination, panning the two tracks to complement one another.

"I used a Pultec-style Summit EQ and a Blackface 1176LN on the electric guitar bus," Fowler remembers. "With the Summit, I would add overall top end, varied from 4k to 10k, and chop out the low end. The 1176 compression amount also varied but mainly a slower attack with moderate to fast release."

Usually a proponent of the punchy tones offered up by his collection of Schecter PJ basses, Robert DeLeo recorded on a new Gibson Thunderbird. With a penchant for mixing and matching heads and cabinets, he formulated the perfect blend of smoothness and bite with two main rigs. For maximum grit, DeLeo unplugged the speakers from his 100-watt Ampeg VT-22 guitar amp-made famous by Keith Richards on Exile On Main Street-and lined the power section into his 1970 Marshall 8x10 cabinet outfitted with vintage Celestion speakers. For a rounder, more fullbodied sound, he ran the Thunderbird through a Demeter Tube Direct Box and into a 1961 Fender Bassman with a 15-inch speaker. The Bassman was miked with both an Electro-Voice RE20 and a Neumann U 47 fet, while the Marshall cabinet was miked with a Sennheiser MD 421 and a Shure SM57. He then used an A/B box to blend tones.

"We tuned that thing as low as possible, so it sounds like a pillow."

But for the tracking of "Cinnamon" and "First Kiss on Mars," rather than blend two different amps, he used a 1968 Fender Bandmaster dirtied up with an early '70s Maestro BB-1 Bass Brassmaster pedal. That setup was miked with an SM57 and a Neumann U 47 fet pointed at the top speaker, and a Yamaha SKRM-100 subkick placed next to the bottom.

"Being a bass player, I'm always asking, 'Can you hear what I'm doing enough?'" Robert says jokingly. "But the way I look at it, I worked way too hard and way too long to not be heard, you know? I can't express how much of my soul I put into this."

HARD-HITTING TRACKS

Endorsed by GMS since 1994, Kretz stayed constant with his kit, although he did cycle through nearly 25 snares to find just the right ones for the

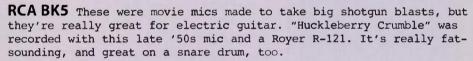
album, including a vintage 6-1/2-inch Ludwig Black Beauty, 6-1/2-inch brass and maple GMS snares, some custom pieces from Orange County Drum & Percussion, and Robert's monster 8-inch Gretsch, which can be heard on the album's first single, "Between the Lines."

"We tuned that thing as low as possible, so it sounds like a pillow," Kretz says. "It's got that fat, late-'70s glam rock feel, but it's hard to play because there's no bounce that comes back to you. It's like hitting a bunch of sheets!"

The size difference between the tracking rooms at Bomb Shelter and HoneFry meant the drums had the most variation in terms of microphone selection and placement. To rein in the sound, Kretz bookended his kit with massive six-foot gobos packed 10 inches thick with pegboard and Auralex

VINTAGE KING

Robert DeLeo shows off a few of his favorite mics.



AKG D 30 This one's pretty rare, and a great kick drum microphone. I also own a deadstock 1964 D20, and I have another D20 that's used on every kick drum on every song on the record.

Coles 4038 I have a pair of these original BBC ribbon mics. These are great on acoustic guitars, vocals, strings . . . everything!

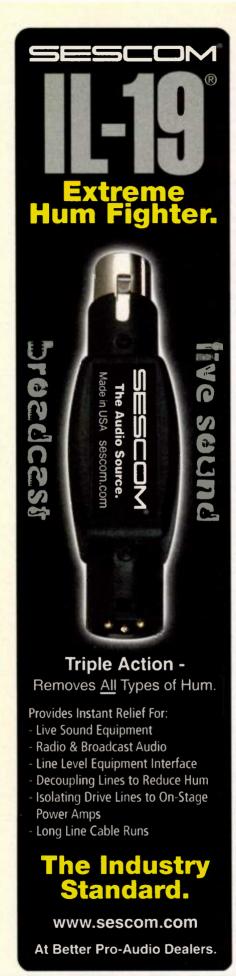
RCA 44BX Eight pounds of mic. This one is in original condition—probably a late '30s or '40s model—and was used over at Eric's above the kit and behind the drummer.

Neumann KM 86 i This was used on all the acoustic guitars on the record. I bought this from Germany on eBay, but I think it came out of Townhouse Studios in London. I was watching the making of *Dark Side of the Moon* and saw these being used on the piano and guitars.

Sony C-37A Endorsed by the Capitol Records crew, this 1961 mic was used on overheads for the drums. Supposedly this was Sinatra's preference for a while.

Neumann U 47 This is the first mic I ever bought back in 1995. At the time, it was \$6,500. Now they go for around \$15,000. Use this on everything you possibly can. This was put out in front of the drums as a mono room mic.







"It's easy

to make

but then

you lose

else."

-Eric Kretz

something

something

sound loud.

foam, plus a tented canopy festooned with Christmas lights for extra vibe. Sennheiser MD 421s were used on Kretz's 12- and 14-inch rack toms and again on the 16-inch floor tom, but to capture the bellow of the larger floor tom—as well as the overall rumble of the kit—a U 47 fet was used for the 18-inch. Shure Beta 98 mics were placed

underneath both floor toms as well.

As digital recording can be unforgiving on cymbals, Kretz and Fowler used vintage Royer R-122 ribbon mics for the overheads, which naturally roll off top end. (DeLeo's Sony C-37A was used as an additional overhead mic during drum tracking at his studio.) AKG C 12As were used for room mics, with an SM57 on the hi-hat, but it was the snare and kick drum configurations that required the most tweaking. A vintage '60s

AKG D 20 and SKRM-100 subkick were set up outside the kick drum, while an MD 421 was placed inside.

On a gobo in front of the kit was a Shure Beta 91, which went through one of the 1066 preamps on the Neve Sidecar and into an Empirical Labs Distressor.

Atop the snare, Fowler used two mics: an AKG C 451 B and a Shure SM57 run through a Neve 1073 in a lunchbox and then a Pultec MEQ-5 to boost the uppermids. Underneath the snare, Fowler used an AKG C 414 set in bidirectional mode

and aimed at a 45-degree angle toward the bottom of the snare. "I call it the snick," Fowler says. "It picks up the beater side of the kick and the bottom of the snare simultaneously." At DeLeo's studio, Fowler used a more traditional Sennheiser MD 441 in place of the C 414 "snick" mic.

For added character, a vintage Shure 55SH vocal mic was set up waist high

approximately six feet in front of the kit, and a Lawson L47 was placed behind Kretz's head and aimed at the snare drum. The 55SH subkick was crushed with a Smart C2 compressor on the way in, while the L47 went straight into the SSL. Apart from the 55SH, most of the drum tracks featured very little compression. The tom and cymbal mics were recorded through the SSL, while the kick and snare mics passed

through the Sidecar's 1066 and 1073 preamps.

DeLeo and Fowler slightly tweaked the configurations at HomeFry, using a pair of AKG C 12As for the overheads, which were a little breathier on the top end to account for the lower ceilings. A U 47 was placed in front of the kit, and a Coles BBC 4038 was stuck in the corner of the room to pick up extra low end. "Cinnamon" and "First Kiss on Mars," two of Stone Temple Pilots' most distinctive and sonically broad cuts, were both tracked at DeLeo's studio.

Batteries not included.*





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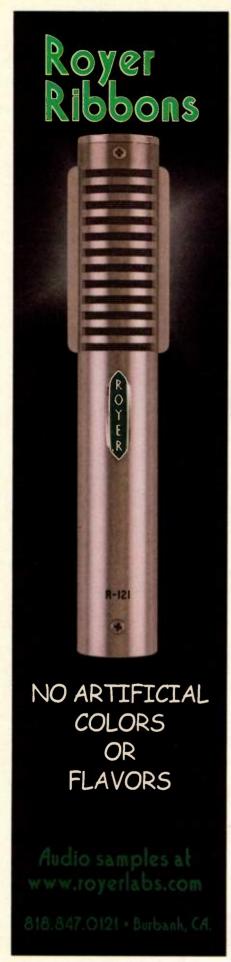
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"I purposefully held those songs until last," DeLeo says. "I knew I wanted to do them at HomeFry. It meant that all the blood, sweat, and tears I put into this place were finally coming to a head, and I was able to hear it rather than just see it."

THE LORD'S WORK

STP tapped renowned specialist and Grammy-winning engineer Chris Lord-Alge for mixdown. "I tried to treat it more like a Beatles or a Zeppelin album than a contemporary album," Lord-Alge says. "Let it be more of a mid-range record, and let the drums be more ambient and less reverb-y. I look at Dean as our era's Jimmy Page, and Robert is 50% John Paul Jones and 50% John Entwistle. They play stuff that works together like a puzzle."

"Everything is so much louder than when it left here," says Kretz of the finished product. "It's easy to make something sound loud, but then you lose something else. There's a finite amount of stuff that can go in there, and usually you have to take stuff out in order to make things sound clearer. Chris has a way of jamming more shit in there and making it work."

Lord-Alge brought out his Universal Audio LA-3As and all four of his bluestriped 1176s, especially for the snare drum. A Marshall Tape Eliminator was used on the vocals, with twice the amount of slap he'd normally use. "Really going for the Lennon thing as much as possible," he explains. For other reverb, he matched up a vintage Lexicon 224 with an EMT 246 to capture a Young Americans-era, David Bowie feel, as on "Bagman."

"I panned this record as wide as possible," Lord-Alge says. "If I could have put it outside the car window, I would. Sometimes I'd take one of the bass distortion amps and pan it right so the fuzz is coming from one side."

STP's focused, uncomplicated approach is evident throughout the album, from the bratty snarl of "Hickory Dichotomy" to the easy Sunday morning vibes of "Maver." In order to go big, they first had to go small, coaxing golden audio out of vintage combo amps, guitars, and snares, then capturing the performances with the finest microphones.

"There's a certain amount of your brain you shouldn't use when you're producing your own music," DeLeo says. "I don't necessarily think it's dumbing it down, but the final product should just be rock 'n' roll music. We're not reinventing the wheel. We're just trying to make a great record with the best songs we can make, and I think we'd done that from the beginning."





Watch Stone Temple Pilots' "Between the Lines" video.



Check out a STP rehearsal and interview.

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CH-CH-CH-CH-CHANGES

Jamie Lidell creates electrified soul from eclectic studio sessions and a series of bad breaks by Patrick Sisson

Compass, the latest album from live wire musician Jamie Lidell, finds the pitch-shifting, melody-looping extrovert experiencing a catharsis. Grasping for solid ground after suffering what he calls a "triple whammy"—the dissolution of a relationship, a change in management, and a move from Berlin to New York—he set down and in the course of a month, wrote his own version of "good, old-fashioned relationship blues."

"It left me to reinvent myself with all the joy and pain and the freedom to think and deal with the fear and shit that got stirred up," Lidell says. "It's the deepest blues I've ever felt. But music is a really sweet healer." Raw performances aside, the classic sentiment expressed throughout *Compass* [Warp] was built from technology-enabled, studio-hopping collaborations. Production was done at multiple studios. There were collaborations with Beck and others at the famed Ocean Way complex in Hollywood. Meanwhile, musician Chilly Gonzales and Wilco multi-instrumentalist Pat Sansone contributed backing parts remotely via online file sharing, and Lidell recorded synth parts on his Sequential Circuits Prophet-5 in his apartment.

Sessions also took place at Leslie Feist's Canadian home in the Niagara Escarpment, with production and mixing help from Grizzly Bear's Chris Taylor.

There, the trio utilized space and texture in creative ways, such as creating natural reverb by playing trumpet off into the wilderness while miking the sound from the other side of the cabin.

These personal songs aren't the work of a knobtwiddling one-man band. "The whole album's approach is about finding acoustic solutions," Lidell says. "There's not much electronics going down."

However, Lidell's flexible, expressive voice did take center stage once again. Befitting the regret-to-rage spectrum of emotions expressed on the album, a variety of approaches were used to capture raw vocal performances. All were sent through a Neve 1081 EQ. But while working at Ocean Way with Beck, Lidell used a Neumann U 47 sent through a Neve 1271 preamp for a "classic, Nigel Godrichesque chain," or an Altec 693, a "skull-shaped" dynamic ribbon mic, which gave the title track's vocal a creamy, dark sound. But for something with more edge, he favored an AKG/Telefunken D 19.

"It's just a really aggressive mic that gave me all the bite I was looking for," he says. "It has presence. I like to do overdubs with a little more burn on them. It's so flattering in a way, but also sounds blank, like it's already EQ'd."

To add more depth, vocal recordings produced at Feist's ranch were also threaded throughout the album. Taylor set up multiple mics in a cavernous, open part of her house to record and blend multiple mic inputs. A Shure SM7 captured the "meat-and-potatoes" of Lidell and his collaborators, including Feist, while Sony C-48s were placed at different heights and distances to allow for a more three-dimensional sound during mixing. The unique Grizzly Bear acoustics and composition are also present on "The Ring," a thumping piano stomper that includes a rippling, pentatonic-style guitar riff from Daniel Rossen.

Heavy use of distortion reinforced Lidell's mindset and lyrics throughout the album. The Thermionic Culture Vulture was responsible for much of the bending and shaping of sounds. "It's such a rewarding box," he says. "It allows you to re-sculpt distortion, and even though so many sources behave so differently with it, it's still intuitive. Everything works in the mix. It's a brilliant go-to box. In a whole way, the nature of the messages and lyrics requires a darker, more eroded sound."

A weighty set of booming drum and bass rhythms also showcased Lidell's darker moods. Recorded mostly at Ocean Way, the drum and bass benefited from the intimate knowledge Beck and players like drummer James Gadson had of the space and the gear. Though they spent two days in the studio, a bulk of the rhythm tracks came out of those sessions. According to engineer Robbie Lackritz, Gadson played a set of custom Pearl Drums in an isolation room. It was extensively

"It's the deepest blues I've ever felt. But music is a really sweet healer."

miked: U 47s, C 414 with C 12 capsules and Josephson on the snare, an API Sidecar and 1073s for preamps, and very little compression. The close mic setup captured a tight, rich sound, which was tracked to Pro Tools and doubled up on the APR 24-track.

Lidell took advantage of tape recording, both at Ocean Way and via his Nagra portable recorder, to capture unique textures and create echo effects. He drafted the ATR tape machines into service as a very expensive delay effect, threading the tape into the custom board and then back into the ATR.

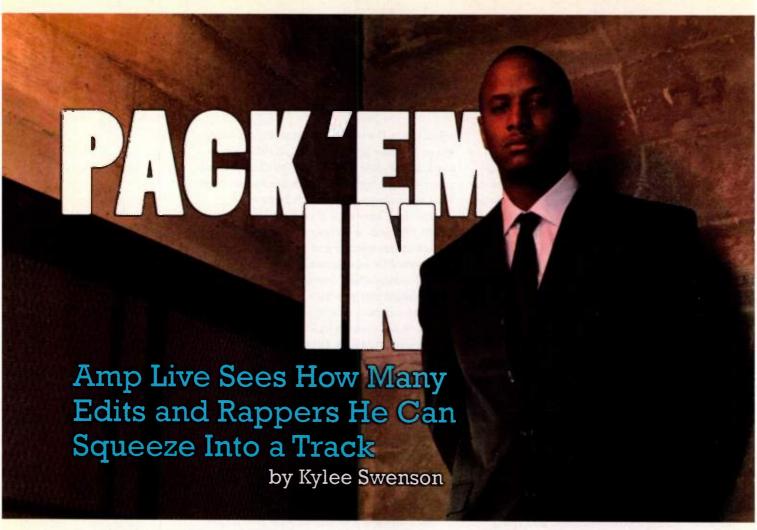
"It's an expensive, naughty way to use the machine," he says. "It was common back in the day, of course. When it starts to hit itself, it's insane, proper goose bumps kind of sh*t. It was a more complex live task, but it was a nice way of adding effects."

The portable Nagra captured drum sounds, the odd cowbell, and even trumpets. "The Nagra captured this strange distortion from the quick distortion of tape," he says. "The way mallets sound on tape is great. You also get the joy of a really aggressive sound into the mic, pushing air, capturing it on the tape. That mid-range power was great. With a trumpet, for instance, you don't want it to be polite—you want it burning."

The communal and experimental elements of the album came together for the title track. Sitting in a circle and working from a simple song sketch, Lidell, along with Feist, Beck, and Nikka Costa, were strumming guitars or singing into a set of U 47s, recording without any separation. It frustrated Taylor when he went to mix the album, but ultimately the space and setup defined the song's brash, western drift.

"There was no way to remove the bass track on the guitar, which made it cool," Lidell says. "You just had to embrace the guitar playing. It was a little shaky, but that was kind of the mood. As you're working with the song, you have to f*cking go for it. There's something really beautiful about that.





There are the producers who will finish a project and take a breath, and there are those who never stop. Amp Live is the latter. From remixing (Radiohead, MGMT, Jamie Lidell) to his hip-hop group Zion-I, his solo albums, and other collaborations, Amp Live's workflow is constant. His latest solo album, Murder at the Discotech [Child's Play] may have taken nearly two years to make, but Zion-I's touring schedule and his other projects were also part of his juggling act. "I'm home for three days and then I have to go back out," he laments. "I just have time to get work done and leave."

Due to the various distractions and Amp Live's diverse musical interests (including hip-hop, electronic, indie-rock, and jazz), the album took several turns. "It started out pretty hardcore dance," he says. "Then I started using more guitars, and then I changed my feeling about it again. I come from a hip-hop background, and I wanted to portray more of that."

In the end, Murder at the Discotech settled on an '80s electro/hip-hop vibe meshed with newer production inspirations from dubstep, hipstep, "B-more chop-up breaks are pretty much done. It's on a commercial level now."

B-more, rock, and even ska. But Amp knows that the latest studio techniques often have a short shelf life. "I think Ableton Live effects are being overused, like tuning down the vocals so that it sounds like a record stopping," Amp says. "And all the B-more chop-up breaks are pretty much done. It's on a commercial level now."

That said, Amp Live still likes a creative turn of Auto-Tune or a jagged stutter edit, but he doesn't stagnate in his methodology. While *Murder* was mostly created in the box-a mix of Logic, Pro Tools, and Ableton Live-he's now working on a jazz-inspired album, *Love*, *God*, *Music*, *Life*, with more outboard gear.

And while you'll hear percussive stutters in tracks like "Dropp," he won't stick to the same tricks for long. "It's a way of making a song more interesting, but I probably won't do it as much anymore," he says. "Now, if I'm with a vocalist, they could do stuff that would fill in for that [effect], different harmonies and arrangements happening in the moment."

But whichever way he goes, he likes to tweak things . . . a lot. "On 'Dropp,' those

drums are really distorted and big sounding," Amp says. "It started out as a basic kick that you get on your keyboard, but I took the sounds through reverb and compressed 'em, put distortion on 'em, re-sampled 'em, tuned them down, and combined 'em with other drums."

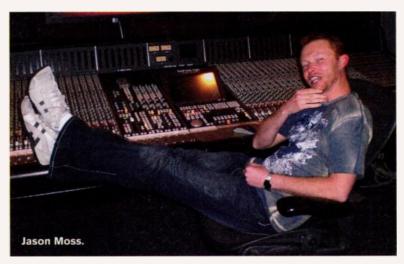
For Murder, which was recorded at 880 Studio in Oakland (where Green Day records), outboard gear was limited to his Avalon Vt-737sp channel strip, a Blue Mouse mic, a Korg Kaossilator, and a Dynacord Echocord. In the box, it was all about virtual instruments and plug-ins such as Native Instruments Massive, EastWest Fab Four, Spectrasonics Atmosphere, FXpansion BFD, Rob Papen Albino 3, and Logic's Guitar Amp.

Jason Moss, Amp Live's longtime mixing engineer (and instructor at Los Angeles Recording School), was impressed with Amp's juggling of inthe-box techniques. "Amp sent me the tracks with so many interesting edits, change ups, and effects, there wasn't as much to do beyond the fundamentals of mixing," he says.

But Moss still had opportunities to experiment. "'About to Blow' was a great opportunity to add some interesting effects to K.Flay's vocals," he says. "The first verse I treated with [Avid] Lo-Fi. I lowered the sample rate, turned off anti-aliasing, and added saturation to give it a funky computerized sound. On the hook, I used [Avid] Recti-fi to add a low octave to her voice to fill it out. The second verse is straight forward until the outtro buildup, where I used a [SoundToys] EchoBoy delay with distortion."

Meanwhile, with a whopping seven rappers competing for space, "Hot Right Now" was a complicated track to make and mix. "I just wanted to combine a bunch of different people that people wouldn't expect to be together," Amp says. Each rapper had four to eight bars to work with, starting with The Grouch and Fashawn, who set the tone. "I used Guitar Amp for one of the vocals," he says. "Or I'd distort a vocal by going out the outputs of the computer, putting it back through the input, and then turning it up."

Moss mixed *Murder* on an SSL 9000K console through JBL 6328 and 4328 monitors, often using the console's bus compressor. "I find the SSL bus compressor glues the low end together nicely," he says. "But when compressing the stereo mix, I usually only use 2 to 3dB of gain reduction. Any more

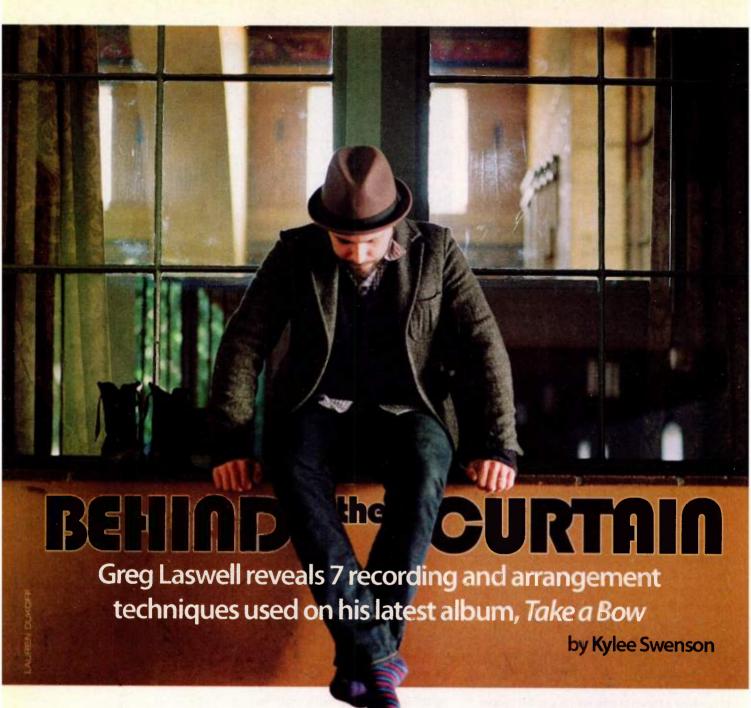


than that and I find my mix closes up and loses bass response."

Yet for "Hot Right Now," Moss had to count on software compression. "I didn't have enough analog compressors to treat each rapper individually," he admits. "I used a combination of Waves Renaissance Compressor and Renaissance Vox in serial and in that order. The amount of RComp changed from person to person depending on performance and tracking quality, but I usually use a 3:1 ratio with around 30ms attack and 125ms release time. Release time has to be fast for rapping due to the rhythmic patterns. The RVox creates a combination of compression and loudness, which helped get mix levels even and create a front and center feel. And the EQ was all done on the SSL channels, emphasizing the 5 to 6kHz range for clarity, especially for male vocals."

Aside from creating a clown car of rappers, editing waveforms into oblivion, and re-sampling and distorting to a crisp, Amp Live is taking a break from wacky drop-the-mic-down-the-well experiments these days. "I used to be more into that until I started spending hella time doing stuff where people either didn't pay attention to it or they were [flippantly] like, 'Oh, okay, that's cool," he says. "So I find a balance of doing the crazy stuff and the stuff where I want to get the crazy effect across, but I don't want to go crazy to make it."





It's no wonder that producer/songwriter Greg Laswell is such a favorite with TV music supervisors (he's had six placements on *Grey's Anatomy* alone). He wears both hats as producer and songwriter equally well, creating beautifully produced and memorable, sing-along songs that cut to the core emotionally. His last three of four solo albums, including his latest, *Take a Bow* [Vanguard], follow the trajectory from the dissolution of his marriage through his mental recovery.

For Take a Bow, he hibernated in a cabin outside of Flagstaff, Arizona, escaping the distractions of his current home base, Los Angeles. He

packed up his car with his dog, a few mics and outboard items, a Martin tenor four-string guitar (which he calls *Take a Bow*'s secret weapon), Gibson J-45 acoustic, Fender Telecaster, banjo, Vox Pathfinder and Fender Tweed amps, Nord Stage and Electro 2 keyboards, an E-mu E5000 sampler (loaded with drum and Mellotron samples), and his computer and software (including the Miroslav string library and Waves Renaissance compressor). Live drums were the only tracks recorded outside of the cabin, right before mixing. Here, Laswell relays some try-it-yourself studio techniques he tested in the cabin.

On His E5000

"I like pulling up a preset in edit mode, detuning it, and playing it while it's still in the edit screen. It allows you to come up with some pretty cool sounds that otherwise you wouldn't be able to."

Backwards Mics

"I had the Neumann TLM-103 and Blue Mouse for vocals, amps, and other things, but I used the Royer R-121 for acoustic guitar tracks. If you turn those mics backwards so that the back of the diaphragm is facing the acoustic, they really bring out the best parts of the acoustic guitar."

Outboard Character

The Millennia Origin STT-1 preamp/EQ/compressor has a really cool transformer button. It's not the cleanest thing in the world, but when it's pressed in, it gives the right kind of character that I like on vocal tracks. With most of my vocal tracks, I'll cut around 500Hz and at 180 or 200. It's really sensitive, so it's just one or two dBs in each frequency while I'm tracking. It really opens the whole thing. I also ran some bass, keyboard, and the Royer through a Focusrite ISA-1, a really clean single-channel preamp. The Millennia was just a tiny bit too noisy for the ribbon because a ribbon needs a lot of gain."

Barely There Vocals

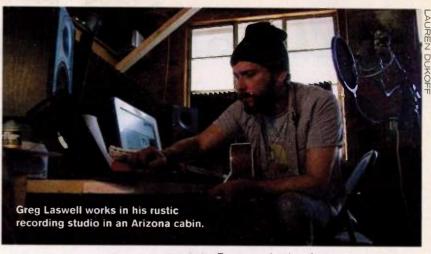
"One of my favorite things to do is to record the lead vocal to get it perfect, and then track two more but turn them down almost to the point where you can't hear them at all. I actually make them so low that if you mute the lead vocal in the center channel, you can just barely, barely hear the extra two vocals, which are panned hard left and hard right. It still sounds like a solo vocal, but it adds a little space, width, and stereo image to it."

Real-sounding Piano

"[Synthogy] Ivory is the best-sounding piano sampler I've ever heard. Within the program, you can adjust the key noise and the reverb in the room. Key noise is basically increasing the noise of the hammers. I pumped that up quite a bit and let the mixing engineer duck out those frequencies if he wanted, but it really adds a really amazing sense of realism."

Real-sounding Strings

"I find that if you add at least one true performance of a real instrument and put it next to a sampled one, they both become the real thing by



"Sometimes working with a song is like a marriage . . . you either stick with it and get through it, or you part ways."

proximity. For example, there's a marcato-type string part in the breakdown of 'Around the Bend.' I did a sampled cello and then had a bass player play a real upright bass line with a bow. I miked up his f-hole and picked up all the bow noise of his performance. And then there's also this banjo part that doesn't even sound like a banjo because it's being played right alongside these string arpeggios. That's the biggest thing with making records like this. It doesn't have to sound real. If you want something to sound real, then do it, but your only job, really, is to make it sound good."

Get out of the Way!

"I had this huge, enormous string arrangement on 'My Fight (For You)' that I spent so much time on because in my mind I was like, 'It needs a wall of sound.' And it didn't. It needed a little weird, spaghetti-western guitar, some Mellotron strings, and bells. I spent so much time trying to force it that it didn't work, and it was never going to work. Finally, right when I decided to throw it out, my manager said, 'No, you gotta go back and keep trying it.' So then I went back to square one and started from the ground up with the vocal, main piano, and acoustic track.

"Sometimes working with a song is like a marriage. You go through a really bad, difficult time, and you either stick with it and get through it, or you part ways. With that one, I went to marriage counseling, and we're so happy now! [Laughs.]"



10 Recording Tips for Singers

Doing a great home recording is easier than it has ever been, but that doesn't mean there still aren't challenges to getting great tracks. Here are some tips to help you get that studio "magic" at home.

Pick a recording program and a setup that works for you.

Grammy award-winning engineer, producer, and songwriter John Jones (Celine Dion, Duran Duran, Sir Paul McCartney) noted that "you can nowadays get a great sounding record at home. The key is to be able to get what you're hearing." Just because Pro Tools is what many pros use, doesn't mean something less involved (and less expensive) won't work as well. Get a software program that gives you the flexibility you need, and that is easy for you to use.

Learn the ins and outs of your gear.

Take the time to learn the software, hook up your equipment properly, and practice recording and mixing before you need to get a song out to someone. On a deadline, it only makes matters worse if you still are learning how to use the equipment.

Apprentice with a mentor.

Old-school engineers used to sweep floors, get coffeeanything to get a chance to sit in on sessions and work with a great audio talent. Take Grammy-winning recording engineer Dave Russell (Two Against Nature, Steely Dan). He spent three years sweeping floors at George Benson's studio to get a chance to engineer. Once he did, the rest was history!

Wiring and Connections.

Nothing spoils a great performance like technical difficulties. Make sure everything is wired and connected properly. If you're not sure, get help. For example, if the speakers aren't connected properly, they may produce out-of-phase signals that can sound thin, cancel out critical frequencies, or mess with the stereo spectrum. The solution is to change the polarity of one speaker.

Use speakers in playback and mixing.

Headphones can be deceptive both in recording and in listening back to the tracks. Great speakers give

you an accurate perspective on the sounds and levels of the individual tracks and the stereo mix. Says Jones, "Turn the volume way down. You should mix at a low level with speakers, so you can clearly hear the balance of the instruments and the vocal."

Listen to the instruments.

How does the acoustic guitar actually sound? Or the vocalist? You should listen to the sound in the room before you record it. Then, you'll have a sonic foundation to reference after the signal travels through the mic and mic preamps and to the monitor speakers.

Get a basic foundation in song structure.

At a recent ASCAP Expo, Quincy Jones noted that in order to do what he needed to do in his career, he took a class in orchestration. Yes, even Quincy Jones needed some training. His advice to songwriters and artists was: "Get your chops together-that's how the spiritual can come through."

Do your homework.

This ties into orchestration, but learn what instruments play which parts and how. If you add a violin sample to a song, ask yourself if a violin would really play that part? If you play bass lines on a keyboard, learn how bass lines move from a bass player's perspective. If you're not a vocalist and yet you record vocals, take a vocal class, and learn more about the challenges singers face.

Get rid of the buzz.

Every bit of buzz, ambient noise, and room sound that gets onto the track stays there. Notes John Jones, "Think of your job as an engineer to find every little piece of junk in the track. Notice each noise, click, and pop."

Avoid the flavor of the month.

Remember the gated-snare trend of the '80s? Yeah, sounds rough today, doesn't it? So do you think you need overprocessed autotuning on every vocal? Think again. Unless the genre of music specifically dictates it, don't think you have to get on every trend for every recording. ea

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MAC OS X 10.4 or higher: G4 1 GHz, 512 Mb RAM













5 Things to Ask Yourself **After Every Session**

When I came up the ranks as a session musician, I had the opportunity to work with a load of producers in all genres off music. I always learned something from each of them, and, curiously, much of what I learned was what not to do during a session once I climbed the ropes and found my way into the producer's chair.

I still make mental notes of pros and cons after every project, as there are always things that happen that teach me how to sharpen my skills for the next session. At the end of a project, I will usually go over these points with the artist, and it is always greeted with appreciation. A smart artist will evaluate sessions or projects for what went well, and for what fell short of the mark, in an effort to aim for getting better for each and every session they do. And so, as we all have to prove ourselves every day, here is a starter kit of five things to reflect on after any recording project.

People First. Music Second.

How well did everyone involved get on during the project?

In the end, our common goal is to communicate something brilliant collectively, and if our individual communication is weak, the product will be weak, as well. An open and honest playing field with a good dose of mutual respect will provide an atmosphere where great ideas can grow. Conversely, one can assemble all the biggest musicians in the world who have attitudes even bigger, and find there is no chance of any meaningful music being born. Believe me, this has been proven enough times!

If there were problems communicating, address them kindly, and go about trying to set a better stage for the next project. Nerves, insecurities, and all other bugs can be understood and worked out if you are all involved enough to talk it through. As a producer, such discussions are part of my life in the studio. I call then my "shrink raps."

Music First. Artist Second.

Did the best music you could make get made?

Great teams understand that everyone on board is needed for what only they can bring. In the case of a band in the recording studio, it sometimes works out that members of the group play many different instruments. I usually encourage this because the results can be amazing (usually mostly to the band). There is a general rule with me that whomever can express whatever idea is going on is the right person (or persons) for the job. There may be a person who has a great feel for a part that they would not normally play on stage with the band. Case in point: If the vocalist has done a lead vocal, and the sound of his voice doing the harmony on top of it sounds smokin', as opposed to the lesser singer who usually sings it on stage, why not go with your strongest suit? The best music needs to come through the studio monitors. The egos can wait in the car. After all, if Paul McCartney were relegated to only playing the bass parts, those later Beatles albums would be entirely different than the classics they are. The same case can be made with most successful artists-they were there to do killer work, no matter how it got done.

later Beatles albums would be entirely different than the classics they are. The same case can be made with most successful artists—they were there to do killer work, no matter how it got done.

In the case of singer/songwriters, the casting of session players is essential to build your signature sound. There can be a mixture of outside players and the artist, or 100 percent one or the other. But in the end, one needs to know where the experiment worked, and where it didn't. Casting is king.

Environment

Was the overall recording environment contributing to, or taking away from, the greatest end result?

These days, artists are renting studios or recording with their home setup. Any way one can achieve what they ultimately want for their music is the right approach. There can be monetary reasons forcing one to record at home, or it could be that the feel and ambiance is more prone to the creative process than a sterile studio with a pricy clock ticking. With so many options available for recording, listen closely to your finished product, and make notes as to what things could have sounded better from a purely audio-quality point of view.

For the stay-at-home recordists, it may make sense to rent a studio to record drums, or utilize a larger room for group performances, and then do all the rest of the recording at home. If the home experience proves to be holding back the creative process, and compromises your efforts, it may be time to seek out a studio that fits your budget, and provides the vibe and sound quality your music demands.

Gear

Did your choice of instruments live up the challenge of the sessions?

Too many times, people discover after the sessions that their musical instruments and equipment were not exactly ready for the task. The studio is a microscope, so you may discover intonation problems you never heard before on stage, or that it took forever to get a decent sound out of the drums. Let each of these lessons teach you about how to get your gear in "record ready" fashion.

Time Management

Did you do 14-hour sessions that ended at 3:30 A.M., only to do it again the next

day for several days in a row?

If so, either you are Keith Richards, or stark raving mad. Keith, (and I know you are reading this), please make sure the song is worth recording in the first place, and then remember that my studio—Tiki Town in Mill Valley, California—is here for you. Stay as long as you like. As for the rest of you—what are you thinking?





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Fun with Stompboxes

Why on God's green earth would a person use a horrid little guitar stompbox with all the effects processing horsepower of the present day DAW? Of course, I'm not recommending eschewing all those wonderful plug-ins you've spent your hard-earned dosh on, but guitar stompboxes-especially the analog variety-offer a brute-force sonic overkill that digital recreations have yet to touch.

Cheapo realtime control over audio mutations is another real plus. Trying to manipulate virtual knobs in real time can be akin to trying to pick your nose using one of those giant foam #1 fingers-an exercise in true frustration. However, by simply placing your thumb and forefinger on a knob, the stompbox can tweeze your tracks with a subtle variation or a full-on audio mutation. And when it comes to forging some unique sounds that can save an otherwise anemic track from digital mediocrity, many of today's top artists such as Nine Inch Nails, Radiohead, and the Fiery Furnaces reach for a stompbox.

Interfacing

Admittedly, you may run into a spot of trouble when incorporating guitar effects into a mixing medium. Depending on your system, you may have to run pedals through an outboard aux send/return or another mixer bus (and returning on a separate track). You may also need to plug a pedal into a direct box to match the high-impedance, unbalanced line level of the guitar pedal with the balanced, low-impedance input of your recording system, preamp, or other interface. There are also some guitar-oriented audio interfaces that provide unbalanced "guitar inputs"-which can be used to route stompboxes into your DAW. You may need to experiment-and read a manual or twoto get your system conversant with guitar pedals, but once you do the work, you'll have a whole other universe of sound modifiers at your disposal.

Cool Sounds & Apps

Fuzz, Distortion, Overdrive. Fuzz is generally nastier square-wave sounding, while distortion and overdrive pedals tend toward a distorted tube-amp tone. Great for the ubiquitous industrial distort-o-vocals,

these pedals are also great for pumping up a wimpy organ or clavinet patch on older digital synths.

Delay. This effect comes in two flavors: analog and digital. Analog pedals generally have shorter delay times and a warmer tape-echo sound. Digital delays are cleaner sounding, and they often have longer delay times, as well as freeze and loop functions that repeat endlessly. Playing with the delay time and intensity controls can conjure trippy Dub effects that would make King Tubby choke on his spliff.

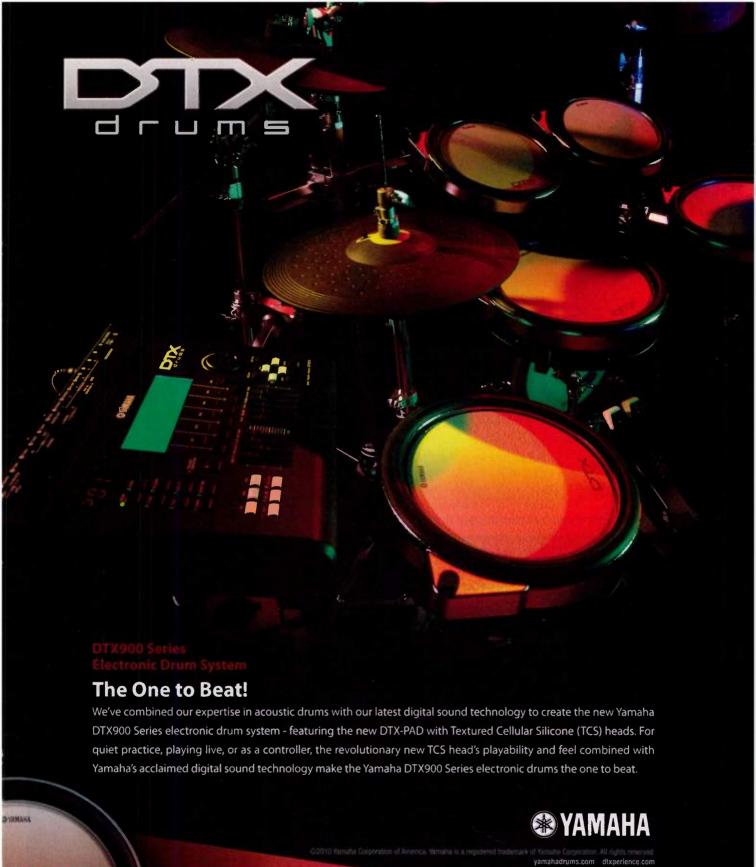
Pitch Shifters. Use these to twist and bend tracks to your will. Analog models such as the Boss OC-2 feature sketchy tracking that can turn the sweetest female vocal into Beelzebub's girlfriend. The incredibly groovy DigiTech Whammy includes a control pedal you can manipulate to create wicked, elastic grooves from drum loops.

Ring Modulators. Takes just about any source input and converts it into clangy, metallic dissonance. Experimentation is the key here, as it's hard to predict what the sound coming in will sound like coming out. Makes boring old drum tracks sound like the Timothy Leary Memorial Steel Drum Band played them.

Phase Shifter/Flanger. Designed to recreate the swooshy/swirly sound of complex studio tape manipulations, phase shifters work great on most traditional keyboard sounds, imparting a woozy vibe that will get you pretty dang close to Pepperland. Flangers are the more extreme animal, delivering deep, powerful "flying through a tube" sound that is really cool on vocals.

Envelope Follower/Voltage-Controlled Filters.

An automatic wah effect that changes timbre in response to your playing dynamics. An envelope follower creates instant '70s Stevie Wonder when plugged into a Clavinet or Rhodes synth patch. Lay it on a bass or bass synth, and you too can be funkadelic. Rub on the patchouli oil, shoot some drum loops through it, and pretend you are Jerry Garcia-but as a rave DJ. 63



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ROTOOLS 8 BY CRAIG ANDERTON

Build an "acoustifier" for electric guitars, using DigiRack plug-ins

OBJECTIVE: Give electric guitars some of the responsiveness of acoustic guitars.

BACKGROUND: Hitting an acoustic guitar hard makes the sound subjectively brighter; electric guitars don't act similarly. However, you can simulate this effect by inserting an expander/high-pass filter combination in parallel with your dry electric guitar track. The peaks of your playing will sound brighter and more "alive."



Go Track > New and create two audio tracks-one for the dry sound, and one for the processed sound. Assign both to the input fed by your guitar.



In the processed track, insert the Expander/Gate Dyn 3 followed by the EQ 3 4-Band.



Edit the Expander/Gate Dyn 3 parameters: Range -80dB, Attack 20ms, Hold 5ms, Ratio 3.0:1, Release 600ms, Threshold -6dB.

Edit the EQ 3 parameters. HPF: High pass mode, Q 24dB/octave, Freq 1.32kHz. HF: Shelf mode, Q 1.48, Freq 1.8kHz, Gain 12dB. No other filter sections are needed.

Adjust levels for the desired balance of straight and processed sounds.

Tips

- · Step 3: The long release prevents the signal from "fluttering" with decaying chords.
- Step 5: If you solo the processed sound, you should hear only the peaks of your playing. If you mute the processed sound when playing at low levels (with the dry signal present), you should not hear a difference.
- Steps 3 and 4: The settings are a suggested point of departure. You'll need to experiment for the best results with different guitars, pickups, playing styles, etc.

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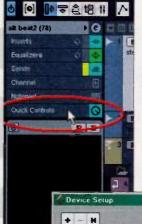


JBASE 5 BY CRAIG ANDERTON

Speed up workflow with Quick Controls

OBJECTIVE: Bring out important track parameters for easy access, then control them with a control surface.

BACKGROUND: When recording, some track parameters are set-and-forget while others are ideal for tweaking. You can bring the parameters you want to tweak-whether mixer parameters, effects, send levels, etc.-to a centralized Quick Controls area in a track's Inspector, as well as control these with an external MIDI hardware controller.



Click on Quick Controls in the track's Inspector to reveal 8 slots.





Click in a Quick Control slot. A browser opens where you can assign a particular track parameter (including effects parameters) by double-clicking on it. Repeat until all desired parameters have been assigned.

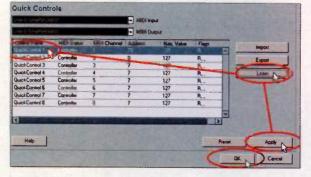
Go Devices > Device Setup. In the Device Setup dialog box, click on Quick Controls.





Assign the control surface MIDI in and out.

Quick Controls



Click on a Quick Control, click on Learn, then move a hardware control. This control is now tied to the first Quick Control slot. Repeat for the remaining Quick Controls, click on Apply, then click on OK.

Tips

- · Step 1: Each track can have its own Quick Controls assignment; these are saved with the project, and can also be saved as Track Presets.
- Step 2: To remove an assignment, select "No Parameter" in this step.
- Hardware controller assignments for Quick Controls are global, not per-project.
- · The R/W buttons to the Quick Control panel's upper right let you read and write automation for Quick Controls.

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Guitar Recording Mash-Up BY CRAIG ANDERTON

It's a wild time for guitar players. Vacuum tube cathodes around the world continue to boil off electrons to their anodes, while microprocessors crunch bits and bytes in an increasingly successful attempt to—well, sound like tube cathodes boiling off electrons to their anodes. Amp heads the size of a lunchbox often replace stacks o' speakers in the studio, and the funny thing is, you can't really tell the difference on playback. Guitars themselves do everything from driving MIDI synthesizers to tuning themselves automatically. And despite living in a high-tech world, the sound of a PRS Signature Series guitar or a classic 1966 Paisley Telecaster have lost not one iota of their charms.

Imagine if the guitar had never been invented, and some new company set up shop in the NAMM show's infamous "Hall E" (a.k.a. valley of the mad scientists). Their pitch? "We've got this fabulous new instrument—think of it as six monophonic oscillators on a plank of wood, with three program changes and a pitch bend lever!" A lot of people would probably just walk on by, but the fact remains that a pantheon of guitar gods have taken those six strings and created some serious magic—magic whose power has not diminished over the years, or in many cases, decades.

When it comes to recording guitar, the options have never been more plentiful, or more interesting. So, we cast a wide net to find out the latest cool stuff in guitar recording technology, filtered out the crème de la crème, and now present the results for your reading pleasure.

One thing's for sure: There's never been a better time to be a recording guitarist. Need proof? Keep reading.



The two internal mics are in the upper right and upper left; the faders don't just control levels, but also write automation. I/O is on the left and right sides.

Cakewalk V-Studio 20 (\$299 street) Comp 100/05 (\$299 street) (\$290 street)

What: Turnkey guitar/vocal recording package with USB interface, Mackie-compatible control surface, specialized Guitar Tracks 4 DAW software with video support, built-in BOSS COSM hardware multieffects with effects editing program, tuner, mic input with phantom power, built-in mics, expression and footswitch inputs. Cross-platform except for Guitar Tracks 4. Why: Solves many problems for guitarists who want to get into computer-based recording by offering zero latency, low cost, ease of use, and reasonable requirements—you can even run it on a Netbook for a highly portable live performance effects setup. Installation: Painless. The USB interface is class-compliant, the software that comes with it is both mature and bullet-proof, and the control surface is obvious.

Learning curve: Figuring out the basics is surprisingly easy, particularly because the control surface is tightly integrated with the software. However, Guitar Tracks 4 (a variant on Sonar Home Studio) is quite capable for those who want to dig deeper, like getting into detailed waveform editing—although digging deeper means a steeper learning curve.

Best bits: Having BOSS hardware effects built-in means zero latency when recording or monitoring, but you can record a dry signal too if you're into re-amping. The vocal recording and processing capabilities are also welcome, given that many guitarists are singer/songwriters. Cakewalk has been getting more into the Mac world, so the VS-20 can serve as a front end/interface for programs like Logic Pro and GarageBand, while the control aspect works with anything that supports Mackie control. The built-in mics are a great idea for getting

ideas down in the heat of creativity; and if you find Guitar Tracks 4 too limiting, the VS-20 gives equivalent integration with other Cakewalk Sonar-family software.

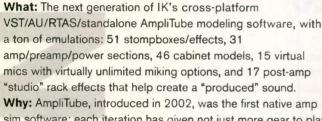
Limitations: The sample rate tops out at 44.1kHz, and the faders are short–300mm. Of course, at this price they're not motorized. Guitar Tracks 4 is "limited" to 32 audio tracks and one MIDI backing track, and the outputs are RCA phono jacks. Bottom line: At this price point, any additional complaining would seem petty. No, you're not going to get boutique mic pres, and if you record at 96kHz, you're out of luck. But I've found few packages that make it this easy to marry your guitar and computer, and the zero-latency hardware effects overcome one of the biggest obstacles to computer-oriented guitar players—although you can add standard VST and DirectX effects if you want. This is an extremely well-thought-out package that gives guitar players what they need to get started with computer-based setups, while offering enough capability to grow.

Contact: www.cakewalk.com



IK Multimedia AmpliTube 3

(\$299 street)



sim software; each iteration has given not just more gear to play with, but a more detailed, organic emulation that continues to refine the amp sim tone.

Installation: IK has ditched the dongle in favor of a simple online registration system, as well as a user area that makes it easy to keep track of authorizations, or ask for more if your hard drive blows up. But check for updates-IK often does "point" releases with extra features and bug fixes.

Learning curve: AmpliTube 3 (AT3 for short) is very much designed for guitarists, down to the graphic look, and is pretty non-intimidating. IK also makes several hardware interface/controller products that work with AT3, thus simplifying the learning curve for an IK-based system.

Best bits: AT3 has added extensive room/mic modeling options that go far beyond previous versions. You can use two virtual mics (chosen from 15 different types) and place them pretty much anywhere in relation to the virtual cabinets, which themselves can live in five different room types. This may not seem like as big a deal as new models, but being able to model not just an amp, but an amp in a room. contributes much to realism. It's also possible to change cabinet size, which is a great effect when creating amp

has a certain warmth, and effectively models the Holy Grail



Two mics being set up on a cabinet, one close and centered, the other furth away and on the edge of the speaker.

of amp sims-the clean-to-breakup transition. The new amp and effects models reflect the increasing sophistication of IK's algorithms, but some of the older elements have gotten a makeover as well. For example, the reverb looks the same, but is now impulsebased instead of synthesized, yielding a more accurate sound.

What's more, AT3 includes two virtual pedalboards. You can connect them in series to create a chain of 12 effects, or in parallel if you prefer two chains of six effects.

Limitations: AT3's main issue is trading off ease of use for flexibility. For example, there are eight routings and while they cover most (if not all) of what most people need, you can't, for example, do parallel processing beyond two signal chains. Also, it's not possible to apply various types of modulation to different processors, although AT3 has added some more "synth-like" processors such as step filtering.

Bottom line: You can download a demo and decide for yourself if AT3 makes the kind of sounds you like, but suffice it to say that if based on past experience you don't think amp sims can deliver warm, organic tones, check out AT3-you might be surprised not only at the capabilities, but the beguiling sound quality.

Contact: www.ikmultimedia.com





Apogee GiO

Yes, the footswitch button colors really do relate to the stomp box colors in Logic Pro and GarageBand. And the rear panel is simplicity itself: audio input, expression pedal in, USB in, stereo audio output.

(\$395 street)

What: Guitarist-oriented USB interface/foot controller designed specifically for the Mac (Intel/PPC G5, OS X 10.5.7) and is compatible with Logic Pro 9, GarageBand '09, and MainStage 2.

Why: Including guitar-friendly audio I/O with Apogee-level quality, along with a foot-controlled control surface, provides a one-stop recording solution for guitar players.

Installation: I was not able to install GiO with Euphonix's Eucon drivers present on my Intel Mac. Turning Eucon off wasn't good enough: I had to physically uninstall the software. (Apogee could not duplicate this with current Eucon and GiO oftware; it seems to be system-specific.) Once I got past that, GiO installation went uneventfully. Also note that you must use the specified programs: e.g., GarageBand '08 won't work.

Learning curve: There's a 1:1 correspondence between the various switches and the functions they control, so any learning curve comes from figuring out how to configure programs to work with GiO, which isn't difficult.

Best bits: Guitarists have their hands full, so the obvious GiO advantages are doing footswitched transport control, turning up to five effects on/off like a regular floor footswitch controller, hands-free recording/punching, and stepping up and down through effects presets. The transport and effect switches are independent—no double-duty operation, which is a good thing. There are some additional touches, like color-coding on the stomp box switches to match effects, and an expression pedal input (check the Apogee site for compatible models). Even the USB cable is an overachiever, as it's about 15 feet long instead of the usual 6 foot cable packed with most gear. However, while the functionality is a

big deal, don't overlook the audio. The high-impedance input doesn't load down your guitar, and Apogee's converters deserve their reputation for top-of-the-line performance.

Limitations: The interface is limited to 44.1/48kHz, so if you like running projects at 88.2/96kHz to squeeze every bit of performance out of amp sims, GiO is not the droid you're looking for. Also, the lack of control integration with non-Apple software, while understandable, limits your options should you change platforms or hosts (the audio I/O works with other programs, though). And the stereo output jack makes sense for headphones, but if you're going into a real-world mixer, the included stereo-to-dual RCA phono jacks cable requires adapters.

Bottom line: This is a classy piece of gear. The sound quality is excellent, and the latency is low-Apogee has taken advantage of tight integration with the Mac. Throw in the hands-free control and compatibility with three common Mac music programs used by guitarists, and you might find it easy to justify adding this to your guitar gadget arsenal.

Contact: www.apogeedigital.com





Line 6 POD Farm 2

(from \$49 street)

What: Back in 1998, Line 6's Amp Farm for Pro Tools TDM systems introduced the world to amp sims—and the company has kept pace with significant updates over the years. POD Farm 2 is their latest native software for VST/AU/RTAS systems. Why: Although POD Farm has been well received as the successor to Line 6's GearBox software, a couple vexing limitations remained and POD Farm 2 addresses them.

Installation: You can obtain a license code to use POD Farm 2 with compatible Line 6 hardware (e.g., TonePort interfaces) or an iLok authorization for using the software independently of whatever hardware you have. Prices differ: The basic POD Farm 2 costs \$49, while the Platinum version with extra models costs \$249; the iLok versions are \$99 and \$299 respectively. Various upgrade paths are available.

Learning curve: Not particularly difficult, as Line 6 has adopted a guitarist-friendly drag-and-drop interface. Any subtleties are easy to figure out, and there's excellent documentation available on the Line 6 website.

Best bits: POD Farm had numerous restrictions on where you could place effects in signal chains—for example, you couldn't put EQ before a guitar amp, only after. Now you can pretty much put anything you want anywhere you want, excepting orders that make no sense (e.g., placing a speaker cabinet before a guitar amp). This includes putting the excellent mic preamp models right after the amp cabinet, and you can have up to 10 effects per chain (with up to two parallel chains) in addition to the amp and speaker. The GUI is a little smaller, so it doesn't take over your screen quite as much, and the individual effects are now available as separate plug-ins

Put 10 effects per chain, in addition to your amp/cab combination, in virtually any order. POD Farm 2 retains the "Rolodex" gear selection of version 1.

called "elements"—great for laptop setups, as you needn't insert an entire POD Farm instance just to use, for example, the delay on a vocal track. Another major feature: Far more intuitive and sophisticated MIDI assignments and control, and you can use various floor controllers if you're into using POD Farm 2 on stage.

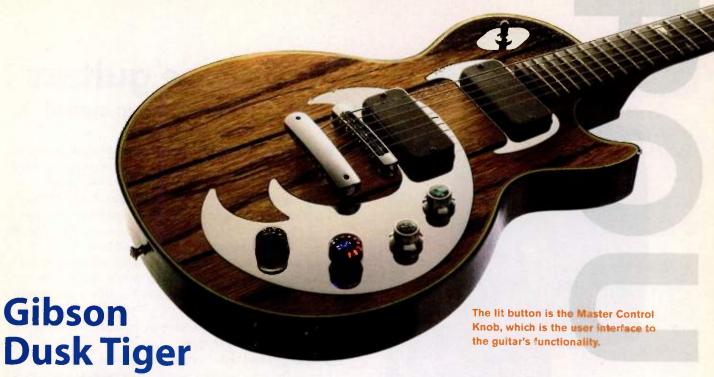
Limitations: You can't have more than two parallel chains, and

modulation options are limited to whatever is built into individual modules (for example, there's a cool sample-and-hold filter effect, but you can't apply the S/H waveform to other effects).

Bottom line: I've always liked Line 6's amp sims—but only after I tweaked the presets to my liking, as they seem designed for players with a lighter touch. However, the limitation on effects placement was frustrating, so having the freedom to put effects anywhere has made a huge difference in customizing sounds. Also, breaking the plug-ins down into elements means I'm using more of the effects, more often, on more different signal sources. For POD Farm fans who like to create their own sounds, this upgrade is a no-brainer.

Contact: www.line6.com





(\$4,128 MSRP)

What: Technologically advanced guitar system for studio/stage including "Robot" (automatic) tuning, Chameleon Tone Technology, FireWire interface that can break out piezo/magnetic/individual string outputs for recording, low-impedance balanced out or standard out, 13-pin output compatible with Roland/Axon guitar synth systems, and cross-platform software suite (Ableton Live 8 Gibson Studio Edition, Guitar Rig 4, Echo Audio Console for interface, Chameleon Editor).

Why: Delivers a supremely flexible instrument for guitarists who want to go beyond the standard electric guitar paradigm, yet still want a familiar look, feel, and playability.

Installation: Having software and a FireWire interface requires installation, but no more or less than other FireWire interface/software packages.

Learning curve: Compared to its predecessor, Dark Fire, the guitar's "operating system" and clickstream are considerably simplified. However, you'll still need the documentation to find out how to access the 11 banks of 8 presets, program alternate tunings, and the like.

Best bits: Robot tuning technology is not a gimmick—no human can tune six strings simultaneously, or jump to alternate tunings in seconds. Feed the individual string outputs into a computer, and you can achieve mind-boggling sounds—it's like the guitar equivalent of a keyboard's split/layer options. Then augment the individual strings by mixing in the standard magnetic and piezo outs, and if you can't get huge, rich sounds, consider a different career. The Chameleon Tone technology provides the equivalent of "analog modeling," as it achieves different iconic guitar sounds via pickup switching, coil tapping, and EQ—all of which

are editable with the Chameleon Editor software, which also makes it easy to share presets with other Dusk Tiger owners. The pickup toggle rotates to give a blend of piezo and magnetic sounds, even without a computer; this is way cool. The guitar itself is very playable and benefits from the PLEK setup. Unlike Dark Fire, the battery is non-proprietary and instantly swappable. Limitations: Unfortunately, the price will be out of reach for most guitarists. Also, compared to the dignified Dark Fire, some are horrified by Dusk Tiger's look, while others love it (but reserve judgment until you've seen it under stage lighting, where it can look spectacular). I initially didn't know what to make of it, but have grown to love its daring vibe.

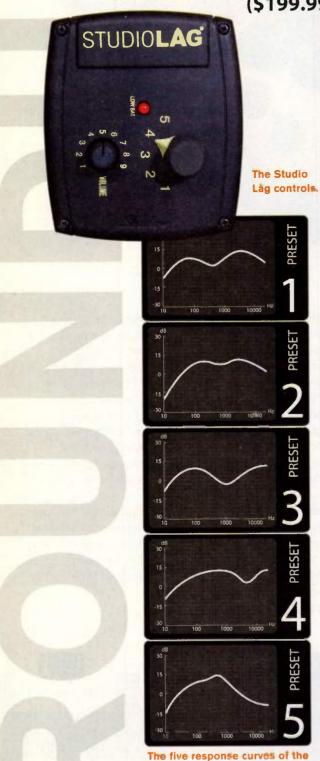
Bottom line: I've played many great electric guitars, but Dusk Tiger is an *electronic* guitar that explores totally new territories. It has changed the way I play, record, perform, and write in profound and significant ways, while still feeling like a warm, familiar guitar rather than some technological freak show. Now that I've experienced it, I can't live without out it.

Contact: www.gibson.com



Lâg Tramontane guitars

(\$199.99 to \$729.99, depending on model)



Studio Lâg preamp.

What: Lâg Guitars' T100 series of acoustic/electric guitars (an "E" suffix in the model name indicates acoustic/electric models) include the Studio Lâg preamp, which offers five distinct frequency response curves. Acoustic/electric models in the T200/T300/T400 series incorporate the Studio Lâg Plus preamp, which adds a bass/treble control, bypass switch (although the tone control still works), and chromatic tuner.

Why: Okay, this isn't *Guitar Player* magazine. But as with Gibson's Dusk Tiger, sometimes a guitar comes along that seems like a natural for the studio—and Låg's Tramontane line fits that description to a "T."

Installation: The preamps come pre-installed in the guitars, so you don't have to do anything.

Learning curve: Unlike conventional preamps, the Studio Lâg preamps have five tweaked, desirable tone presets so you can just dial in your core sound onstage or in the studio. However, you need to spend the time necessary to get familiar with the different tones so you can choose the right setting for the right context.

Best bits: As most engineers know, notching out part of an acoustic guitar spectrum can be a valuable technique for creat-

acoustic guitar spectrum can be a valuable technique for creating space for other instruments (or emphasizing highs and lows), and several of the Lâg preamp responses do just that; the Studio Lâg preamp is built into the guitar unobtrusively, and odds are an audience wouldn't know you're using it. The EQ doesn't do anything you couldn't achieve with outboard EQ, but having it in the guitar is one less piece of gear to carry around. Also, the five tones are very useful—I suspect most people will gravitate to two or three tones, but it would likely be a different choice of tones for different people.

Limitations: There's no way to tweak the five sounds, or get "in-between" sounds. And while battery life is reasonably long, the active pickups still require a battery to work.

Bottom line: Overall the guitars are definitely the star of the show—they play extremely well, especially given the price—but the Studio Lâg pickup/EQ combination adds that extra juice that takes them out of the ordinary.

Contact: www.lagguitars.com





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What: The G2.1Nu isn't the first floor effects pedal with a USB interface (including an output that can drive head-phones). However, it's the "poster boy" for a new generation of the genre.

Why: The 96kHz internal sampling rate creates distortion with fewer audible artifacts than systems using lower sampling rates. But it also does computer integration really well, with 32- and 64-bit ASIO drivers for XP/Vista/7, as well as cross-platform, free "Edit and Share" librarian software for painless patch editing, saving, and sharing.

Installation: While the G2.1Nu is class-compliant, the ASIO drivers give lower latency with Windows. USB can also bus-power the unit (which for stage use can run on batteries or an optional AC adapter). Edit & Share is easy to install.



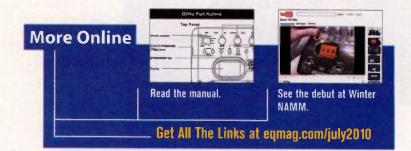
Learning curve: In addition to an effects selector for editing, the G2.1Nu includes three knobs, whose functions vary depending on the effect being controlled. These mimic the limited knob set included with typical stomp boxes, providing a familiar environment. The LCD is a huge improvement over the two-digit display in the G2.1u; front-panel editing is actually quite easy once you've read the manual, but Edit & Share definitely represents the easiest way to edit.

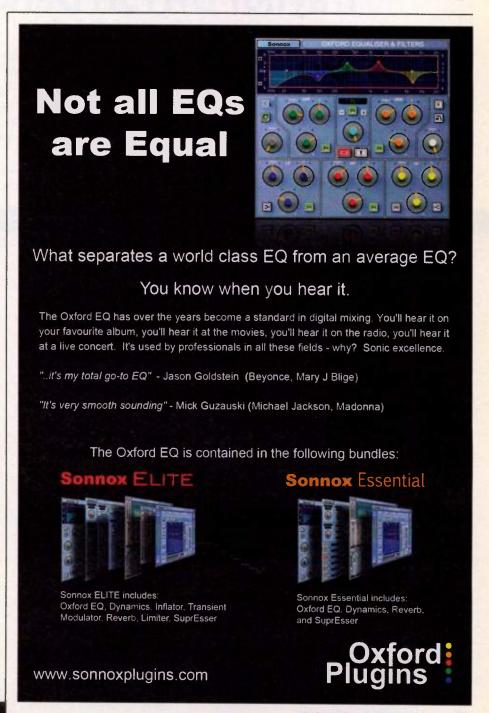
Best bits: The "next-generation" aspect is for real. Patches change in 5ms-when you hit the footswitch, the patch changes now (and there are 100 factory/100 user presets). The unit is also surprisingly quiet. in large part due to a relatively unobtrusive noise gate that gives smooth decays (a more traditional "choppy" gate response is also available). For extras, there's an onboard drum machine for practicing, integrated expression pedal, looper function, and input for an optional footswitch (for tap tempo, drum machine start/stop, etc.). Finally, because you get your sound "in the box," there's zero monitoring latency while you record the processed sound. However, when used as an interface, you can monitor through the computer as well-great if you want to add, for example, a parametric EQ after the G2.1 Nu for tonal tweaking not available in the unit itself.

Limitations: There's no dry out for recording into a separate track should you want to re-amp. The distortion can sound "fizzy," but editing and proper gain adjustments can help tame this, as does using post-G2.1Nu plug-ins for recording applications.

Bottom line: The G2.1Nu shows just how much \$200 will buy. The metal case is a plus for the stage, and sound quality exceeds what you'd expect for the price—especially if you learn how to tweak the parameters. The free software and drivers are a nice touch that deliver on the promise of a studio-worthy device that also works well on stage. Overall, the G2.1Nu is serious value for money.

Contact: www.samsontech.com







It does indeed look like it was designed by mad scientists, for mad scientists. Come to think of it, a lot of guitarists remind me of mad scientists....



Traynor's DarkHorse features an all-tube design.

Traynor DH15H DarkHorse

(\$520 street)

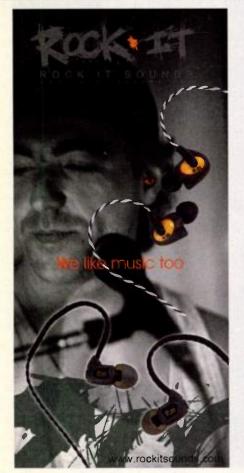
What: The DarkHorse is an all-tube amp head that can drive 8 or 16 ohm cabinets. You can select between two separate output stages; a 6V6 pentode stage delivers 15 watts, while a 12AU7-based triode stage delivers 2 watts. Why: When people listen to recorded guitar amps, they hear sound—not size. And size can be an enemy of small studios, because it may be hard to fit a full-blown Marshall stack into your space; and even if you can, the neighbors might not appreciate that you get the tone you want only with the volume cranked. By foregoing massive amounts of power, the DarkHorse packs features and tone into a compact head at a reasonable price.

Installation: Connect speaker cabinet. Plug in. Turn on.

Learning curve: If you can't handle four knobs (Gain, Bass, Treble, and Master), two switches, and an on-off switch, then you probably can't handle reading this magazine . . . so the point is moot.

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Best bits: The tone stack has a switch to allow for either British or American voicing (these put the tone controls after the second tube stage or between the first and second tube stage, respectively), or a middle "pure" position that bypasses the tone stack. Dark Horse has the tube sound's "secret sauce"—an output transformer—which gives a certain midrange warmth. It's also really easy to replace the tubes, as there's a "cage" that's held on with four screws. Or, you can just take it off to impress people who like to see tubes glow. Then there's the look, which has the vibe of a 1950s sci-fi movie; I expected to flick the 6V6/12AU7 switch and enter a parallel universe where shredders ruled the world. And you gotta love the included gig bag—it's about the size of a camcorder case on steroids.

Limitations: There's only one channel, which probably won't be an issue in the studio, but limits the usefulness for live performance. DarkHorse is basic, which may be a turnoff to some but then again, it does what it's intended to do really well.

Bottom line: The DarkHorse has serious competition from the likes of Vox, Mesa Boogie, Orange, etc.—so it comes down to the tone. Although I haven't done a head-to-head comparison with the competition, DarkHorse indeed delivers that big tube sound; what surprised me is that with a little care, you can get clean, sparkly tones as well. Being able to choose three different tone stacks with the 6V6 or 12AU7 adds versatility beyond the

expected, and while the Traynor DHX12 extension cabinet is a suitable companion, any cabinet I tried with the DarkHorse worked just fine—so it will likely work with your favorite cabinet, too. And you reduce the odds of your neighbors calling the police when you're recording late at night.

Contact: www.traynoramps.com ea





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www.sweetwater.com

MOTU



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Miktek CV4 Large-diaphragm tube condenser microphone

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



Genelec 8040A Active bi-amplified studio monitor

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





\$2010 Sweetwater, Inc.





PORTABLE PLAYTHINGS

BY CRAIG ANDERTON

CEntrance DACport (\$399.95 street; www.centrance.com)

Sometimes it seems audio is on a race to the bottom—with datacompressed files, nasty ear buds, and on-board sound chips that sound like well, let's not go there. DACport goes in the other direction: It takes audio from your computer's USB port (Mac, Windows, or Linux), puts it through a reference quality D/A converter, and

delivers extremely high quality audio to a 1/4" stereo headphone jack.

I've covered how much I like the Monster Turbine earbuds, as they make computer audio bearable. But teamed with DACport, the combination is stunning (as it should be, given the total price). The DACport's Class A headphone amp is direct-coupled with 18V of headroom, so the bass makes it through intact; native operation is 24-bit/96kHz (but it also supports 44.1, 48, and 88.2kHz audio). No special drivers are required–just plug-and-play, as the unit is also USB-powered–and CEntrance claims an essentially jitterless clock stability of 10 parts per million. The noise floor is typically better than –120dB, which is a pretty amazing spec.

DACport is good for more than laptops. My Mac connects to studio monitors, and the difference using DACport compared to the internal audio is a revelation. If you have the bucks, this is the ticket to audiophile computer playback.

Korg Sound on Sound SOS Unlimited Track Recorder

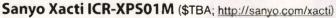
(\$299.99 street; www.korg.com/sos)

Yawn... another portable recorder. But wait: SOS is a *multitrack* portable recorder designed specifically for musicians. Unlike the old school sound-on-sound technique of building up tracks by destructively mixing a new track with an old one, SOS keeps the Broadcast WAV files for individual tracks separate—you can transfer all the individual tracks over to a DAW, and mix away. The time-stamped files align automatically, even if you started recording an overdub in the middle of a song.

Storage uses a microSD or SDHC card (a 2GB card is included), but there's no USB port so file transfers require taking out the card and using a card reader (a microSD to SD adapter is included). Also, recording is 44.1kHz/16-bit, not 24-bit, although of course that conserves memory.

Musician-friendly features abound: tuner, 50 onboard rhythms, tons of effects (including ones you play in real time by treating the display like a KAOSS pad), built-in stereo mic, internal monitor speaker, guitar input, external mic in, loop recording, variable speed without pitch change, unlimited undo/redo, free accessory software, etc. Sure, it's bigger than the micro-mini portable recorders—but the feature set is

huge. The SOS SR1 cleverly takes the portable recorder concept into portable studio territory.



Rule #1 about portable recorders: If it's not convenient to carry around, you won't. But you'll carry the Xacti-under 1cm thick, and 46 grams with battery.

There's a consumer/pro split personality. The consumer side lets you play back music, listen to FM radio, and use automatic recording level controls. The pro side has manual adjustments, quality built-in mics, WAV PCM (44.1/16-bit)/WMA/MP3 recording, variable speed, external ins, and more. Recording is to microSD card (2GB included—Sanyo specs 8GB max, but users report that higher-capacity cards work).

The Eneloop battery is proprietary; the charge lasts for about 14 hours when recording WAV files, and with backlighting off, 20+ hours. Battery life is much longer when recording data-compressed files. You can't use standard batteries, but the long life and 2.5 hour recharge time likely means you won't need a spare.

Connecting via micro USB, the Xacti looks like a hard drive to Windows and Mac computers (Mac operation is "not guaranteed," but mine worked flawlessly). The Xacti has serious functionality, so read the manual; but you can figure out 90% of it just from the informative display.

The sound and convenience is exceptional—this recorder rocks. And given the size, there's no excuse not to have it on you at all times!



Œntrance

PRODUCT SPOTLIGHT



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The S-7, S-7B and S-7C are the only mics that you need to make pro-quality recordings. From screaming guitars to whispered vocals, each S-7 mic has a specific character that will give you the ultimate flexibility and the best results.

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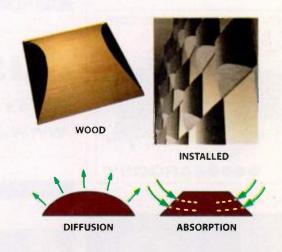
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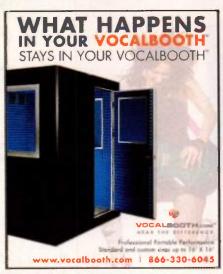


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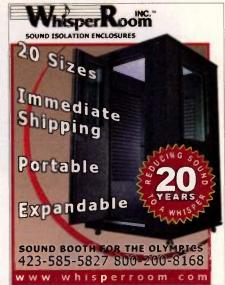
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LESS IS MORE BY YARON FUCHS



Some kids want to own a candy store. I dreamed of owning a music store. In the early '90s, I bought into NYC's EastSide Sound studio. In 2000, my partner Bob Brockman and I opened NuMedia Studios in NoHo, and I found myself working with Grammy-winning artists such as Herbie Hancock, Ben Harper, Bryan McKnight, Smashing Pumpkins, Tim McGraw, and Moby.

By 2007, we began to see large rooms like ours devolve into an endangered species. We were working 20 days a month just to meet our overhead. Our landlord wanted to renew our lease, but I'd started a family, and I felt it was time to reassess. The industry was changing at warp speed. Technology was getting smaller, cheaper, and more powerful, and fans were rejecting the age-old concept of paying for music. We decided not to renew our NuMedia contract.

Professional Audio Design owner Dave Malekpour confirmed my belief that I could turn my garage into a top-flight, work-at-home facility within a reasonable budget. I already owned a considerable amount of analog gear, and Dave developed a package that fit perfectly with the hybrid "in-the-box/out-of-the-box" working style I envisioned. Dave also recommended architect/acoustician John Storyk's Walters-Storyk

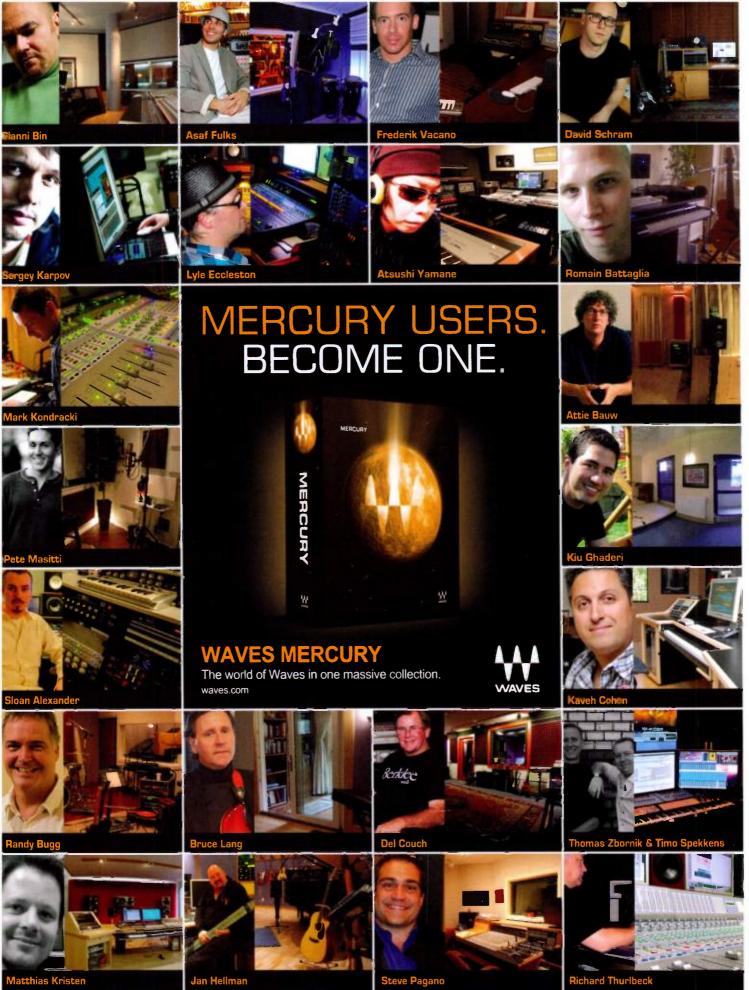
Design Group to design my home studio.

Thanks to evolving equipment, advanced acoustic prediction, and simulation-design techniques, I maintained the quality of my mixes as effectively in my 400-square-foot garage studio as I had in my 4,000-square-foot NuMedia complex. Thanks to Storyk's expertise and a floating, roomwithin-a-room structure with a poured concrete floor, I'd be free to work at noise levels in excess of 110dB without disturbing neighbors or resident wildlife.

With a Digidesign D-Control console, Focal Twin 5.1 system, KRK Expose E8s, Neve 1081s, outboard gear, and a loaded API 500-series rack, my country studio represents the ultimate home-mixing environment. It's artistically inspiring, and I can make extremely expensivesounding but cost-effective records.

The city still has wonderful large rooms, and if I need to book a live session, my friend Troy Germanowho built Germano Studios on NuMedia's footprint-will welcome me in my old studio. I can be a client instead of an owner, and then bring the files upstate where I don't need to watch the clock. And I'm saving hours of commuting time each day, and dramatically increasing my quality time with my kids. 🗪





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