Inside Track

Secrets Of The Mix Engineers: Dylan '3D' Dresdow

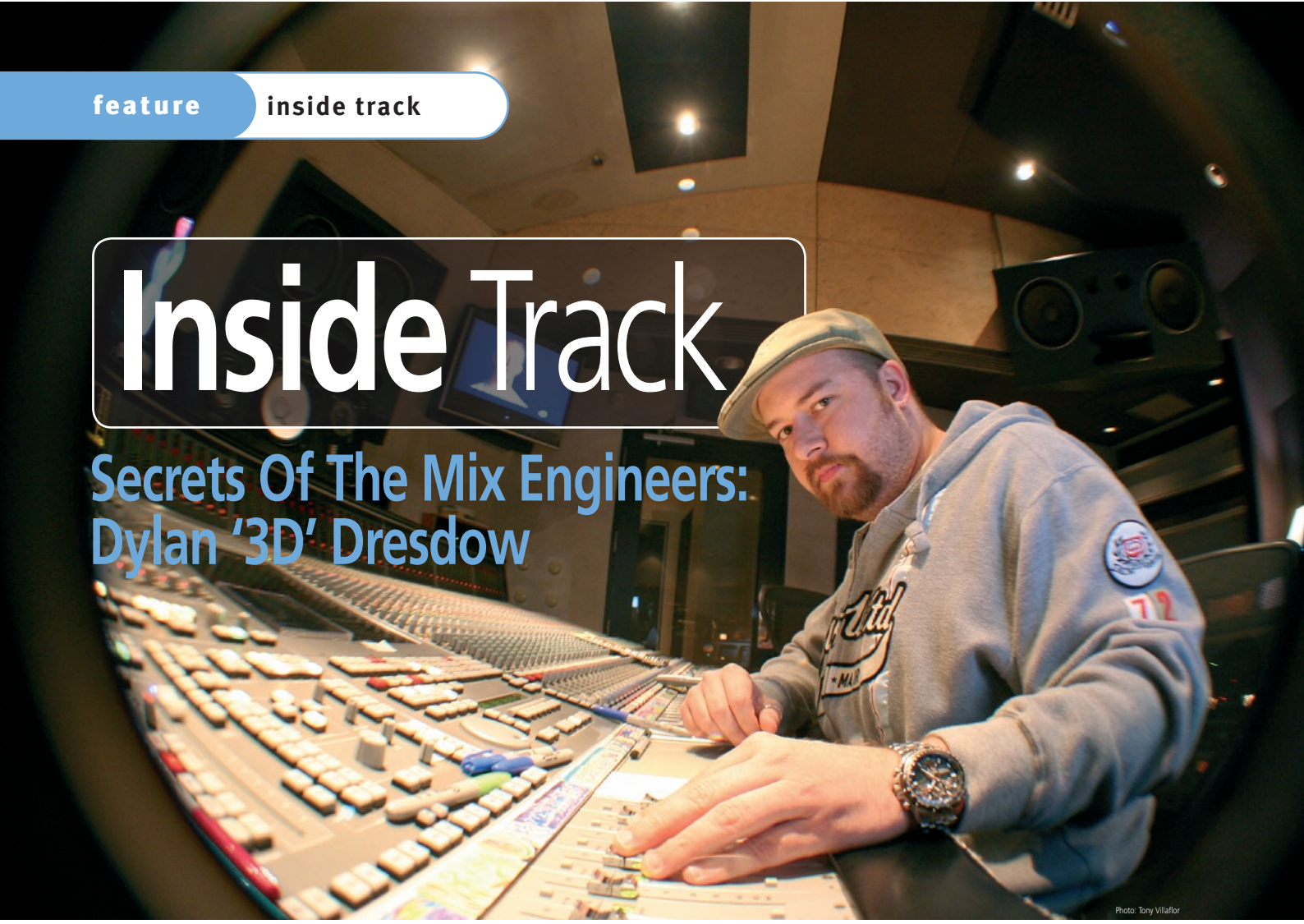


Photo: Tony Villaflor

Paul Tingen

For their fifth album, *The END*, Black Eyed Peas main man will.i.am took the band — and their long-serving mixer Dylan Dresdow — in a new direction, with stunning success.

A stylistic departure from a band known for chart-friendly hip-hop, 'Boom Boom Pow' nevertheless became the Black Eyed Peas' first US number one single, selling one and a half million copies there in five weeks via downloads alone. It also made it to the top in the UK and Canada.

The studio magician responsible for nailing its hit potential is Dylan '3D' Dresdow. Formerly from Florida, like many other US top mixers a graduate of the Full Sail University's Recording Arts programme, and now a resident of Los Angeles, Dresdow cut his professional teeth at Enterprise Studios in LA, and subsequently benefited from a one-year master class assisting the legendary mixer David Pensado. '3D', who owes his nickname to the fact that he has three 'd's in his name and to a talent for spatial mixing, has been independent since 2000. In 2006 he founded his own studio, called Paper VU, and his credits include Ice Cube, Missy Elliott, Wu-Tang Clan, Michael Jackson, Nas, Common, Chris Brown, Usher, Flo Rida and, of course, Black Eyed Peas.

Dylan Dresdow's association with BEP and their producer will.i.am goes back to 2000, when Pensado and his then apprentice mixed the quartet's second album, *Bridging The Gap*. Dresdow went on to co-engineer the band's third and fourth albums, *Elephunk* and *Monkey Business*. He also has mix credits on all will.i.am's solo efforts, and new album *The END* sees him promoted to sole mixer on a project with a money-no-object budget: "For this project we had the opportunity not to cut any corners, and make sure that we made a record that will stand the test of time, and that will hopefully sell very well at a time when records aren't selling as well."

Beginnings Of *The END*

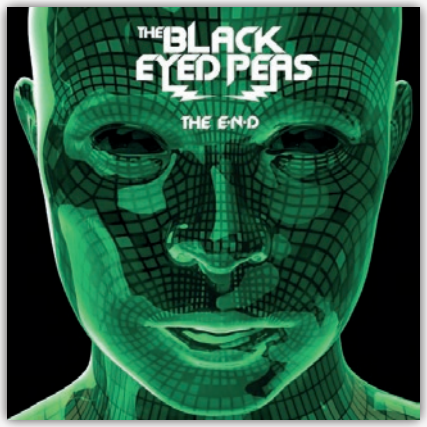
The END was recorded and mixed primarily at the Record Plant in Los Angeles, on an SSL 9000J, but Dresdow brought in his own Pro Tools system, Lynx Aurora 16 converters, and some other bits and pieces from Paper VU, and sometimes took the sessions back to Paper VU to make use of esoteric outboard that wasn't easily transported. By the time Dresdow arrived at the Record Plant to mix the album, most of the material had been recorded by will.i.am and engineer Padraic 'Padlock' Kerin. "The songs were presented to me as if they were ready to be mixed," Dresdow recalls. "There were no plans to do any additional recording, but then, whatever I did would influence Will to come up with a great new part, or a great new section, so Padraic, Will, or myself would do additional overdubs. We jumped from song to song in doing this, because we really wanted the songs to make sense as a whole, and have the sequence correct. While *The END* is not a concept record, the idea is that you listen all the way through. Jumping from song to song gave us the ability to make sure that all the songs were a cohesive whole and matched up from a sonic perspective. That would have been harder to do had we mixed the songs linearly, like start with song one, and then song two, and so on.

"I think Will's main vision is for *The END* to be a little like a DJ spinning records in

a nightclub. DJs don't stop in between songs, they keep the music going, non-stop. So *The END* is sequenced in a certain way, with short or no spaces between the songs. Will also was really adamant that he wanted it to be on a par with many of the electro-influenced sounds that are out there now. The main bass in 'Boom Boom Pow' is an 808, for instance, there's no bass guitar or keyboard bass. As a mix engineer, I had to treat some elements in very unique ways. And Will also enlisted the [*French DJ and producer*] David Guetta to work on some of the songs. Will wanted to break the mould and push to the forefront."

When Dresdow received the song files at the Record Plant, supposedly ready for the final mix, he noted that, unusually for the Black Eyed Peas, the vast majority of the tracks consisted of synthesizers. "They were called 'bubble synth' or 'air synths'. As far as I know there were no software synths used on the album, it was all hardware synths, played without MIDI cables. When Will records synths, he'll play and record the keyboard several times until he hits a section he likes, and he'll then grab that section in Pro Tools and edit his performance as audio, because it's easier to drastically manipulate than it is when working with MIDI. In addition to the synths and 808 drums on the album, there were also programmed 909 drums, drum loops, real and sampled basses and a few guitars [*though these three were not present on 'Boom Boom Pow'*].

"I had maybe 90-95 percent of the final vocals when I began, but when we started overdubbing and adding and editing sections, we went back and re-recorded vocals, because we felt that the performances could be stronger, and Will also added extra ad libs and vocal harmonies. I typically recorded vocal overdubs with a Sony 800 or a Neumann U87, protected by the Pete's Place Blast Filter, then going into my Cranesong Flamingo mic pre, then a Tube-Tech CL1B compressor. I'd set the Flamingo levels very conservatively, and would use the Tube-Tech make-up gain to set my level for going to the DAW — it's clean enough to use for large amounts of gain. The Pete's Place 'Blast Pad' filter was designed so people could use vintage ribbon mics on huge guitar cabinets, but it is also the best pop filter I have ever 'not' heard. It's way better than any kind of pantyhose or something like that. It's somewhat expensive, but worth it.



"We had some keyboards at the Record Plant for additional synth overdubs, among them a Moog Little Phatty, Korg OASYS, Juno 106, and some custom units and so on. I would take the outputs and connect them to preamps like my A-Designs Pacifica, Neve 3405 (racked by Brent Averill), then into an A-Designs Reddi tube direct box, and back in to the SSL. I usually keep the 'pad' button pressed in on the Pacifica, which seems to do something to the low end. I rarely added compression to the synths while recording, but occasionally used board EQ or the Avalon E44 EQ. Using high-quality elements like that are like a thousand paper cuts that bleed someone to death; each one individually may not seem like much, but the sum as a whole can help make a mix spectacular. The Lynx was also very important. I'm a really big fan of those converters, I think they sound fantastic. I also like the fact that you don't have to calibrate this particular version. Plus they don't have fans. There's so much gear these days that has physical fans that make a noise in the control room. It's not always possible to put things in a machine room, and it really bugs me if gear like that makes a noise. I think it's very poor design for a company to put an audible fan in a unit that's supposed to be used in a library-silent environment."

Inside Paper VU Studios

Despite claiming "to satisfy today's champagne requests on a beer budget", Dresdow's studio is graced with an unbelievably long list of rare and vintage hardware, as well as a fully loaded Pro Tools system. There is, however, no mixing desk.

"At this point I believe that any mixer out there should competently be able to do a mix in the box or on a desk, and be able to get a great-sounding record either way," opines Dresdow. "If I could, I'd work on an SSL 9000 every time, but I can't do that, because there would be recall and other issues to deal with. Will.i.am's *Lost Change* was the first record that I mixed entirely in the box, in my North Hollywood studio apartment, mainly due to the beer budget at the time. That was a great learning process, because I learned that you need to really focus on getting your digital gain structure right if you want things to sound really good. Plug-ins also have a sweet spot. But when you know what you're doing, I don't think it really matters whether you are mixing in the box or on a console, you simply need to find a way to make it work. If you listened to a bunch of records that I mixed in the last couple of years, I defy you to tell me which ones were done in the box and which ones on a console.

"The huge step up was when Pro Tools went to 24-bit. I typically work 24-bit/48k, and that gives me the elbow room to confidently mix in the box; 96k just takes up too much DSP and ultimately makes the record sound worse when you have to skimp on DSP-heavy, higher-quality plug-ins. There still are certain things that analogue will do better, and *vice versa* but I don't think it's to such a degree that you can't make records that are mixed in the box sound great. At the end of the day, it's the person driving the car, not the car. If you gave Dave Pensado a Mackie 32:8 and a rack of DA88s, he could still make a great record, though it may take more time. When I see some guys talking poorly of digital in magazines it frustrates me sometimes, because if I'm working with producers who don't know any better, and they read that stuff, when I'm mixing in the box they think that it's going to be inferior to mixing on an analogue desk. It's difficult to fight those stereotypes.

"My studio is almost all mixing in the box, but I do have a lot of outboard gear, because one of the problems that engineers and mixers are running into these days is that we all have access to the same crayon box. Everybody has the same plug-ins. Every time you hear a flanger, it's almost always done with [*Waves*] MetaFlanger. The same thing can be true with outboard. There's a lot of stock gear that you have in every studio, like 1176s or LA2As. On top of that, many plug-ins are emulations of classic studio outboard. I don't care whether they sound exactly like the originals or not, if they get me where I need to go, I'm happy with them. Yet, while plug-ins may sound great, we still yearn for that little bit of individuality. I didn't want Paper VU to be a run-of-the-mill place, so I chose outboard gear that's unique and that would also set it apart from the plug-in stuff. That's why I have a lot of quirky, esoteric pieces of gear, and even some prototypes of equipment that never made it onto the market, which are literally one-of-a-kind units. All that helps me attain a uniqueness that's not easy to achieve for other engineers. I don't think any self-respecting engineer wants to sound exactly like another."

'Boom Boom Pow'
Written by will.i.am, Jean-Baptiste
Produced by will.i.am

Dylan Dresdow: "There really was no final stage that one would call the mix stage ▶

DYLAN '3D' DRESDOW

Dylan Dresdow (centre left) with will.i.am (centre right), mix assistant Joe Peluso (left) and Record Plant engineer Padraic 'Padlock' Kerin (right) during the making of *The END*.

with any of the songs on *The END*. We jumped around until the very last hour. We even did tweaks to songs after they came back from mastering! In a normal situation, when I get given a song to mix, I'll listen to it one time as it is presented to me. That will give me a good idea of where the record is supposed to go, and sometimes I'll jot down notes and ideas of what to do. Immediately after that, I'll jump in and mix as quickly as possible to try to catch the vibe. In the case of *The END*, because we spend an extreme amount of time working on the project and several days on mixing each song, there was a risk of over-mixing and homogenising the album. I wanted to make sure I didn't do that.

"I also wanted to pay homage to the elements that I love in dance music, and at the same time push the envelope, so that it would sound futuristic and not like 2000 and late [*the reference is to a lyric from 'Boom Boom Pow': 'I'm so three thousand and eight, you're so two thousand and late'*]. Much of that was just instinct, running quickly through the tracks: solo the drums, solo the bass, and tweak things. A lot of the EQ was applied without solo'ing things; instead I'd EQ with the whole track playing, which gave me a much better idea of the pockets the different tracks were playing in. Synthesizers, depending on the part and the sound, can take up a lot of space, and when you have a lot of them layered on top of each other, you can run into some train wreck-areas. This was one of the reasons why I was very happy to mix on an SSL. The solo-in-front feature is something that I wish every DAW had. If you are EQ'ing a track, it allows you to keep the track at the same volume, but everything else will drop behind it, and you can control how much behind you want it. It allows you to EQ a track in context.

"The total number of tracks on 'Boom Boom Pow' was about 64. These include all the different drums, the synths, and the vocals and backing vocals. We also did several remixes of 'Boom Boom Pow' that will be released on an EP. We really tried to go for a different sound with the remixes, and some of them, quite frankly, ended up being almost new songs. At the same time, many of the effects that I used on 'Boom Boom Pow' were used on the whole album, they were a kind of common thread, and helped to make the album sound consistent. In general, while mixing, being organic-sounding was not a goal. Being 3008, in 2009, was."

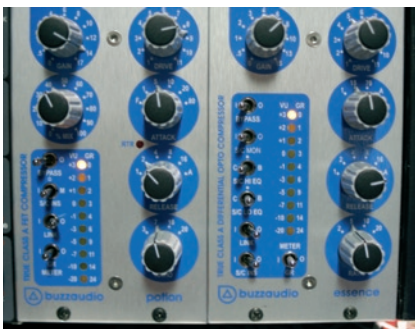
Drums: SPL Transient Designer, API 550B

"The main drum parts on 'Boom Boom Pow' were the 808 bass drum, a 909 clap, and a loop. I used the SPL Transient Designer to tweak the attacks of the drums. It's stellar for punchy envelope compression on kicks and snares. A lot of the time when working on the album I'd mult the kick drum and mult the snare, compress them really hard, and roll off a lot of high and low end, so they became very mid-rangey, and I'd put a tight gate on them. I'd sculpt the attack in this way and would add this into the track. It made the drums sound very punchy. I also applied the API 550B EQ to all drums, mostly for yet more mid-range punch. The 550B is really tight-sounding, ideal for a song like 'Boom Boom Pow', in which I needed to have nice attacks on the kick. If a loop sounded muddy, I'd cut around 240Hz; if I wanted more woody knock, I'd boost at 700 or 800 Hz."

Bass: Buzz Audio Essence, A-Designs P1

"The 808 bass went though my Buzz Audio Essence opto compressor, going into my A-Designs P1 EQ, which is basically the 500 series of the Pultec EQP1, typically using the 100Hz setting on the low end, boosting a lot. Your bass will translate a little better to smaller systems and the NS10. But for this record I was less concerned about how my low end was going to be heard than how it was going to be felt. I really wanted to make sure that the low end was pushing air through the speakers. I pushed 60Hz on the 808 bass in 'Boom Boom Pow', and on some of the other songs I even went as low as 30, to create a sub sub that really wants to hug your ears.

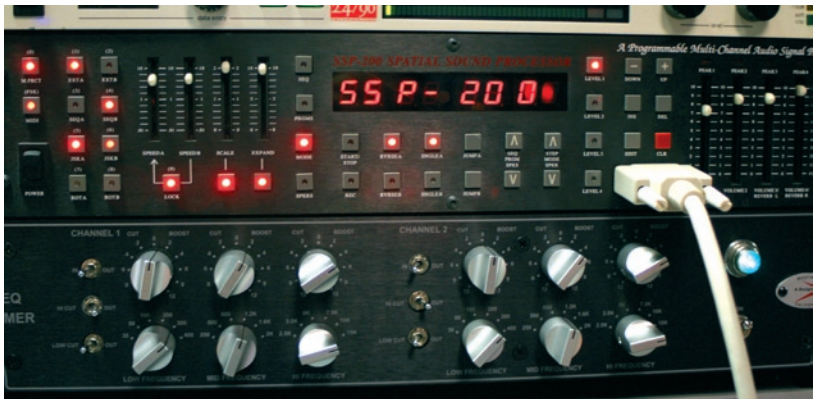
"By the way, I'd also use Buzz Audio gear for the guitars on the other tracks on *The END*, but in this case it would be the Potion FET. I'd set it to 100 percent and slam it aggressively with a faster release time than I normally use on a compressor. I make it really aggressive-sounding, giving as much life and character as I can: I'm shoving it over the edge! Then I use the Mix control on the unit and back it off, so it still sounds like it has a lot of extra vitality. At that point I often put the signal in again, and tweak the ratio and release time. A fast release time imparts a big compressor footprint on the sound. It is basically parallel compression within the unit. I also commonly used the Cranesong Phoenix plug-in on the album. The Dark Essence [*one of the five Phoenix versions*] set to Opal can smear loads of lushness onto the low end."



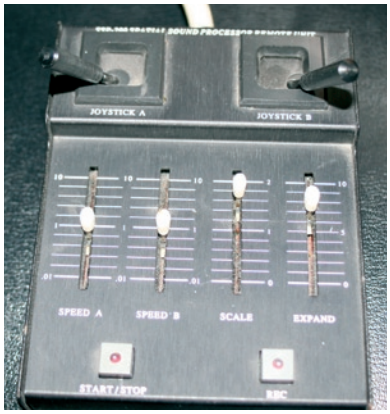
Dylan Dresdow's Buzz Audio Potion and Essence compressors (FET and optical designs respectively) were widely used on his mixes for *The END*.

Synths: Mathew Lane DrMS, Waves Maserati B72, Desper Spatializer, Sensortech SSP200 Spatial Sound Processor, Z.Vex Fuzz Factory, Machine & Woolly Mammoth, Little Labs PCP

"One important effect I used on many of the synths was the DrMS spatial processor plug-in



One of the many unusual pieces of gear at Paper VU is the Sensortech SSP200 Spatial Surround Processor, with its joystick-based remote control (right). Beneath it in the rack is the A Designs Hammer EQ which was used extensively on 'Boom Boom Pow'.



[*by Mathew Lane, from www.mathewlane.com*]. It gives you three-dimensional control over your audio, but different from any of the other plug-ins out there. You can place things wide outside of your speaker plane, and still have them mono-compatible. I don't mind if things disappear a little in mono, but I also didn't want that to happen to a degree that the music wouldn't make any sense any more. A lot of the feeds in nightclubs are mono, and the music in a lot of department stores is mono also. So the idea was to have a nice width when you're listening on a good system, but make sure it also still sounds good on a lesser sound system. You can also mess with the two bottom parameters on the DrMS, Focus and Field, and get some very unique digital witchcraft that allows you to smudge up your audio so it either gets out of the way of other things, or brings it more into the foreground. The former was particularly helpful, because with a lot of synths I did not want to have too much focus on them, because you risk them getting in the way of more important parts, like the vocals."

"Another plug-in I used on a couple of the synth parts was the Waves Maserati B72. 'Boom Boom Pow' was one of the first songs I began mixing for this record, and at the time that plug-in had just come out, and because Tony has worked with the Peas, I thought it would be fun to put it in. It worked really well to give these synth parts more drive and character. The synths that had the B72 on them then went through my Roland Dimension D, with all four buttons pushed in, and that gave a nice subtle chorus effect underneath, which added an element of surprise within the track."

"Throughout the record I also used my Desper Spatializer with the eight joysticks, and the super rare SSP200 Spatial Sound Processor, originally made in 1990. The Desper is awesome, really cool. When people started taking my '3D' nickname very literally, they expected me to get things to sound really wide. So I got the Desper from the Dust Brothers around the time I was doing a lot of work with Missy Elliott. I used it the first time on a Madonna remix I did with Missy. Superwide mixes have fallen out of favour since then, but they're making a little bit of a resurgence now, so it was fun to dust off these spatial enhancers and put them on some synth parts."

"Finally, I used some Z.Vex pedals on some of the synths, among them the Fuzz Factory and the Machine, both guitar distortion pedals, and the Woolly Mammoth bass fuzz pedal. The Fuzz Factory is an electric beast, and it works incredibly well on many different sources. You can make a guitar part sound like it's getting its feelings hurt, or really put a choke hold on a synth part. You can use these pedals in mono for stereo parts, because you get this nice definition in the ▶

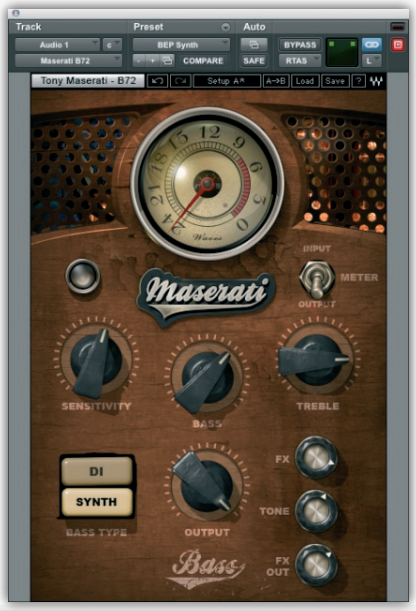
middle, and still have the clean sound on the left and right. I used the Little Labs PCP unit with the pedals. The PCP is aimed at guitarists, and you can send one guitar signal out to different heads, and audition the different sounds. But I used it to match my impedances. I went out of Pro Tools, through the Lynx, line level into the PCP, plugged an output of that into a guitar pedal, then into a DI, and back into the Lynx converter."

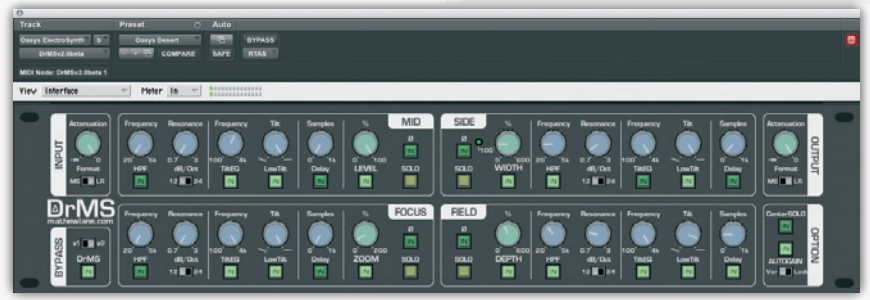
Vocals: Eventide H910 Harmonizer, Antares Auto-Tune, Waves Tune, Pete's Place BAC500, McDSP Filterbank E4, Massey De-esser, A-Designs Hammer HM2EQ, Cranesong STC8, NTI EQ3

"On the intro of 'Boom Boom Pow', you can hear some stuttering edits. They were created manually. I then also added the Eventide H910 on the very distinct deep voice that is introducing the record, which has a very distinct stairstepping thing. You can see the exact setting on the image [*overleaf*], and with that you can recreate that effect. As for the Auto-Tune, the effect was already there when I began mixing, but we did quite a few tweaks with it after that. I experimented with lots of different colours to make the vocal tracks sound more extreme: flangers, choruses, delays, and so on. Ultimately, these sounded too cheesy, so I backed them off and only kept some of the more subtle effects, so that it sounded unique to the Peas, and didn't sound like Kanye or T-Pain. When I wanted to go for a harder Auto-Tune sound, I'd put the Waves Tune in front, and I'd chain it to Auto-Tune Evo with the speeds set relatively fast, but with the Humanize knob turned up to mellow things out a bit. In sections where I wanted it really hard, I'd record the effect, just like a keyboard part. There was a lot of automation. All this was a collaborative effort between Will and I.

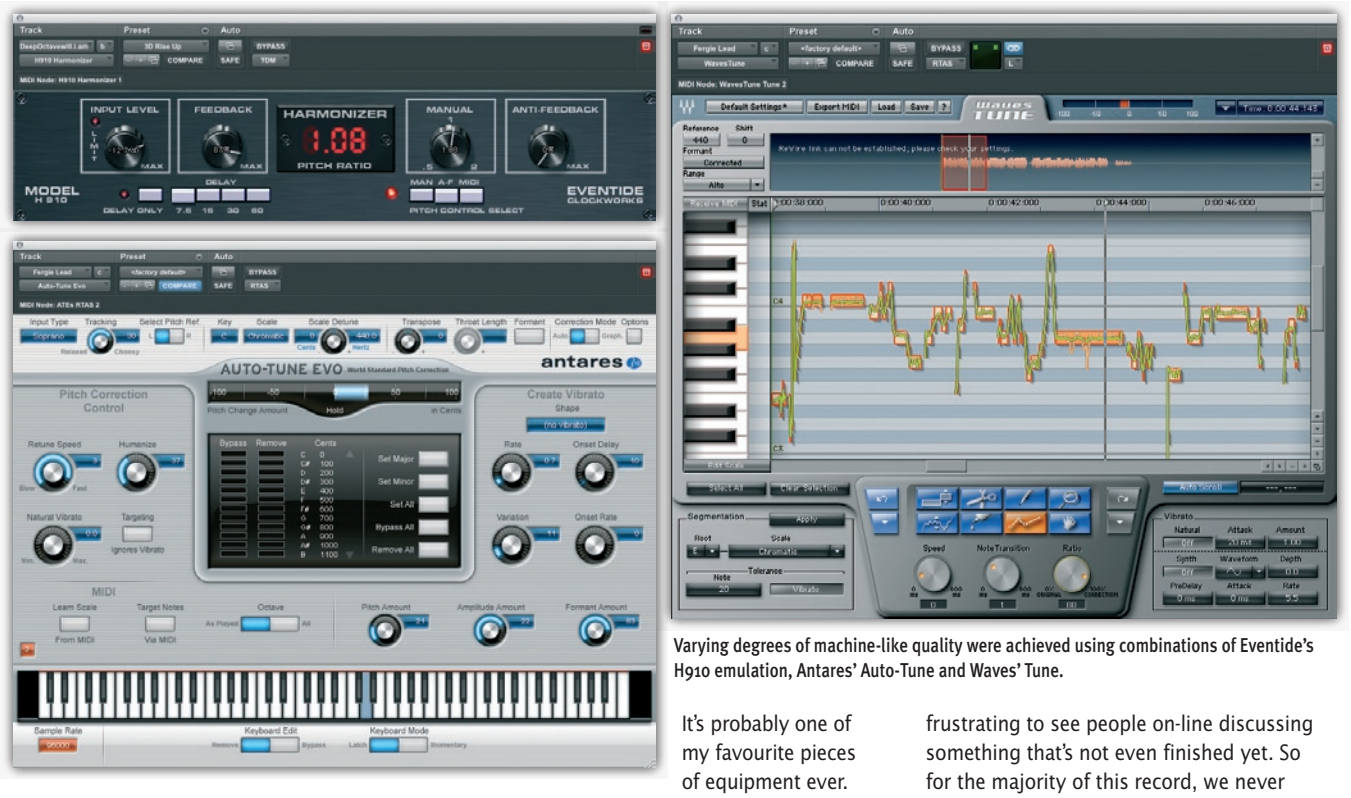
"My approach for each lead vocal was song-dependent and began with the blueprint will.i.am had already laid down. My treatments started with an HPF: I rolled off everything below 50Hz, and sometimes as high as 100Hz. This got rid of a lot of information I didn't want on the low end of the musical range and kept that stuff from making my compressor overwork. Vocoder or pitch-enhancement processing, ie. Waves Tune and Auto-Tune, was placed next. The Pete's Place BAC 500 compressor followed in-line with the 'Dist' button engaged: the 500 is a very subtle compressor, and pressing the distortion button adds an edge to the vocal and helps it to pop out of the mix. I ended with using the McDSP Filterbank E4 or the Massenburg Design Works EQ. In the case of 'Boom Boom Pow' it was the Filterbank. I used the Massey De-Esser on each vocal, post-EQ. For Fergie, it was focused in the 8k range, for the guys it was more in the 4k range.

"For the background vocals I used the A-Designs Hammer HM2EQ, going into my Cranesong STC8 compressor/limiter, and then into my NTI EQ3. I'd have the low cut buttons on the Hammer engaged, and would boost around 300 cycles to add some body, around 1.2k for a presence that helps the





Waves' Maserati B72 and Mathew Lane's DrMS stereo processor were among the processors used on synth tracks in Dresdow's 'Boom Boom Pow' mix.



Varying degrees of machine-like quality were achieved using combinations of Eventide's H910 emulation, Antares' Auto-Tune and Waves' Tune.

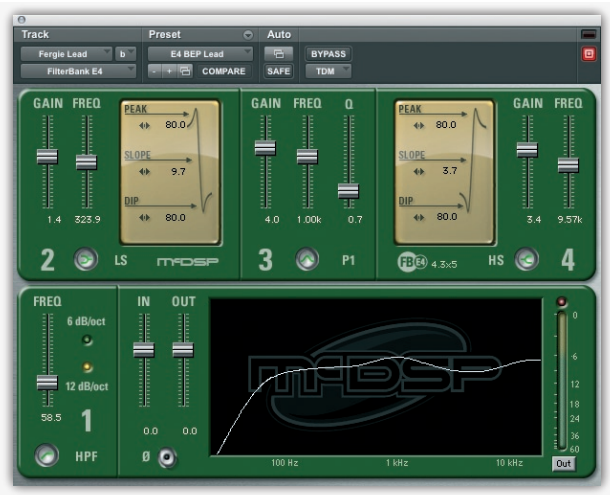
▶ vocal jump out a little in the mix, and 15k for some sparkle. There is a lot of magic in the Hammer, and it is one of those units that I have trouble finding a counterpart for in the digital domain. The STC8 is incredibly good for a lot of different things, and it's a particularly great compressor for backing vocals. I rarely used its limiter section. Instead, the 'A' preset worked excellent for me, and allowed me to apply large amounts of gain reduction without the typical negative side-effects, like weird tail-end stuff. The NTI/Nightpro PreQ3 was put in the chain mainly for the air it gives to the top end. The one I have is an eight-channel version and I think it's one of two that were ever made. It's probably one of my favourite pieces of equipment ever. It sounds really, really sweet. Neither of the Hammer or the NTI have bandwidth controls, and sometimes you think you're going to need a good parametric EQ, like a GML or something, but these two EQs have such tremendously wonderful sweet spots on them that I really did not need a parametric."

Locking The Mix

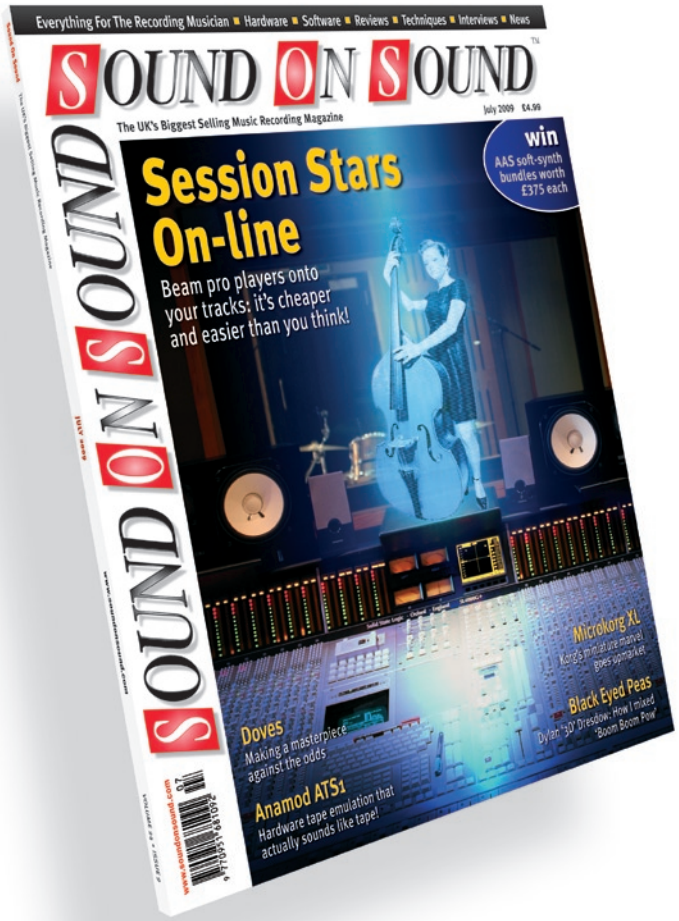
"I don't really want to talk about what I put on the stereo mix bus, because it might be confusing. Basically, I used a compressor and occasionally a limiter on the stereo mix, to mix against and to see what it would sound like, but sent everything to the mastering engineer without any processing. This pseudo-mastering gives me an idea of what elements could potentially suffer during the mastering stage, specifically in regards to loudness. What I do want to say is that we really put the lock on this album while mixing. Early on, before I even started on the record, a few snippets were leaked, and it's very frustrating to see people on-line discussing something that's not even finished yet. So for the majority of this record, we never printed any stereo mixes. If we wanted to hear a song, we'd do a recall. This meant that there was no way the record could be leaked. It drove some people at the record label crazy, because they want to hear stuff, but we really had to protect this record, which is supposed to be a new direction, a new sound, a new image, a new everything. When stuff is leaked, you lose the element of surprise, and this can really mess up how you release things.

"Will.i.am is travelling quite a lot — one day he's with Oprah Winfrey, the next with Bill Clinton — so instead of sending him MP3 mixes I can use Source Element's Source-Live. It's a plug-in that broadcasts audio over the Internet. Let's say Will was sitting in a green room before doing an interview with Oprah, and there's a change he wants me to do. I send him a link, and he clicks on it, puts in his password, and he can listen to the mix, hopefully on a decent set of speakers or headphones. It's a fantastic plug-in that now I use very often, especially when I'm doing unattended mix sessions. With artists that are often on the road, it's impossible for them to always be in the room with you. Source-Live sounds very good, and to me, this type of technology is the future. It's a Godsend for international collaboration."

If you have any follow-up questions, Dylan invites you to use the contact section on his web site at www.papervustudios.com. SOS



McDSP's Filterbank E4, with the settings used on the lead vocal in 'Boom Boom Pow'.



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