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Welcome

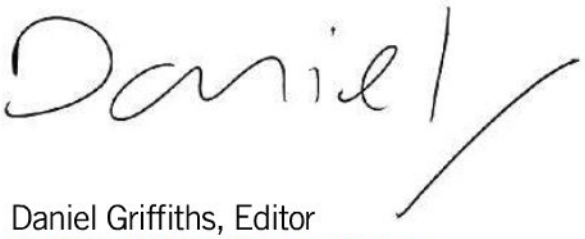
Ultimate Power

Time spent in front of a computer screen, overcoming a DAW's learning curve has long been the only way to acquire the skills in order to be truly productive. But with bad habits easily becoming ingrained and new features endlessly piling complexity onto complexities are you ever really sure that you're working as quickly and as smartly as you could be?

Step up our incredible *Ultimate DAW Tips* feature beginning on page 43. We've racked up eight of the world's most popular DAWs and with the help of *FM*'s resident experts put together no-nonsense tips that cut to the heart of what today's producers need. You'll be discovering new ways to do complex time-consuming techniques. There's ideas to inspire your next composition and even top secret shortcuts to slamming master channels.

Backing up the hi-tech tips are three sets of documentary evidence from three artists at the top of their game. We're *In The Studio With* Sébastien Léger (complete with video on DVD). Likewise with Holy Ghost! And we check in for a live set with Midnight Juggernauts. No other mag gives you this much insight.

And finally we've an amazing range of hard and software reviewed and rated complete with audio on our DVD. Make sure you're back next month. We're doing it all again...



Daniel Griffiths, Editor
daniel.griffiths@futurenet.com

EXPERT CONTRIBUTORS THIS MONTH...

Robbie Stamp
engineer, producer

Robbie won first prize this month and proudly took delivery of SSL's awesome new Nucleus. The only problem we now have is getting him to give us it back.

Jono Buchanan
engineer, producer

Jono's trusty UAD-2 card gets a double workout this month as it locks horns with their amazing Studer emulation and brand-new officially endorsed SSL plug-ins. Hear them for yourself on our DVD.

Bruce Aisher
artist, producer

Once it would have bankrupted a small country and baffled the smartest mind but now you can have the incredible 80's sound of the PPG Wave in your DAW. Like Bruce here. He's our chosen scientist to test the new Wave 3.V on page 100.

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Artists

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FMDVD

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INSIDE STORY

DVD Editor Will Seelig's inside track on the making of *FM*'s DVD

While Seb Léger's studio was massively well equipped the big surprise came when we checked out what he used for monitoring mixes.

Over the years *FM* have seen most set-ups but this really was a first. Using a Japanese brand of 2.1 PC monitors Seb Léger has managed to create the biggest possible mixes. This set-up was a true testament to his hearing and skill.

So don't ever underestimate the ability of knowing your speakers, if you learn them well enough they can be any brand!

Enjoy the *FM* DVD?
Want to see your favourite artist on video? Then email us at fmdvd@futurenet.co.uk

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DVD HIGHLIGHTS

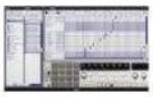
Knowledge Base: GarageBand

We take you through the basic elements of Apple's entry level sequencer to show how powerful it really is

Ultimate DAW Tips

This month we have a huge selection of project files and audio examples to accompany our massive feature

Reviews: Hear the gear



Hear the gear we review every month with a selection of audio examples of each new product in action

From the Vaults: Atmospheres

920 Incredible 24-bit atmospheres and a fantastic set of Minimal Techno construction kits

Sample Techniques

Each month, our sample creators work tirelessly to bring you original content for use in your music. As always, they go that extra step to make sure that the samples are both unique and brilliant

Glitch Hop: Bit reduction

"To add that all important lo-fi edge to this months collection we used a fair amount of bit reduction, both software based and hardware. The amount we used varied from source to source, from a just a touch to crisp up the hi hats and snare, to completely destroying whole loops. Our two favourite software bit reduction plug ins are Subtek's Lo-fi plus and Audio Damages' Master Destrukto, which both do the job in completely different but musically useful ways. Of course sometimes it's good to go old skool and run some audio through our Casio SK-1 sampler for some true lo-bit crunch."

PLUS OUR SPECIAL BONUS SAMPLES COURTESY OF

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200+ demo sounds for you to use and enjoy. If you like what's here then bag the full collections from **soundstosample.com**. They're instantly downloadable online!

WAVEFORM RECORDINGS CLASSIC HOUSE

"Prepare for rich, melodic and groovy loops which marry the warmth of vinyl with robust contemporary programming. With subtle nods to the Chicago and Detroit innovators of yesteryear, Waveform draw upon their rich experience to deliver timeless groove after timeless groove."

SAMPLESTAR - NU ELECTRIK

"A seamless fusion of French electro, Italo and indie-disco, Samplestar's Nu Electrik comes bursting with floor-rocking beats, basslines, synth loops, mangled vox lines, and expertly-crafted drum hits, fills and synth one-shots, giving endless inspiration and creative possibilities."

SOUNDS TO SAMPLE PROGRESSIVE HOUSE SYNTHS & STABS 2

"Deep, driving and euphoric mainroom synth loops and prog stabs, plus MIDI files. It's a big mainroom sound, with all-new sidechained trailblazers, throbbing toplines, hands-in-the-air progressions and generous helping of sub-strong basslines."

HY2ROGEN - PROGRESSIVE TOOLS 3

"A must-have selection of searing synth leads, ultra-detailed drum loops, kick-free tops, basslines, vox and XXL drum hits. Taking the mainroom by the balls this package crams in basslines, speaker-shredding synth leads and glitched vocal runs tailored to kick-start your inspiration."

© Richard Ecclestone

THE MAKING OF YOUR UNIQUE *FM* SAMPLES...

Glitch Hop

Fragmented beats and broken rhythms

We asked Oli from Groove Criminals all about his amazing Glitch Hop samples you'll find on the DVD. (And don't forget a similarly sizey bunch of amazing Rhythm Layers from Cyclick Samples on board too).

All the beats were made using the GCHQ drum hit archive and used a mixture of hits both synthetic and real, we discovered. "We used a lot of layering to get depth and snap and also threw a fair amount of odd noises and pitch shifted stuff into the mix as well," Explained Oli. "All of this was programmed in software using whichever method we felt like at the time including Battery and FXpansions rather splendid new drum machine/sampler Geist."

Synthetic Sounds

"On the synth front we used the usual mixture of hardware and software but felt using some of the smaller, quirkier analogue synths quite appropriate.

This meant that the under-rated and rather rare micro Yamaha CS01 – including its breath controller – got a good run out as did the classic toy-like Casio SK-1 sampler. Nothing delivers the 8-bit crunch like one of these! We then went slightly more modern – with a hint of retro – in the shape of the Korg Monotron, Dave Smith Instruments Mopho and Chimera bC8."

1,000 samples

On the software side, one softsynth of particular note that came in very handy was De La Mancha's Puls, another Groove Criminals favourite that comes highly recommended. It our first choice for those lo-fi, old skool computer game riffs. Who needs a SidStation?

GEAR USED

Glitch Hop Groove Criminals use: Korg Monotron

"Whenever we need some miscellaneous synthy bleeps and pharts we've started to find ourselves increasingly reaching for Korg's little box of analogue goodness. Ridiculously small but with its own sonic character and only around £50 we like it a lot."

Rhythm Layers Cyclick Samples use: Kurzweil K2600r

"This is the All-American monster synth and sampler that despite being endorsed by cheesy prog rock keyboard fiddlers is a truly stunning machine. It is featured this month as after many years I have fitted the ADAT I/O board which allows the amazing KDFX engine, which can be found as a standalone product, to be accessed as an eight channel real time effects unit. The filter, LFOs and envelopes of the synth are also accessible to external audio as the ADAT inputs are treated as oscillators, albeit without pitch control – but of course, there has to be a downside!"

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Portastudio meets iPad?
10 It's insane. Insane, but so very cool. Stick a four-track cassette deck on your iPad!

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M-Audio got Venom

Get ready for a brand-new performance-based synthesizer that could be 2011's next big thing…

Everyone knows M-Audio, and millions of music-makers have owned and loved at least one of their popular keyboards, interfaces, monitors, mics and more. However, with the innovative Axiom line of keyboards under their belt and new stewardship from big-name owners Avid complete, it seems that M-Audio are keen to try out something new.

Step up, the M-Audio Venom synth. Rumoured for six months, it's finally breaking cover at the NAMM show in Anaheim USA around the time that you're reading this. (Full show report next month, naturally.)

The Venom is a four-octave 'performance-based' synth, laden with controls and styling clearly lifted from the popular Axiom Pro. There's a simple, Axiom-sized LCD display and just enough multi-function knobs to give the built-in (virtual) analogue synth engine a tweak.

The accent – we're told – is on ease of use, and programming from the 'board itself is said to be an ideal introduction to synthesis and the process of building a sound from scratch. Meanwhile, pro users will love the massive modulation options and huge collection of on-board oscillator waveforms. Topping off the lot (and keeping that 'performance' tag promise) is a built-in phrase sequencer for rapid part-generation.

With so many similarities to the Axiom, it's no surprise that the Venom comes packing a major software editor in the shape of the Vyzex software, which allows users to create and customize sounds directly from their computer. Ideal for those wishing for a few more of those continuous rotaries.

All this and a built-in MIDI and audio interface too. It's everything you need to get creative in 2011.

WANT TO KNOW MORE?

Check out **m-audio.com/somethingwicked/?cmpid=AV-SM-VT-12** – M-Audio have drafted in The Crystal Method to test-run the Venom.

Porta Pad

Tascam make Portastudio for iPad

Seeking the nostalgic feeling of how you used to record your demos? This nifty-looking iPad app could be for you. Based on the classic 30-year-old Tascam Portastudio and developed with the main man over at Analog Industries, the official Tascam app can handle some USB audio interfaces, will export to iTunes and will eventually have Soundcloud integration, too. At just $15.99 from the app store, it's worth a look if you're after a familiar way to jot down your demo tracks. **tascam.com**

WANT TO KNOW MORE?

Stay tuned to *Future Music* – we'll be rounding up all the best iOS music-making apps soon. **Next issue on sale 17th Feb**

eyoControl for iPad

This app is just $6.99 and will serve up control of any MIDI-enabled DAW on the Mac. Using the free eyoControl Server software, it can even support multiple instances of iPads – working by connecting with your DAW using virtual MIDI ports. The software contains the obvious fader-splattered mixing surface and transport control, plus a dual-layer keyboard and MPC-style pad controller. More updates are on the way, but so far this looks like a handy tool for anyone with an iPad and a compatible DAW. **eyosido.com**

Reason to be cheerful

If you use Reason, we recommend you pick up the brand-new *Computer Music Special – Reason: The Expert Guide*. Featuring 100% fresh new tutorials, this magazine/disc package is everything you need to make better tracks with Propellerhead's awesome software studio.

There's a section of masterclasses that'll get you working like a pro with ReGroove, designing your own drums in Kong and recording vocals entirely within Reason! A massive collection of tips and tricks also shows you how to create today's hottest sounds step-by-step using Reason's tools.

There's all that, plus an exclusive pro ReFill collection on the disc featuring sounds from Prime Loops, Sample Magic, FatLoud, Nine Volt Audio and Zero G. So, what are you waiting for? If you want one, don't delay – supplies are strictly limited!

Computer Music Special 45: Reason – The Expert Guide. Available from selected WH Smith, Barnes & Noble, Chapters and independent newsagents, or order online at **myfavouritemagazines.co.uk**

Diary

Events, festivals and gigs…

Grum
When: 3 February
Where: Koko, London
myspace.com/grummmusic

Hurts
When: 3 February
Where: HMV Forum, London
myspace.com/ithurts

Greg Wilson
When: 5 February
Where: Manchester Deaf Institute
thedeafinstitute.co.uk

Mark Ronson
When: 16 February
Where: Roundhouse, London
ticketmaster.co.uk

Seth Troxler
When: 18 February
Where: Stealth, Nottingham
stealthattack.co.uk

Mr Scruff
When: 19 February
Where: Koko, London
Koko.uk.com

Annie Mac
When: 19 February
Where: 53 Degrees, Preston
53degrees.net

Venetian Snares
When: 23 February
Where: XOYO, London
xoyo.co.uk

Ferry Corsten
When: 25 February
Where: 02 Academy, Leeds
o2academyleeds.co.uk

Dave Clarke
When: 26 February
Where: Ironworks, Inverness
ticketmaster.co.uk

MUSIC TO OUR EARS

The *FM* Playlist

What we're listening to this month…

Prince
Rarities
Scouring the internet for The Purple One's rare tracks. Don't tell him, though; he'll get upset.
Chris, Deputy Editor

Le Knight Club
Santa Claus
Revisiting the French Touch this holiday season, this is my favourite of Guy-Man's tracks.
Declan, Production Editor

Black Eyed Peas
The Beginning
A matching set of Pro Tool doodles so interchangable that it's like to 60 minutes of tech demos. ***Daniel, Editor***

King Jammy's At Channel 1
1977-79
The perfect Roots showcase for '70s Jamaican production.
Will, DVD Editor

Who Goes Square?

A new flexible microphone in a range of candy colours

Not only does the new Little Square Mic look the business, this is a flexible, feature-packed recording option. Inside this studio condenser microphone are dual outputs, analogue mini-XLR, USB and a palette full of colours to choose from. The handy uni-directional condenser also has a well-designed adjustable mic stand mount. This can be positioned to stand the mic upright on a desktop or collared on to a normal mic stand, making it a great podcasting, radio or laptop mic.

Inside, there's a 34mm Von Braunmuhl and Weber-style cardioid transducer, coupled to a discrete JFET impedance circuit with a high SPL handling circuit. Available now at just $180, it seems like this could be quite a handy unit to have around. **studioprojectsusa.com**

WANT TO KNOW MORE?

For the full spec and availability, visit **studioprojectsusa.com**. Review in *FM* soon. Next issue on sale 17th February.

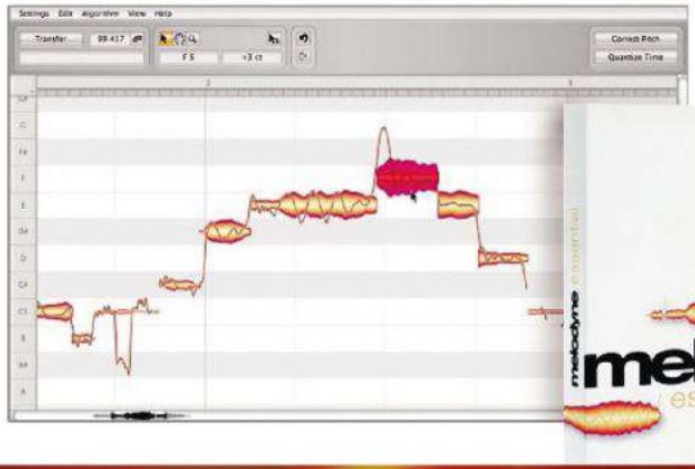
Jack In

The massive amount of iPad and iPhone apps being launched make these devices incredibly tempting for both musican and producer, but some professionally designed apps sound a bit lacking. That's why New Signal Process have designed this mono box that slots into the headphone jack on your iDevice and makes using recording or signal processing apps much easier. Based around an aluminium shell and stomp box design, the NSP Breakout features a true bypass switch, making it great for DJs, guitarists and keyboard players alike. It's a high-quality device and so doesn't come cheap at $115, but when you consider the value you'll get from the array of apps available, it might be worth it. **newsignalprocess.com**

Melodyne-amite!

A $99 version of the revolutionary software

Coming packed with many of the same features that their flagship boasts, Melodyne Essential delivers direct plug-in operation and 64-bit support, and works with Monophonic audio content. Obviously this version is cut back but, as the name suggests, all the core features remain – and Celemony tells us it keeps this version of Melodyne super-sharp to operate. It will run as a standalone program or as a VST, AU, or RTAS plug-in in compatible DAWs. Any documents created using Melodyne Essential can be easily opened in any other version, and any users of the previously bundled version of Melodyne Essential can upgrade for just $29. **celemony.com**



YAMAHA
The Piano that Performs - anywhere
Perfect for the pianist on the move, Yamaha's P95 is light and easily portable yet delivers a great piano experience on stage or at home. Its 88-note Graded Hammer Standard keyboard feels reassuringly familiar while the beautiful, stereo-sampled grand sounds utterly convincing.
Visit your nearest Yamaha dealer to hear for yourself.
RRP just £593 www.yamaha.co.uk

Roland Ready To Rock 2011

With new products across the board, we discover what's hot

Right now Roland are unveiling their 2011 kit at the NAMM show in the States. But here's advance notice of what's hot from the big 'R'.

Biggest of all is the new V-Piano Grand – their awesome piano emulation system now housed in a fabulous full-size grand enclosure. Of course it can be argued that if you're going to have something the size of a small car making the sound of a piano then you may as well get a real piano, but the technology on board, which lets you design your own virtual (even impossible) piano, makes the V-Piano so much more.

Elsewhere catching our eye are their new Tri-Capture interface that gives you stereo in, hi-Z guitar and mic pre inputs. Meanwhile their Duo-Capture gives the hi-Z and stereo line in for the minimum amount of effort.

Roland are also kick-starting the guitar synth once more with their new GR-55 unit and new entry level TD-4 kits and pro-ready TD-9 kits give the famous V-Drums line a revamp for 2011 with new coaching features, new soundsets and USB stick playback. Reviews soon.

WANT TO KNOW MORE?

Head to **roland.co.uk** for the full specs fest on all their new products

Roland's TD9-KX2 tops the pile while [left to right] their Tri-Capture, GR-55 and Duo-Capture deliver the goods

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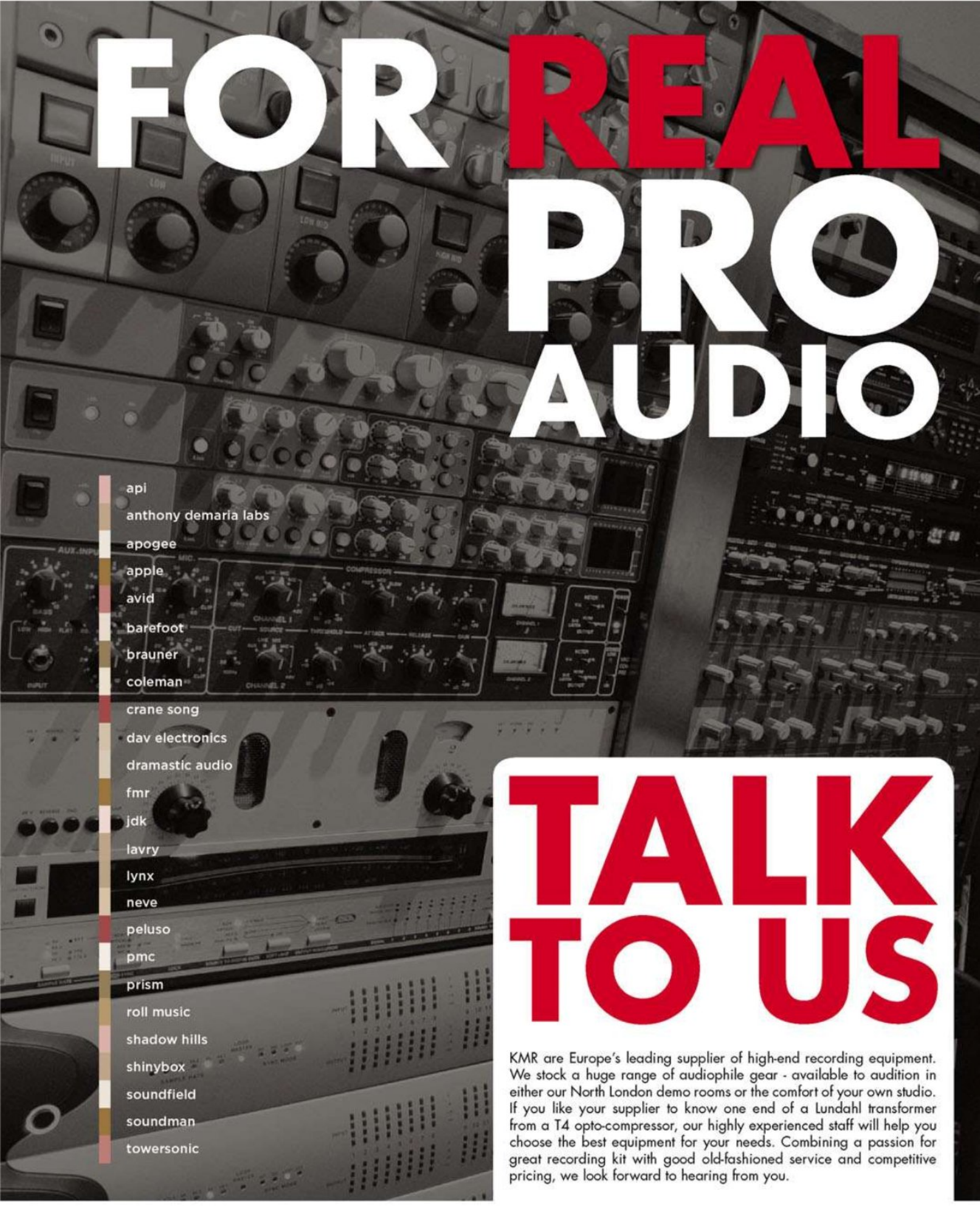

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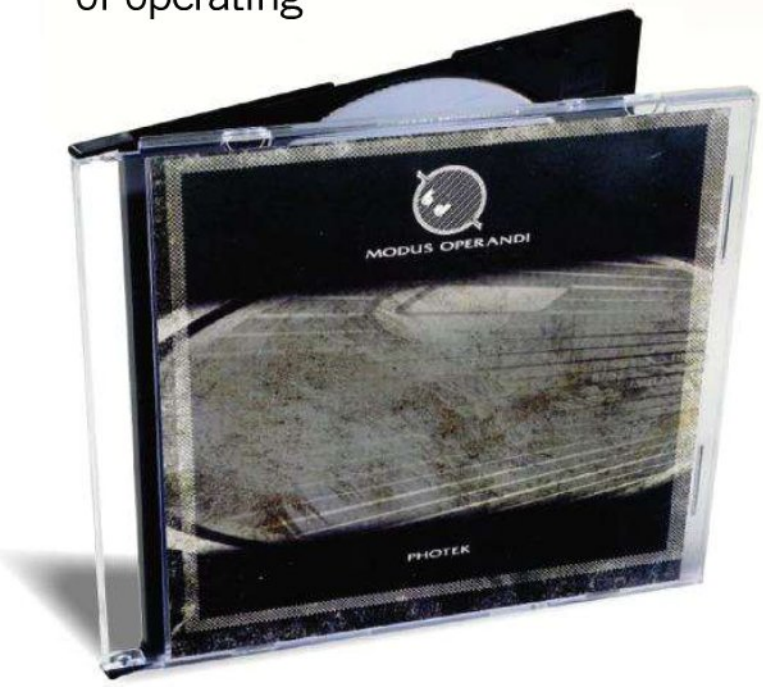
THE CLASSIC ALBUM

Photek
Modus Operandi

Virgin, 1997

A milestone in D'n'B from the era of two-second sample time. ***Roy Spencer*** studies Photek's method of operating



What is 'Intelligent' Drum 'n' Bass? Is it a tune that Prof. Hawkin bumps on his iPod? Maybe it's a track that gets mentioned in a keynote speech at a conference of Pure Mathematics?

The image it conjures up is of some chin-stoking academic musing over the witty use of time signatures, rather than shocking out to them at a sweaty Rave. With Photek it's not mutually exclusive, you can do both. So, don a mortar board and cosy up to a bass bin, we're wheeling up the seminal Drum 'n' Bass masterpiece, *Modus Operandi*.

It's blatantly Photek's dissertation on Breakbeat techniques. He beavered away 24/7 in the lab on drum programming for weeks at a time, sweating over the E-MU sampler like an obsessed scientist on the brink of a breakthrough in his lab. Due to the laborious nature on working on vintage gear, every single drum hit was carefully pieced together one at a time.

It wasn't just the production that was given meticulous attention. Titles of tracks were pulled from dusty textbooks on the nature of infinity. The album's name is taken from Latin. Tunes like *The Fifth Column*, which meditate on the dark side of the ancient Samurai, feature recordings of actual martial arts weaponry, to do the subject matter justice. "The album was about technique, and the way I put it together," says Photek. "Around that time I had honed my craft to where I had wanted it to be. Before that I'd been making 'tracks' and developing what I was all about for about three years. But by the time I got to the *Hidden Camera EP*, and then the album, *Modus...* I think I had the ability to take an idea, and take it all the way to how I wanted it to sound. For what it was, it was perfect in my mind." It must have taken determination, given the tools at the time. "The other part of it was that everything took a lot longer," he says. "You could save the MIDI sequence really quickly. But if I decided to save samples it might take 40 minutes. As a result you wouldn't save that often. The amount of remaining tracks I lost because I wasn't saving was not even funny. It was like, 'it feels a bit unstable at the moment, and I'd really love to save, but I've got an idea I'd like to try'...then you'd lose it all."

The tireless, studious, work paid off. The resulting album was a benchmark for Drum 'n' Bass. It showed producers that they could aim for the head as well as the dancing feet. And for that Photek is proud of his academic achievements.

"It's my first fully accomplished record," he says. "It fulfilled it's own prophesy. It was my M.O at the time. It was hard work. But anyone who knows how to make music understands. It was like building a cathedral or something. I was like 24 when I made that, it took some real focus. With the tools I had, I think I pushed the envelope as far as I possibly could."

Track by track with **Photek**

Hidden Camera

"It was the first thing I did after signing to Virgin, the *Hidden Camera EP*. It's very much Jazz-orientated. All the drums were programmed, but it was four-four. The drums finalised every six bars. I used to it a lot. It let the track keep hold of you, but not get predictable.

"I remember buying a guitar at the time for a hundred quid, and playing it through a Sony MP5 multi effects box. I combined that with bits off Jazz Funk records. I was buying a lot of records at the time. Because when you picked up a rare record, not many people would have it, so it made your tracks stand out. It was a case of touring, say Tokyo, and buying an old Herbie Hancock album for like £150, an original pressing, and bring that back. Maybe for just one little Flexatone sample that you couldn't ever make yourself. It was a real treasure hunt."

Smoke Rings

"I'd made that break for the earlier *UFO/Rings Around Saturn* 12". It used to take weeks and weeks to make a beat like that. You'd program every single little backwards and forwards shuffle of every tambourine shake in MIDI. If you'd put so much time into it, you'd want to reuse it.

"I never used a compressor. I didn't use one for years. The drums punch because of the E-MU sampler. There was nothing else that sounded that punchy. You could transpose stuff without losing character. You could play samples and pitch shift them many semi-tones, but it would still have the presence of the original. The E-mu was perfect for the way we were making music. That and the way you used your mixing board. Overdriving the gains on the Mackie 32 desk was standard, everyone in Drum 'n' Bass was aware of that. The distortion really brought out different resonances."

Minotaur

"This uses that bass bongo sound that I still use today. I'm always pulling it out and trying it in tracks. I did at least one other track like that before, using the bongo drum as a bassline. It had to be somewhere on the album as it was one of my favourite sounds, ever. It came from an obscure patch I had. I always loved it. It was a bit more angular and cleaner and Techno nerd, the way I used it, from the Rave days. It's almost like a gong meets a bongo. Kinda severe, but Jungly at the same time.

"It came together a bit later in the recording sessions. *Hidden*

LIKE IT? TRY THESE...

Various
Headz 2B
Mo' Wax comp full of excursions in style. Peep Photek's (under the guise of Special Forces) epic, *Trilogy*.
ADD THESE TO YOUR PLAYLIST:
Trilogy and Roni Size & DJ Krust's Tribetoon

Various
The Drum Sessions
Fancy loading some killer drums in your sampler for a Photek-style workout? This is a good port of call.
ADD THESE TO YOUR PLAYLIST:
Aces and Drum Battle, Section 1

A Guy Called Gerald
28 Gun Bad Boy
Trailblazer of a proto-Jungle album, featuring tracks that inspired Photek on a new path
ADD THESE TO YOUR PLAYLIST:
Cops and 28 Gun Bad Boy

Goldie
Timeless
The other milestone in album-led Drum 'n' Bass from everyone's favourite gold-gnashered Metalhead.
ADD THESE TO YOUR PLAYLIST:
Timeless and Angel

Photek
Solaris
Long Player from 2000 that showcases Photek's ability to effortlessly drift between any genre he turns his hand to.
ADD THESE TO YOUR PLAYLIST:
Terminus and Infinity

In The Studio with... Photek

"When I did *Modus*... I was in St. Albans in Hertfordshire, where I was born and grew up.

"By then I had enough money to afford three E-MU samplers, from the E-MU E4 series [5000 and 64], which were at the centre of everything. That gave me the grand total of a minute and a half/two minutes of sample time.

"There was a Mackie 32 track desk, plus I had another 24 channel desk. Then I was using a PC to sequence it running Emagic Logic. I'd just made the switch from Cubase on an Atari.

"My other prized tools were a Lexicon Reverb and a Roland JV-1080. They made up the main body of the stuff I used. I had a few other bits, like an old Proteus and a Sony multi effects box, an MP5. It was like a half white rack unit that not many people had come across at the time, so I had a lot of effects that weren't in everybody's toolbox. I also had the Technics decks. If you wanted to reverse sections of your sample, or change the pitch of it, the easiest way was to spin the deck backwards, or move the pitch control. You were choosing your samples very, very carefully to loop. You might have had an idea that you wanted it to reverse or bend down at the end, then have a delay at the end.

"You had to construct that process all by hand. I think it was a year after that that hard disc recordings really became the norm."

Camera and *KJZ* were definitely first, as they were on the first EP which came out before the album. *Minotaur* came out in the middle."

Aleph 1

"I used that old Spectrum-type cassette computer game loading sound. I loved that, programming your own games. You'd get the book from WH Smith and it'd be an inch thick with three crap games in it. And you'd spend the whole of a Sunday typing in these codes. And if you were lucky they actually worked. That noise I used haunted a generation [laughs].

"Aleph was a term from Steve Brown, who was A&R at Virgin. He was a Math PhD. It just seemed to fit the project. There are loads of different alephs. An aleph is a fraction of infinity, which meant that they were infinite in themselves. It seemed to fit the way the track seemed to be endless and kept on evolving. I've always loved that name, actually."

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"This title is a reference to the speed of the track in BPM. I'd done *Into The '90s* on Metalheadz before that, which was in that decade and at that speed too. I felt it was a big deal to do a song at a different tempo

"Everything was that militant at the time. It was like if you used the wrong bassline, you were rubbish. And you'd have to work for like a year to get your credibility back. It was strictly militant at the time, and we'd all be examining each other's music for drums and samples.

"I remember when Mo' Wax was in full swing. They were leading this charge and embracing all these different types of music. At one point I was ready to sign to Mo' Wax. It was between them and Virgin. It would have been interesting to see what would have happened if I'd gone down that route."

> "Overdriving the gains on the Mackie was standard. Everyone in Drum 'n' Bass was aware of that"

Axiom

"This title came from Steve Brown as well. It's another pure Mathematics term. The definition is something like, it's a point that can be used as a theory in an argument, like an undisputable fact.

"I wanted to make a track similar to *Anything Can Happen* by A Guy Called Gerald. That was one of the tracks that turned me from being completely Hip Hop obsessed into embracing a whole new wave of music. That track was so heavy. I consider that to be the first Jungle/Drum 'n' Bass track. He nailed it. To me *Anything Can Happen* is the axiom of Drum 'n' Bass. It's an undisputed fact that that was a Drum 'n' Bass track before its time.

"I used the same kind of tambourine shaker, the same kind of 'down-to-business' feel to it. It was paying respect to that."

Trans 7

"We were mastering at Metropolis, and I switched this track with another at the last minute. There was a big debate about why *Ni-Ten-Ichi-Ryu (Two Swords Technique)* wasn't on the album. But it meant that if people wanted it now they had to search about for it [laughs].

"Against the wishes of Steve at Virgin, I wouldn't let the track go on the album, which was a bit stupid, looking back on it. *Trans 7* went on instead. I remember we were at the mastering house and I didn't have the DAT for it. Stuart Hawkes, who was mastering the album for me, ending up mastering the track off a dubplate that I'd been playing out as a test. So Stuart cleaned it up a bit, but any crackle and hiss you hear is

because it's off vinyl. I called it *Trans 7* because it was the seventh track, and the dubplate manufacture was called Trans Co."

Modus Operandi

"It's still one of my favourite all time tracks. I wouldn't change a thing about it, except maybe cut eight bars out of the intro. It has some lovely rim shots. Erykah Badu highlighted them as the best sounds ever.

"There are right rim shots and wrong rim shots though. There are the ones that hurt your ear, then there's [Tom Scott and The LA Express's] *Sneaking In The Back*, that Massive Attack used perfectly [on *Blue Lines*]. It was a track that had absolutely nothing to do with Drum 'n' Bass at all, but it had the Photek sounds. The title came from the film *Heat*, where they talk about the robbers and someone asks Pacino's character 'what's their M.O?' and he replies 'Their M.O is that they're good', and I loved that.

"Like 'I'm gonna be really good at the rim shot and the balance of the drums', so we called the album *Modus Operandi*."

KJZ

"That stands for Kirk's Jazz. I was on one of my first ever tours in Japan and I went with Kirk Degiorgio, the Techno producer. He had an amazing knowledge of records so we would go record shopping together a lot. He gave me a DAT packed with stuff that he'd found. I think a lot of the drum hits that make the beats on this track come from that particular DAT collection.

"It sounds very busy to me now. People say it's my best beat. But *Smoke Ring* was much more difficult, really. I programmed a break – I think it's made from bits of Elvin Jones, Max Roach…I tried to remain respectful and not take their entire swagger and just use it as my own. I think I pieced it together with a whole new swing. There are bits of Mark Mondesir, from Courtney Pine's band. He really blew me away. I just chose obscure masters."

The Fifth Column

"It's got the sounds of a real Ninja throwing star in it, which was near impossible to record. That was the craziest fun tune to make. I also recorded the sound of a bicycle chain whipping through the air to sound like swordplay. I took the sound of every individual swipe and I sampled them into the E-MU and triggered it, resampled it, sped it up, then put it through effects. I mean it was the most elaborate recording I've ever done. But the sounds were totally designed from scratch, like they do in the movies.

"It fit on the end of the record nicely. It was simply a case of sticking it on at the end. A case of, if you can make it through the whole album, you can probably handle this too. It would have upset the flow of the ambience of the album as a whole if you'd stuck it right in the middle [laughs]." FM

"It's got the sounds of a real Ninja throwing star in it, which was near impossible to record"

Photek's Studio Today

"The studio is pretty basic now. It's a nice room in Hollywood, just down the road from Capitol Records, so it's nice to be near that landmark building. It's a far cry from my old bedroom full of smoke and empty teacups.

"It's basically a maxed out Apple Mac with Apogee hardware, running Logic and an SSL rack and G-Series compressor. I'm using a Roland mic, and a Diezel Herbert Head Guitar Head, which I picked up after working with Nine Inch Nails. I was like, 'how do you get that sound?' and they said it was the Diezel. So I was like 'well, that's what I'm gonna use'. I'm using plug-ins like Camel Audio, but I like to have the most basic plug-ins other than that because I like to have a session that is transferable to other studios. I try to keep it fairly limited to keep it about what the structure of the track is like rather than what plug-ins I've got. I was actually reminded about that by the producer Switch from Major Lazer when we got together to work on some stuff. He had like one third-party plug-in other than the Apple plug-ins. Less is more. It's like what I achieved with an E-MU, a sequencer and one effects unit… I probably did more with that than those years where I had every bit of kit at my disposal, and basically fumbled around with it. Too many toys. You can get lost in the world of mouse clicking."

WANT TO KNOW MORE?

Photek is now working on new material. A series of EPs will be released from February. myspace.com/photekproductions

NEED TO KNOW

Five essential facts about… Photek and *Modus Operandi*

1 He kept the same E-MU sampler until he gave it to his gardener's son four years ago.

2 **The working title of the *Modus Operandi* track was *Reverse Kids*.**

3 Photek recently discovered all the original DATs from the recording sessions.

4 **"I'd fall asleep while working on a loop. Wake up, have a cup of tea, and try and remember where I was at and keep going."**

5 New Photek material will reference his experiences of the late '80s/early-90s warehouse party era.

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A few essential bits of information about...

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LS6 4DD

WHO RUNS IT?
Matt Peel and Andy Hawkins

WEBSITE
cottageroadstudios.co.uk

Situated in a 19th-century coach house just outside of Leeds city centre, Cottage Road Studios is a classic example of an independent recording facility building up a great reputation thanks to dedicated, hard-working staff and top-quality equipment. Run by the production and engineering team of Matt Peel and Andy Hawkins, Cottage Road is a real gem. Andy, a self-confessed tea addict, puts the kettle on while Matt explains the studio's history.

Originally set up as a private facility by Sisters Of Mercy guitarist Adam Pearson, the studio turned commercial around a decade ago, following album sessions by Leeds band Parva – now better known as the Kaiser Chiefs. Matt was brought in about eight years ago as an engineer, while Andy joined a couple of years later after being spotted as a like-minded spirit while recording at the studio with his band. When Pearson moved away from the area a few years ago, Back To Basics promoter Dave Beer stepped in as the new owner. Since then, the studio has hosted sessions by the cream of Leeds' music crop, from the Pigeon Detectives to ¡Forward, Russia!. More recently, Sheffield indie-rockers The Crookes, Leeds post-hardcore punkers Pulled Apart By Horses and promising Welsh psych-pop duo Under Alien Skies have dropped in to work on material.

A little bit of Monica

As we move through the main live room into the spacious control room, Andy and Matt begin to fill us in on the studio's extensive and carefully chosen gear collection. The centrepiece of the control room is the 80-input Amek Rembrandt console with Supertrue automation, chosen for its routing options and hassle-free operation as much as its sound. An SSL or Neve was considered, but the Amek won thanks to its neutrality and versatility. As Andy tells us, "Being an SSL or Neve room right now's kind of boring. Everyone's doing it. Why not

Genelec 1073Bs

"These are good for bottom end judgement and checking the full frequency range."

Yamaha NS10s

"I didn't grow up using these, so they're not my first choice. We're going to get an amp and put them in as another option."

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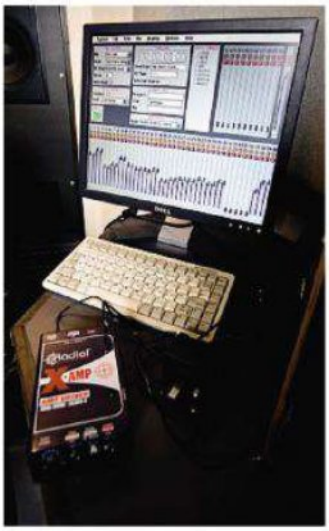
Jen SX1000

"These are generally seen as the extremely poor man's Italian Moog, but they've been used for basslines, leads and some ambient stuff. They're not going to win any awards, but they're consistently available for about £100."

INTRODUCING...

L-R
Matt Peel
Studio Manager
Andy Hawkins
Producer/Engineer



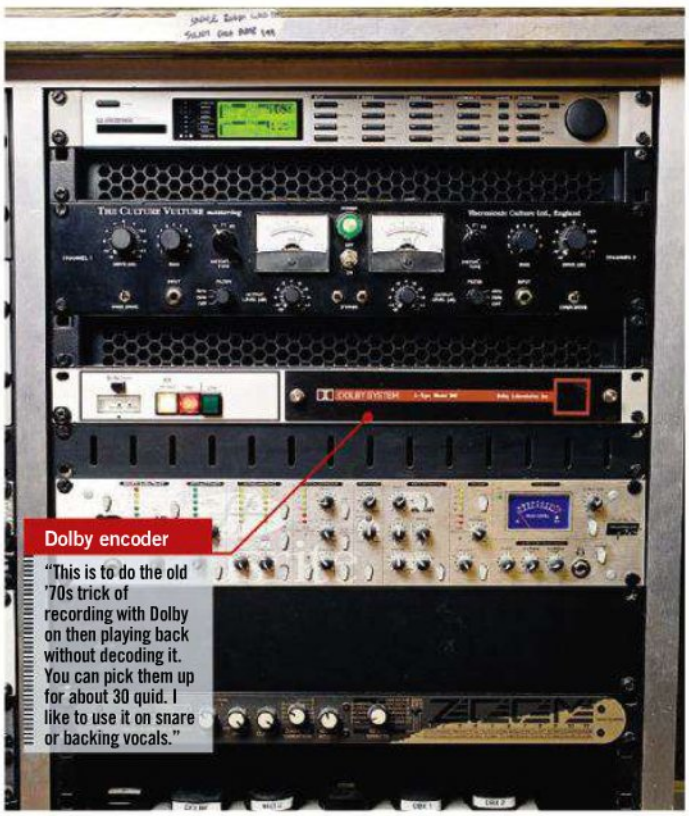
The Instrument collection

Matt and Andy are both accomplished musicians, turning their hand to just about any instrument if a session requires it.

Dotted around the studio you'll find their collection of instruments and amps, which include a variety of Fender, Gibson and Musicman guitars and basses, a Takamine acoustic, a modified Gordon Smith Gypsy and a Slingerland drum kit. There's also plenty of unusual stuff on hand to help inspire the creative process.

"I use the Suzuki Omnichord loads," says Matt. "You can turn off the drum machine and chords, then use the arpeggio part through an amp or some delays; it sounds really cool."

He also tells us about some of his favourite amps: "I bought the Orange head when I was about 16 and it's been a total workhorse. I used to have one of the 4x10 cabs too, which sounded ace but was so incredibly heavy that I ended up getting rid of it. Dave from The Pigeon Detectives leant us the bass head. It's really different to the standard modern bass sound, with a really clicky top end and subby bottom. It's like a nice, clean DI, but then you turn the gain up and get all that lovely '70s fuzz. It sounds a lot cleaner than modern stuff because it's so simple. I don't see the point in things like graphic EQs on bass amps."



Dolby encoder

"This is to do the old '70s trick of recording with Dolby on then playing back without decoding it. You can pick them up for about 30 quid. I like to use it on snare or backing vocals."

be a bit different?" Matt agrees: "I think the Amek has less of a sound than an SSL. People like to mix on SSLs, but I don't think they suit every music style. This is a little bit more neutral." "Plus it used to belong to Lou Bega [of *Mambo No. 5* fame]," says Andy. "And it did alright for him!"

Monitoring comes courtesy of Mackie and PMC, with a pair of Yamaha NS10s about to be added as a third option. Andy and Matt both rate the PMC TB2As highly, having originally bought them for the studio's mastering suite but being so impressed that they moved them into the main room. "They're not too hyped-sounding," Matt says. "They're just nice and warm."

Culture vultures

Looking around the racks of gear, it's clear there are plenty of options for just about everything. Audio Maintenance Limited's Carnhill mic preamps are given glowing reviews, while Empirical Labs' popular Distressor gets the nod as the studio's most frequently used compressor.

> Being an SSL room right now's kind of boring. Why not be a bit different?

"The Distressor will always win if you audition it against other compressors," Matt explains. "But it's a dangerous path to go down, because you end up wanting to use it on everything. A lot of the time I use it along with the [Teletronix] LA-2A. Something really fast and quite extreme on the Distressor doing a lot of gain reduction, then something slow on the LA-2A after, just to tickle it a bit."

Thermionic Culture's excellent Culture Vulture stereo valve distortion also gets used on a wide variety of material. "I just did a Spector-style Christmas single with The Crookes," says Matt. "I put the Culture Vulture across the whole mix on that. I love the way that on those old records you can hear when the vocalist belts a note out and it distorts a little bit. I had it doing almost nothing most of the time, then just adding that raspy distortion on the peaks."

Although most of the studio's work gets sent out for professional mastering, loudness maximisation is part and parcel of any mix process these days, and Matt has his own spin on it. "I've been doing a lot of clipping to get the loudness up recently," he reveals. "Using a little bit of compression, as much digital clipping as you can get away with and a bit of limiting helps to retain the punchiness without changing the sound of the mix too much."

Willing tea boys

Matt and Andy's straightforward, no-nonsense approach to recording can be explained in part by their backgrounds. The pair honed their skills over years of playing in bands, working front-of-house for live acts and taking every opportunity to learn from the producers and engineers they worked with. Aside from Matt spending a few months on a college course before realising it wasn't for him, neither have any formal training in engineering or production. The number of hours the guys have put into perfecting their craft clearly gives them a confidence in their own abilities, but also means that they're honest and realistic about how difficult it is to get into the industry.

To any up-and-coming engineers and producers, Andy offers a few words of wisdom: "We get two or three people a day emailing to say they'll come and make tea or sweep the floor. Who would want a bright person to be wasting their time making the tea? You'd be much better off buying a few microphones and a soundcard, blagging some bands and making a couple of records to learn the ropes.

"If you're in here making tea you're not going to learn anything. There's no substitute for declaring that you're going to record someone and just having a go at it." Andy and Matt's success proves just what can be done with that level of dedication and a fearless hands-on approach. FM

YOUR STUDIO IN HERE?

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ON THE RADAR

RJD2

We catch up with RJD2 at Moogfest, North Carolina to get clued up on his extensive DJ rig, television themes and that elusive swing…

We are inside the Orange Peel in Asheville, North Carolina – an all purpose modern Rock establishment that is one of the focal points of Moogfest, a new Electronic music festival.

Appearing solo behind a long strand of decks, samplers and one-laptop rig, RJ leads off with *A Beautiful Mine*, the track that's also the theme for the insanely popular TV show Mad Men. He's constantly in motion, running from one end to the other, as the crowd quickly swarms into the room.

FM: Is the reason you move about so much on stage because you want to keep your performance energy high or because you've got so much gear that you've got to manage?

RJD2: "It's because I'm busy up there. This kind of show, which took a lot longer to evolve, was born from your traditional DJ set. Then I added the sampler, but I realised that four turntables would let me set up one DJ routine while the other one was going on.

"Before Serato came along I had to press up vinyl for the shows. But dub plates don't actually sound as good as high quality WAV files. So for this last record, I was already using Serato, so that's how the computer got involved, which I can also set up as a kind of a rudimentary sampler."

Take us through what's up there with you.

"From left to right: my laptop running Serato, then a Korg padKontrol that's programmed to work like an MPC sampler. Then it's turntable, mixer, turntable and then another turntable, mixer, turntable. The last thing is the video camera.

"Everything gets submixed into the right-most turntable rig. I can turn off everything from that mixer because it's got auxiliary inputs for everything. The left-most DJ rig I'll use to switch back and forth from vinyl to Serato."

Why not have two Serato rigs?

"I could use two but there are so many routines that are worked out with vinyl that I know that if I pull out a record, cue it up, and put the pitch down to minus six and roll off the low end that that is going to be exactly in key with this other record. So a lot of it comes from the fact that I rehearse these things."

In the past, some critics haven't been too kind about the singer/songwriter side of your work. How has this affected your output, if at all?

© Meredith Chetwynd

"That aspect of it kind of got blown out of proportion. I really try not to let reviews and journalism have any influence on anything I wind up doing on a record. The terms in which I think of these things are more along the lines of 'am I going to play drums on a song or program the drums? Am I going to be singing on a song or am I going to look for a vocal sample or hire someone out?'

"This is the way that I tend to think about my music. People talk to me sometimes like I'm putting on different Halloween costumes or something and for me that's not accurate. For me it's more like multiple shades of grey."

Can you talk a little about how *A Beautiful Mine* was conceived?

"There's really not a lot that's too interesting about how it came to be. I think the story about how it got licensed might actually be more interesting than how it was made [laughs]. That record came from an album I did with Aceyalone. We had been talking about it and talking about it and it got to that dangerous point where he said 'we either have to start this now or we're not doing it at all'. And we did it, and I basically went off and made a bunch of tracks and he picked things that he liked and wanted. And I would say that the *A Beautiful Mine* track among other things on that record came about because it was the only time in my life where I could completely let my hair down.

"Acey was like 'Listen man, I want you to pick how this record sounds' and I'd never been in the driver's seat when producing a Rap record – I've always been at mercy of the tracks a rapper chose. So if I had been working with someone else, I might have done that *A Beautiful Mine* track but it probably would have died a slow death."

Can you give us one production tip that you think is invaluable?

"If you want to get micro-technical, one of the biggest über tips that I could give your readers if their diligent about it, could be worth its weight in gold. If you truncate a drum sound when you're sampling one shots, don't truncate it to the exact point of attack. Don't ever, ever, ever cut that space off. You should always leave yourself somewhere between 2000 to 4000 samples before the transient begins. Silence, basically. Then I run the start point up to the transient because you want that sound to be immediately triggered, but the thing is when you get into duplicating a sound like that or changing the feel, it can become enormously beneficial to keep that bit of silence. That extra space can give you the drunken J Dilla feel to it. You can do that by running the start time of the hi-hat and leave the kick and the snare the way they are. It'll just push the sound of the hi-hat out.

"And you can do that with any drum hit, and I find it very easy to do that to varying degrees. Plus if you were doubling up a kick and then running the pitch down four half steps, by moving it around a little you can also avoid phase issues. It's a simple method that people seem to miss." FM

WANT TO KNOW MORE?

For all the latest news on RJD2 and for a list of his upcoming tour dates and releases, visit his official MySpace at **myspace.com/rjd2**

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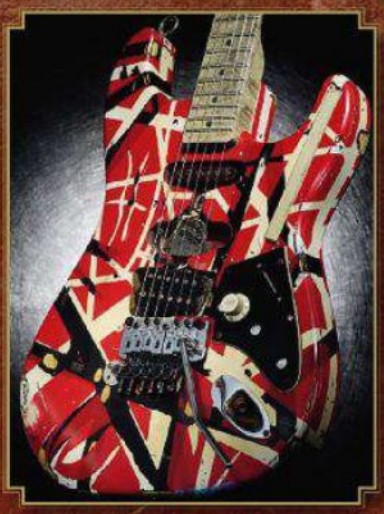
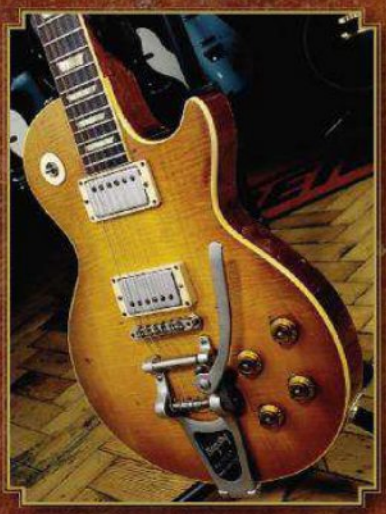

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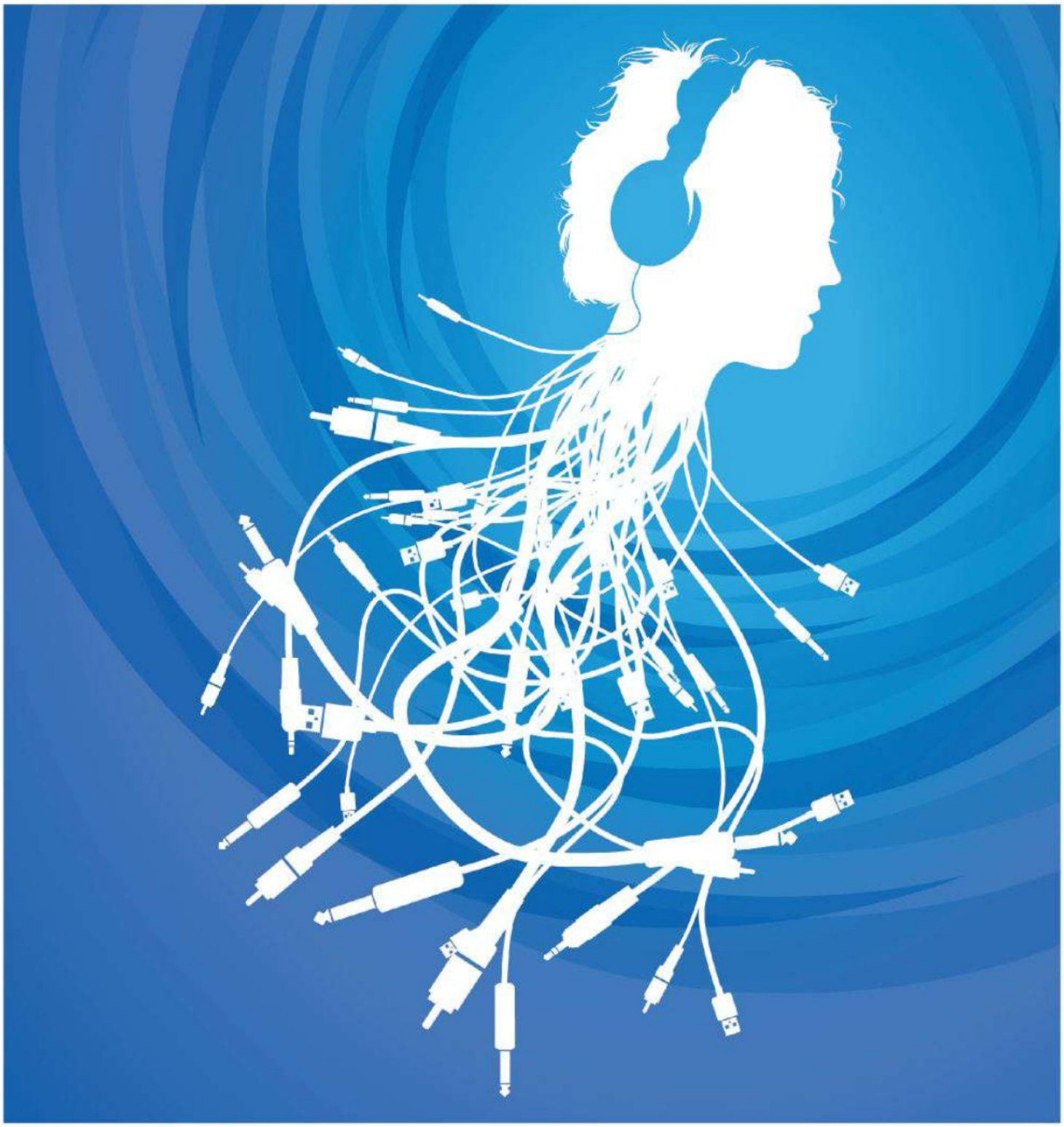

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Albums

If it's hot, it's here. Welcome to this month's new releases, all lovingly rated by the *FM* review crew

Album Of The Month

Feed Me
Feed Me's Big Adventure

Mau5trap

As the first external artist to be signed to Deadmau5's label, Jon Gooch, former creator of Drum 'n' Bass outfit Spor has turned to a choppy Electro House style and served up an eight-track banger, kicking off with an acidic stomper before moving into a more familiar territory usually occupied by acts such as Wolfgang Gartner and Skrillex. The overall tone is one of cut-up synths, and samples driven by a heavy, simple kick snare beat. The production quality and attention to detail is superb, especially on the Dubstep moments towards the end of the album.

Aside from a couple of exceptions, it's relatively formulaic in concept, and there's been a fashionable jump on to this type of sound all around the Electro House scene. But in Feed Me's favour, there's a touch more musicality in the melodies he produces than in other heavy Gartner-fied Electro House. This album will place Feed Me up alongside the best, and he'll be slamming the biggest dancefloors in 2011. ***Chris Barker***

ADD THESE TO YOUR PLAYLIST:
White Spirit, Silicone Lube, Muscle Rollers

9/10

Beat Milk Jugs
10 Years of Hangovers
TV Records

Many debut releases are a long time coming, and Beat Milk Jugs' is no exception. Formed in 2001, this Latvian outfit were FM Reader Demo stars before getting signed in 2009, allowing them to focus on this vigorous nine-track collection of fleshy tracks.

Beat Milk Jugs rarely put style before substance, with a strong focus on songcraft. They weld authentic Prog sensibilities to abundant acoustic instrumentation and orchestral strings for a raw, organic vibe. Electronic vignettes seep through the mix to add fleetingly hypnotic punctuating elements.

Not My Day is the highlight of numerous tracks that build up into a wall of energy through their controlled, yet highly charged, guitar riffs and chugging percussion; Jev Maligin's yearning vocals drill nightmarishly into the depths of your subconscious on this occasion.

The production could probably be tidied up in places but what it lacks technically, however, is replaced by a sense of muscular authority and some vital, energetic writing.

Declan McGlynn

ADD THESE TO YOUR PLAYLIST:
In/Out, Not My Day, She Likes Black

8/10

Stateless
Matilda
Ninja Tune

Described as cross between Radiohead and Coldplay, Stateless are a four-piece Electronic Rock band based in Leeds. The group signed to Berlin-based !K7 Records in 2006 and released their intoxicating self-titled debut the following year to a relatively low-key reception. That said, it does no harm when DJ Shadow eulogises: "As close to perfection as I've heard in a long time."

You can see where the fashionable producer was coming from: *Matilda* is without doubt a seamlessly crafted record boasting lofty vision. The first track to really stand out is *Arie*, expertly expressing the band's melancholy aesthetic and blending folk strings with reverberating sub bass and unnerving vocals.

The songwriting is top-class, and achieves a journey-like, cinematic feel. Highlights are many; vocals on the powerful *Visions* are blistering, the dark, ambient *Red Sea* is perfectly pitched, and *Ballad Of NGB* a great slab of orchestral R 'n' B.

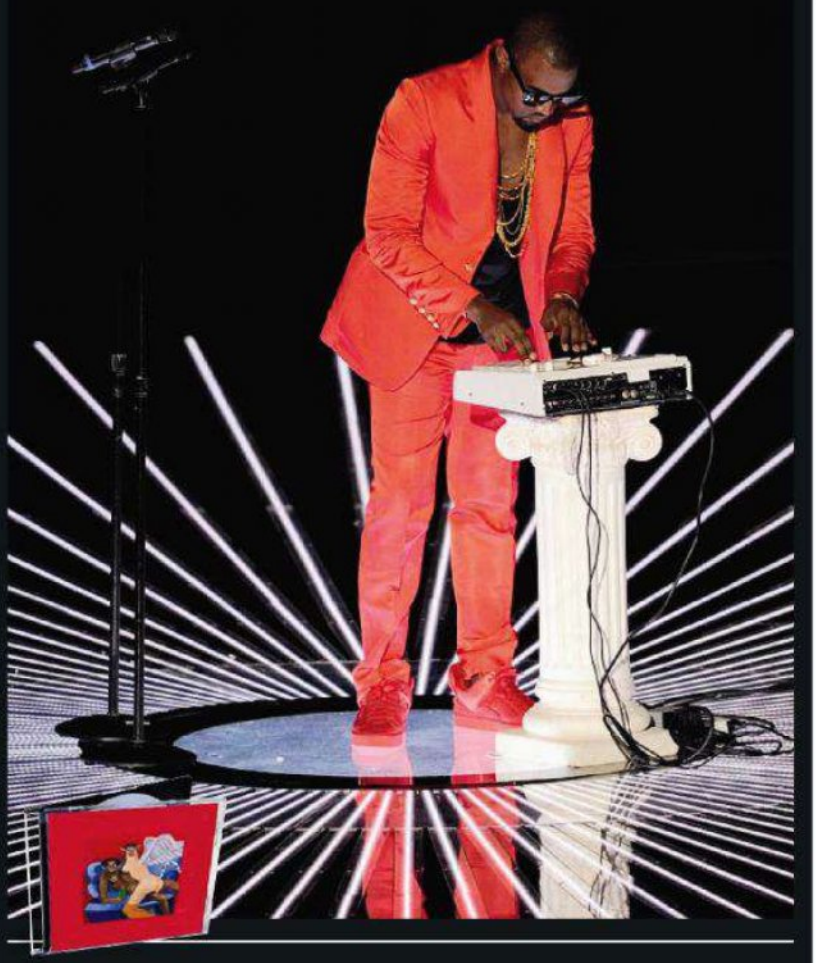
With its uncanny Eastern European influences, embedded in a rhythmic rock drive, this is a must for fans of Massive Attack.

Danny Turner

ADD THESE TO YOUR PLAYLIST:
Ariel, Visions, Ballad of NGB

9/10

It's On Our iPods



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Kanye West
My Beautiful Dark Twisted Fantasy
Roc-a-fella/Def Jam

It's tough to imagine the level of pressure Kanye had to ride out when producing this, his most twisted and tortuous album yet. With everyone and their protegé wanting to appear, and opinion on 2008's *808s And Heartbreak*, ranging from 'genius' to 'shit', it's incredible that this album even happened, let alone gelled together so well.

Every sound and beat feels like an experiment. And if that means deliberately leaving rushed, distorted, and badly recorded elements, then so be it. Besides, there's always something lush, complex and jaw-dropping going on around it to prove that the mistakes are anything but.

The vocals are amazing. Kanye sounds spontaneous and passionate; contributors such as Rihanna, Jay-Z and Nicki Menaj are given the 'turn me up' treatment their status demands. It's clear that many tracks are built from multiple takes, with multiple artists doing their thing. Tracks are therefore less snappy, laser-guided hits than dazzling chop-shops of best bits.

Instrumentation is a mash of orchestra and brass with both the Electro sheen of *808s...* and the breaks of *The College Dropout* given the night off. There *are* breaks and machines, but no single element is ever recognisable.

It's overly long, yet simultaneously feels like a whirlwind. It's taxing and demanding, but emerges triumphant as a new form of commercial Hip Hop. ***Daniel Griffiths***

ADD THESE TO YOUR PLAYLIST:
Runaway, All Of The Lights, So Appalled

9/10

Console
Herself
Disko B

The German Electronic collective Console spark back into life, headed by Martin Gretschmann. The album was recorded on his laptop while touring with Indie-Rock band The Notwist, for whom he is chief programmer. It was then back to the studio to mix with vocalist Miriam Osterrieder, as well as a collection of Gretschmann's favourite electronic toys.

Console have been compared to Electro bands such as New Wavers Ladytron and Electroclash protagonist Miss Kittin, yet *Herself* is not quite as bright and uptempo as either of those bands' efforts. The album features 11 songs that, despite their stabilising beats, are unlikely to raise pulses on the dancefloor and – withstanding the occasional tempo climb into beat-driven Pop territories – couldn't truly be considered Electro-Pop.

Instead, *Herself* is a dark, measured and tightly controlled album of rather suffocating songs, flickering with melody and strange tribal percussions, and toying with wistful atmospheres. Beautifully produced, Osterrieder keeps her vocal refrains as low-key as the music, appearing intermittently with spoken, rather than sung, lyrics.

Carefully mixed and at times hypnotic, *Herself* brings rewards to those who have the patience to submit, but you could equally understand why this might be construed as a lacklustre effort that struggles to sustain the casual listener's focus. ***Danny Turner***

ADD THESE TO YOUR PLAYLIST:
She Saw, A Homeless Ghost
Dropped Down

6/10

Chaim
Alive
BPitch Control

Israeli artist Chaim grew up listening to Rave music in his bedroom in Tel Aviv, filtering the heady rhythms of neighbourhood street parties and sneaking his way past bouncers to take a closer peek at the workings of his domicile's unique brand of Melodic House.

Having signed to Berlin-based label BPitch Control in 2008, Chaim's debut now arrives two years later, deleveloping those formative influences and adding subtle, Pop-inspired melodies to his own take on Tech House.

Alive has all the ingredients you would expect from the late-'90s rise of the Tech House movement. Opener *Rain* is a perfect example of Chaim's emotive take on the genre, supplementing the usual Dance music techniques with warm melodies and pungent beats, surrounded by glitchy, interloping tones. Indeed, you can almost actually *smell* the rain.

Elsewhere, Chaim creates mature, sophisticated House that borders on subversive Electronic Pop; employing the intimate cries of vocalist Metial De Ra. Some tracks, such as the surreal *Everything*, are reminscent of Susumu Yokota, with broken piano riffs, repetitive phrasing and percussive textures that create rich atmospheres.

With less-than-subtle elements of Disco present on numerous tracks, Chaim evidently has plentiful room for self-gratification, too – not wholly unexpected from an artist fast becoming one of the most expressive on the Electronic circuit. ***Chris Barker***

ADD THESE TO YOUR PLAYLIST:
Rain, U & Eye, Everything

7/10

Tipper
Broken Soul Jamboree
Tipper Music

British composer Dave Tipper first came to my attention after desperately trying to find the music to a TV advert featuring a soundtrack that turned out to be Slag Boom Van Loon's *Butch* – a collaboration between µ-Ziq and Speedy J, mixed by Tipper.

Having pored through Tipper's back catalogue from that point onwards, it's fair to say that he's an artist who has subsequently produced a clutch of my favourite Ambient, Trip Hop and Nuskool Breakbeat tracks of all time.

Tipper now works as a software sound designer, while continually being licensed for commercials, mainstream and cable TV projects, although thankfully he's not given up making records – *Broken Soul Jamboree* is his 12th release.

As followers will have come to expect, Tipper's specialty is his affinity for painstakingly immaculate, dextrous and intricate programming, and we find him here in a chilled-out mood with 13 tracks of ingenious yet unflappable Glitch Hop.

Broken Soul Jamboree shows an artist still developing, with a more consistently inviting Ambient/Downtempo compositional style. Utterly spotless and brimming with pulsing effects and pitchbent found sounds, *Broken Soul Jamboree* throws up a host of smoothly creative, glowing gems on an album that can only be described as pure headphone heaven for technophiles.

Danny Turner

ADD THESE TO YOUR PLAYLIST:
Dead Soon, Cinder Cone
Ever Decreasing Circles

8/10

TCM
The Criminal Minds
Rephlex

Formed in 1985 by college student DJ Halo and graffiti artist Chase 1 (along with partners in crime DJ Spatts and MC Iceski) The Criminal Minds are reckoned as one of the greatest Hip Hop bands to never make it.

With no label behind them, the group had to sell most of their gear in order to afford initial releases, but by 1990, British Hip Hop was already under siege by a record industry clamping down on the use of unlicensed samples – which TCM had no means of paying for.

Unable to survive, and seemingly unwilling to adapt, TCM's career was brutally cut short – and indeed all over by 1994. However, their releases leave a legacy well-surmised on this specially remastered collection of lost classics, some of which never even made it to vinyl.

Similar in sound to Public Enemy and prime time 'ladies love'-era LL Cool J, this is a bulldozing collection of superhuman breaks, brash rapping and corny – but irresistible – movie samples, surrounded by copious amounts of scratching and subtle bass rhythms. Imagine discovering an unreleased PE album. Well this is it.

From a production viewpoint this is brutally raw, but the collective's abounding energy remains well-crystallised. The odd jazz-inflected endeavour also raises eyebrows, in remembrance of days when Hip Hop had a more credible expression of its cultural lineage than the Pop-crazy 2010 flavour currently demonstrates. ***Daniel Griffiths***

ADD THESE TO YOUR PLAYLIST:
Break Shit Up, Systems
Overload (Original 12"), Widowmaker

8/10

Retro Respect

Daft Punk
Alive 2007
Virgin

The robot rockers first pioneered the towering audio and visual spectacular with theatrical ease with their first *Alive* album in 1997. Since then, they've continued to prove their brand of Electronic music sounds even more exciting live. This album, complete with cheering crowds, is the closest you can get to the Daft Punk experience without worshipping at their giant Techno pyramid.

Chris Barker

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Compilations

PICK OF THE MONTH

Various
Trax 25
Harmless

Trax Records unleashes its multi-tracks and masters to the modern-day torch carriers, delivering 21 re-edits over two CDs. Artists such as John Daly, Ray Mang, Toby Tobias, Leo Zero and Greg Wilson tackle classic tracks from Virgo, Frankie Knuckles, Mr Fingers and Farley 'Jackmaster' Funk. In a word: unmissable. ***Declan McGlynn***

Plastikman
Plastikman Arkives
M-Nus

Never have 808, 909 and 303 been given such a workout. These 11 CDs and one DVD, incorporate all six previous Plastikman albums, plus a host of rarities. It's relentless genius that's both essential time-capsule of Rave gone by and a trail-blazing map for the future. ***Daniel Griffiths***

Various
Hard Dance Anthems
New State Music

Yes, the genre is still here – but thankfully it's evolved slightly away from the numbing, thudding kick and bass on the offbeat, and the Dance tag includes snappy Techno, Trance and Tribal House influences. Still, it's intense stuff… ***Chris Barker***

Various
Anthems Electronic 80s 2
Ministry Of Sound

Another huge slice of the '80s neon underground. Forgotten favourites Scritti Politti, Re-Flex and Living In A Box combine with a few of our favourite synth riffs ever in another classic compilation. ***Chris Barker***

Worth the Weight
Bristol Dubstep Classics
Punch Drunk Records

A double CD featuring artists that perfectly showcase the diversity that made Bristol such a major Dubstep player with its unique take on the popular genre. ***Will Seelig***

Sébastien Léger

IN THE STUDIO WITH...

He's the casual French master of House and Tech, blessed with golden ears and possibly the most bizarre monitoring choice we've ever seen in *FM*. ***Chris Barker*** heads to his Amsterdam studio for Heineken and hardware

© Joe Branston

He's been releasing records internationally for over a decade but in the last three years, Léger has become a globally recognised force in Dance music production. His huge solo club hits like *Hit Girl*, collaboration with Chris Lake on their *Mistakes EP* and vast amount of remix work has marked him as one of the club's leading producers, with a golden touch when it came to big, spacious and melodic productions. Léger's parents were both musicians and he himself was classically trained on piano and percussion. For the listener, this nod towards formal musical training might be something that's very obvious considering the melodic nature and evolving arrangements, but his ultra casual personality means it isn't something that Léger thinks important.

His studio is similar to others we've seen in the tall and thin townhouses of Amsterdam – located in the roof space it's a small but packed affair, with plenty of hardware and personality. The first thing that strikes us production nerds are two giant Lego Daft Punk robots where studio monitors would usually rest. After a glance around, we spot two cheap white plastic PC speakers that Léger tells us are his main and only monitoring solution. Sure, there's a white plastic subwoofer on the floor, but it's basically a £20 2.1 system and we can't believe this is what Léger creates his music on. Moving back downstairs to the living room to crack open a beer and begin the interview, we spot the three cushions – each sewn to resemble a piece of classic Roland hardware. On a desk there are a spare set of the 2.1 speakers Léger uses in the studio, which incredibly he tells us he found in a skip with great excitement, as he has no idea where he would buy a replacement set. We settle down in Léger's living room and start the interview...

FM: You're a DJ who became a producer. What were your early influences?

Sébastien Léger: "I first started in the '90s DJing in my bedroom with both vinyl and CDs, but I was playing more of the New York vocal House stuff – Frankie Knuckles, Masters At Work. I liked anything with a big diva vocal really, it was super gay but I loved it, y'know, the piano and the singing.

But that scene was not moving so I started playing a bit of the Chicago House sound with a bit of Techno and the French Touch music thrown in."

This is while you were still in France?

"Yes, I was playing at clubs and I had a few residencies, mainly at gay clubs, because I was playing gay music [laughs]. It was funny because I think I was fifteen at the time and resident in a gay club, but anyway… I started making tracks in 1997, using the Pioneer CDJ-500s and looping up a track and then looping a Disco track up beside it and I thought 'woah, I'm making my own music'. Obviously, these tracks were never released.

"Later I decided to buy an MPC2000 and I can't even remember why, I don't think I really even knew what it was but I knew I could make music with it. A week later I had made my first track and it was horrible, but then slowly I made some tracks that became my first releases."

When did you know that you had made a track that was good enough for release?

"Well I remember I thought it was OK so I bought a blank CD which were super expensive then and burnt it to disc and when I played it out I thought it was working well. So I took it to a producer and got it released on his label as Deaf'n'Dumb Crew."

Deaf'n'Dumb was your early alias?

"Well me and a friend, but I was doing all the work. Anyway I had this white label and a plan to go to this club in Paris where Paul Johnson was meant to play so I could give it to him. Well, Paul Johnson didn't show up but I ended up giving it to Play Paul who is the brother of Guy-Manuel de Homem-Christo from Daft Punk. The next day [Play] Paul called me and said he had a friend who owns the labels Black Jack and Rivera and they wanted to release the tracks properly. This is when it really changed for me."

So this was when it became a job?

"I quit school at 15 because I didn't like it. I was DJing every weekend as a resident and I just thought 'OK, that's it for me this is what I want to do' way before then."

It must have been amazing to get that first record out because it was everything you wanted to do.

"Yes but it's been a long time, I've been doing this for 17 years and only now in the last three or so years have things really been getting to where I wanted them to be."

What have been the big moments?

"[Laughs] When Paul Johnson didn't show up! It's been slow, there's not been one moment. Even with DJing it's always been up and down. Sometimes I'm headlining the main room and other times I'm just a part of the line-up."

When did you tire of the MPC?

"Well, I'd been working on the MPC for around ten years but adding other stuff along the way. I had all this equipment and I just had to pray that it was all synchronised. I used to make all my tracks live by muting and jamming the patterns as they played, doing the filters and effects live and so on. I used to sometimes have to go back and do it ten times before it was right."

Do you think it gave you an edge?

"Well it probably made my tracks slightly less predicable, because at this point most people were using computers and sequencing that way. I think it's maybe a French Touch thing though, because a lot of people like Daft Punk and Alan Braxe used to use a more hands-on approach. *Homework* was a massive influence on me – the compression, the modulations and phasing made it sound like it was always moving."

> "I started making tracks in 1997 by using the Pioneer CDJ-500s and looping up a track and then looping a Disco track up beside it"

Are you musically trained?

"Yes, my parents are both musicians but I don't use it really, just my ears."

But you could hear that musicality in some of your tracks that ran parallel what Eric Prydz was doing.

"Yeah, that was a period when I wasn't inspired at all and I was really impressed by what Eric was doing and thought 'well, this is the sound I could make'. I wasn't copying him, but I was heavily influenced even though it wasn't a sound I played in my DJ set and wasn't me at all."

Now you seem to have merged the melodic with the tougher and groovier sound.

"Yeah it's definitely back to where I started and I'm making much more use of all the experience I've had. The new album is actually called *Origins* because it feels like I've gone back to my roots."

Will there be vocals then?

"No [laughs], I didn't say I was going back that far. I gave up with vocals ten years ago. My old records have the screaming diva vocal but never again. It's Chicago House influenced, not New York House."

Was the switch from the MPC to using the computer a difficult move?

"It was so easy, even though I had never ever used a computer for music before. My friend Chris Lake came to my house when we made a track together – a track that I now hate, but anyway. He told me to

Sébastien's exclusive Daft Punk figures keep watch over his studio

Léger on the Acidlab TB-303

This TB-303 has been a little bit modified. I have an original here but it's not MIDI. This one is so I can program my basslines in my sequencer rather than the built-in step sequencer which is a nightmare.

I just put some notes, like it's a plug-in and it makes a nice bassline. There's an overdrive knob which is a very subtle but there's more switches and knobs for really changing the sound. And you can program the filter over MIDI so I draw in shapes in the sequencer. There's no other TB-303 that can do that.

Then I record the audio from the machine and I've got a nice clean bit of audio for looping or chopping. I can even add swing which the original doesn't have. There's endless possibilities.

try Ableton, so I got the demo and found it pretty easy to use really. Then fifteen days later I did my first remix with Ableton, a track by Ida Engberg called *Disco Volante*. She had a fucking massive hit with this remix with one and a half million YouTube plays with my version of the song under her name. But anyway, making music was so quick and I was really surprised how easy the transition was. I think Ableton Live is the best thing that ever happened in my life." [Léger glances at his girlfriend and laughs.]

Do you think you'll use Ableton as the centrepiece of a live show in the future?

"I already played live for the first time last summer, with just the laptop running Ableton Live, the Evolution UC33e and the iPad. I used loops of my own tracks, arranging them how I want with new drums and synths and I loved it. So now I'm planning to go even bigger this year with more kit. There'll be the Roland TB-303, the 909 and the 707 drum machine because I love it. I'll also take the Moog Voyager and the controllers for Ableton and it will be all inside some sort of structure. It's a work in progress right now but should be ready soon. The plan is to put a camera inside so people can actually see what I'm doing live and incorporate it with the lights and visuals."

Are you nervous about taking all of this tech gear on stage?

"No not really, I mean if something goes wrong with the computer I can just hit start on the drum machine and restart."

Will you be remixing less?

"I did say that I would stop remixing completely for a while but I actually did five at the end of last year because they were artists that I really wanted to remix or it was for my label which I'm really trying expand. In the past I used to do remixes for the sake of doing remixes and paying the bills I guess, but I never actually played them in my DJ sets, so I said I was going to stop doing that because it wasn't me. As I get more and more well known I definitely think it has given me the freedom to be able to turn things down and do more of what I want.

"There's a big difference now to what things were like three years ago. There was probably two years when I was a bit lost and the tracks I made weren't really for me but because of the internet you can't erase them. It's bad because some people know me for these tracks and are saying to me 'why did you change your style?' but there are always people who discover me for the new material too."

> "I was really surprised how easy the transition was. I think Ableton Live is the best thing that ever happened in my life"

Does this confusion affect you for DJ bookings?

"Yeah, I sometimes get asked to play on line-ups with artists I don't want to play with, because it's not my style. It does mean less gigs but the gigs I do play now are much more the style that I want to do."

Which producers are you into at the moment?

"Well they're all friends actually like Format:B, but most of the tracks that I play are actually from underground artists that aren't big at all. Just because I think that the new guys are making fresher sounding tracks than the big names."

So where does that leave you?

"[Laughs] um, good question. I think if I was me I would play some of my tracks out. It's a difficult question though, but I used to make music that I wouldn't play in my set at all, so now it's better."

Any new purchases for your studio

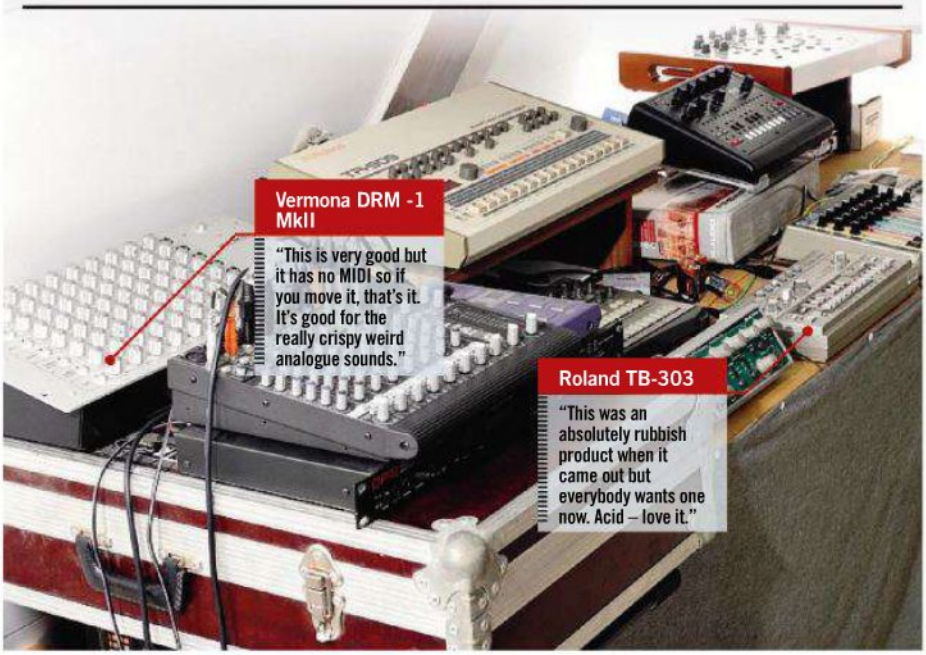
"I want to buy an 808 again because I had the 808, 606, 707 – all of them – but I had to sell them when I needed the money. Now I will probably buy them back at twice the price. I'm never looking for the next plug-in or anything, just hardware machines."

Your studio monitors are just old 2.1 multimedia speakers, what are your tips to getting your sound? Do you just have golden ears?

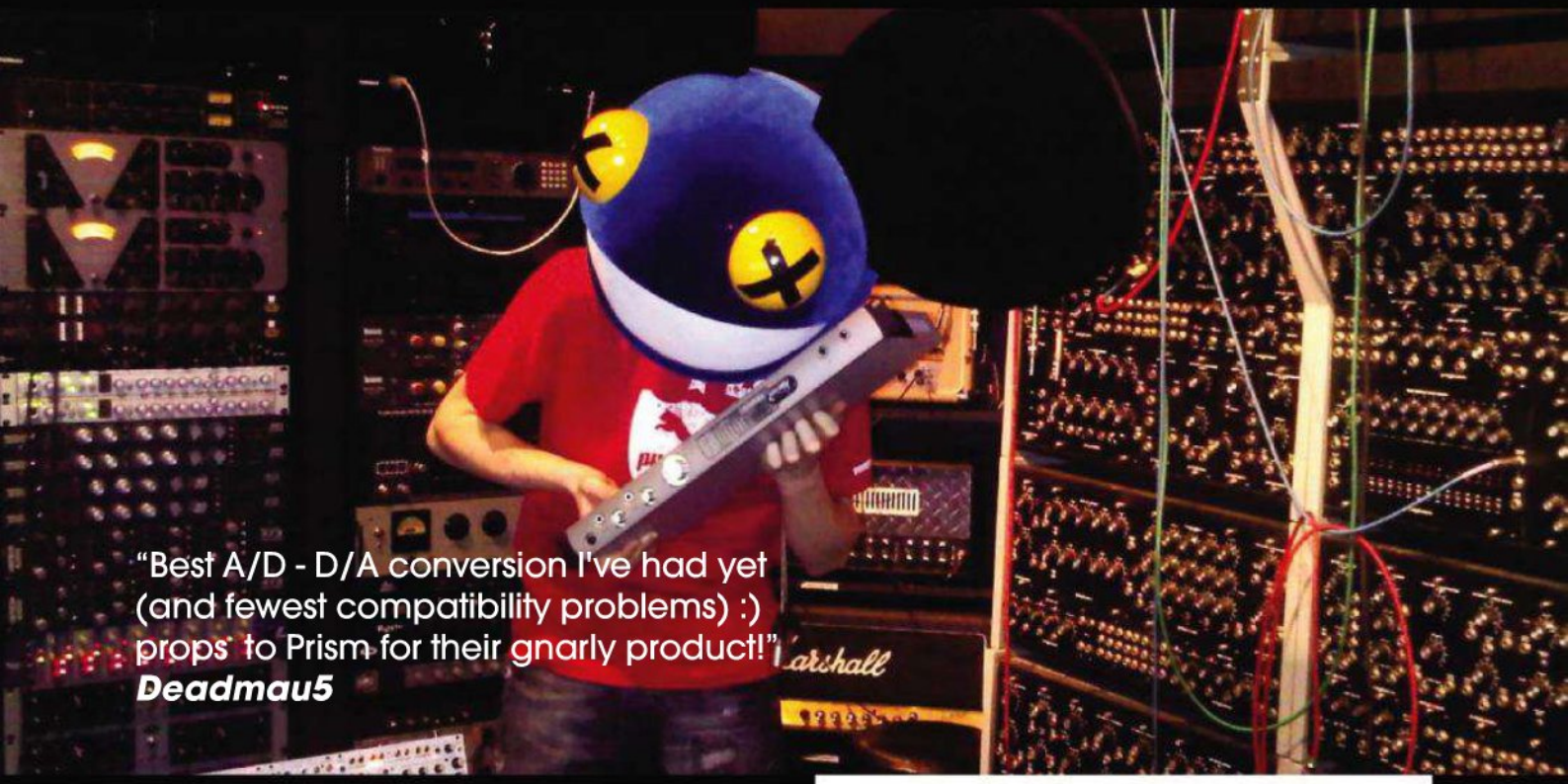
"[Laughs] my tour manager often says my ears have been touched by God. But I don't know what it is. I just start from scratch every time in Ableton, I never have a template of a preload. Because I come from a

Born to Synthesise

"This is my hardware area in my studio and most of it is plugged in so everything works. It's mainly just for fun and for my own pleasure. It's rare that I release a track with these things on it, but it's cool. I like to have the hardware around me because it keeps things creative and fun, even though I don't have quite as much hardware as I used to have and everything is eventually put into Ableton anyway."



Prism Sound



Deadmau5 logical choice of interface

When Deadmau5 went looking for a high quality I/O solution, it became apparent that there was only one choice.

Orpheus provides Prism Sound's world renowned performance, sound quality and state-of-the-art clock technology in a dedicated FireWire unit compatible with both Windows and MAC OS X.

Orpheus features line, microphone and instrument inputs, selectable RIAA Equalization for turntables, a built-in premium-quality monitoring mixer and concurrent ADAT and switchable S/PDIF or AES3 digital I/O plus support for outboard MIDI devices. The Microphone inputs include MS matrix processing and dual headphone outputs are provided each with their own volume control.

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hardware background, you always had to finish a track and there was no way to save sounds or settings, so I work like that. I try to finish a track in around two days."

Do you mainly put your new records out on your own label?
"Yeah, pretty much, but an old French label keeps releasing my old tracks and it's really messing up what I've been trying to do. They bought an old catalogue of my music from 1999 and released 72 of my tracks on Beatport. 72! So when people are going on to Beatport and searching for me, they find tracks that are ten years old and it looks like they are brand new on Beatport. It's really driving me crazy."

Is it time for a new alias?
"Well I thought about it a few times but it so hard to build a career already without confusing people."

Would you advise people to start their own label?
"No, don't bother, just produce solid tracks and get them released on big labels to build up your name. Try and get at least 10 EPs released on these labels before even thinking about starting your own. Even then I'm not sure it's a good idea."

Has it been a big challenge to start your label?
"Not so much because I didn't start my label until about three years ago and I was pretty well known already so it worked. There's no point doing it if you've only been making music for two years."

How do you find the records for your sets?
"I just spend hours on Beatport and on SoundCloud and MySpace. You have to put the time in to find the music just like you would in a record store."

And you live in Amsterdam now, why? Do you play in Amsterdam a lot?
"Not any more, maybe once every six months, but I moved here six years ago because I was tired of France and I wasn't playing there really. I was actually DJing mainly in Holland and had a lot of friends here. It's small here but it has everything and is a really nice city. I love Amsterdam."

Do you get frustrated about earning mainly from DJing and not the music you make?
"I'm not one of these producers that become a DJ because they can press sync. I'm a DJ first and it doesn't bother me that most of my income is made from that because I was a DJ before I was a producer. What's frustrating is when I'm DJing, people ask me for a track I made three years ago. I like to play the latest tracks, not just my own songs. The live set will be where I play my own music. I think I'll always be DJing on hardware rather than laptops. I don't like looking at the screen." FM

WANT TO KNOW MORE?

For a round-up of all of Sébastien Léger's latest news and tour dates, visit **sebastienleger.net**

Ableton Live
"This is the best product ever Ableton you are very good!"

Kinyo Speakers
"I don't know what to say about these. I bought them over ten years ago and they were the first speakers that I had for my computer so I used to listen to all my music on them. So I knew them so well by the time I started to use them to make music. These and Ableton are the perfect combination for me."

TL Audio Fat Track
"I'm not using this for sub-mixing or stemming, I'm just using it as a monitor controller."

Boss Voice Transformer VT-1
"This is an amazing little device for making the robot voice effect, it's connected up but I don't use it much anymore."

Nord Lead 3
"This is my favourite synth – I know it very well and I've done all my famous tracks using it."

Moog Voyager
"It doesn't get used much any more because it's so much easier to use the Arturia plug-in that sounds pretty much the same. It's a great piece of gear though and I'll use it for the live show."

ON THE DVD: Sébastien's Guide To...

1

Creating Basslines
Sébastien shows us how he made the bass for his remix of Format:B's *Dog Tag* using Arturia's Minimoog.

2

Getting The Groove
Using precise quantise and shuffle settings he creates the distinctive groove for his remix of the Cirez D track *On Off*.

3

Creating Leads
The secret is out. Here's how Sébastien created the lead sound on his own track *Le Moustique*.

4

Using the TB-303
A new arrival at Sébastien's studio is his modified TB-303. Here he shows you how he uses the Acidlab's new MIDI features.

5

Work In Progress
An *FM* exclusive. Here Sébastien shows us around a new track, *Harajuku*, that he's working on for his album.

FutureMusic KNOWLEDGE BASE

Hardware Controllers

Sometimes software alone just doesn't cut it. *Greg Scarth* gets hands-on with controllers

In this month's *Knowledge Base* it's time to take a good look at hardware controllers. From 1970's tape machine remotes to the latest iPad apps and everything in between, controllers can make your music-making life a lot easier. We'll explain what they can do for you, take a look at some of their history and explain what options are out there on the market for you to consider.

Why do I need a controller?

To the modern generation of producers who practically grew up using computers to make music, the process of working with software comes quite naturally. Some may even ask what the point of controllers is given that they don't technically allow your software to do anything it can't already do. If a hardware controller doesn't offer any features which can't be accessed via mouse, keyboard and menu functions, what does it really add to the music-making process?

Essentially, the advantages are simply a matter of convenience, efficiency, ergonomics and tactile interaction. The ability to access and adjust key parameters without digging through menus or adjusting fiddly virtual settings makes it much quicker and easier to reach your desired sounds, speeding up your entire workflow. Controllers are typically a lot more comfortable to use than a mouse and keyboard, reducing the risk of RSI and similar long-term problems but also simply making you more relaxed and able to concentrate on the music in the short term rather than being distracted by aches and pains.

Perhaps most importantly, a physical controller offers a level of hands-on feel and feedback which a virtual knob or fader simply can't. The human element of Electronic music should never be forgotten, and the ability to grab a fader, make an adjustment and immediately hear the change in sound with every move of your fingers shouldn't be underestimated.

The Lexicon 480L LARC remote is an iconic piece of kit, found atop lots of studio consoles

BC: Before computers

Remote controls for studio equipment pre-date modern music software, DAWs and plug-ins – even in the analogue era remote controls were used to make life easier. Most notably, remote transport controls made tape-based multi-track recording significantly easier.

What would you rather do: sit at the mixing console with a remote next to you or dash to the tape machine every time you needed to hit record, rewind or arm a track? As we moved into the digital era, remote controls for outboard hardware such as reverbs and samplers became commonplace. Even now, you'll still find the distinctive white LARC (Lexicon Alphanumeric Remote Control) sitting neatly on the console in plenty of professional studios, bringing full control of the rackmount reverb unit's settings right to the producer's fingertips.

In fact, even the idea of remote control isn't necessarily essential. Many hardware controllers simply offer increased control over the standard knobs and buttons. Roland in particular were way ahead of the game when it came to offering comprehensive hardware programming units for their synths. A number of the company's '80s keyboards and modules are at their best when paired with the optional programmer. Take a look at the sparse front panels of synths like the JX-8P, D-50 or Alpha Juno and you'll soon see why the programmers attract second-hand prices nearly as high as the synths themselves. Stick an MPG-80 programmer in the rack next to your MKS-80 Super Jupiter module and you've got yourself one hell of a powerful synth setup.

Even a synth as notoriously complex as the Yamaha DX7 saw a dedicated hardware editor in the form of the extremely rare Jellinghaus DX Programmer, which offered hands-on control of practically every parameter without having to scroll through

menus and peer at the tiny LCD screen. If you're lucky enough to find one for sale now you can expect to pay somewhere in the region of £2,000 but the editing potential opens up a world of sounds which is otherwise fiendishly difficult to access, unless your name happens to be Brian Eno.

Complete control

The hardware controller really matured around the time of the 'DAW revolution'. With the proliferation of computer-based studio setups, various manufacturers released all-purpose control surfaces that offered the hands-on features that were being lost as the world moved from tape machines and mixing consoles to digital recording and mixing. The control surface continues to increase in popularity. From the most basic transport controls to simple mixer-style faders and rotary controllers, even the budget end of the market caters to the basic needs of many producers.

In the mid-range market, products such as the Mackie Control Universal range allow you to take control of the vast majority of mix functions and can easily be expanded to add more channels or different features. Likewise, products such as Novation's Nocturn range provide control of plug-ins and software, taking advantage of the Automap control software to provide visual feedback of the hardware's mapping. Meanwhile, at the top end of the scale, professional control surfaces such as Digidesign's Digi002, the Cakewalk V-Studio 700 and SSL's newly unveiled Nucleus offer a complete control package with built-in audio interface and preamp features to integrate seamlessly with your software.

If you really want to take things to the next level, SmartAV's mind-blowingly futuristic Tango might just be the ultimate combination of touchscreen display and hardware controller.

> "The good news is that new controllers are becoming easier to set up"

Protocols

The good old MIDI protocol offered the first industry standard for control devices and it continues to be favoured by many manufacturers, albeit usually updated to the more modern MIDI-over-USB variety seen on everything from keyboards to control surfaces. However, there are a number of other options when it comes to choosing controllers, including the Mackie Control Protocol, the Open Sound Control (OSC) format, Euphonix's EuCon, Mackie HUI (Human User Interface) and Novation Automap. Furthermore, data can be transmitted over MIDI cable, USB, FireWire, Ethernet and now Wi-Fi.

The choice of which protocol, which mapping features and which connection method will work best for you will largely depend on the rest of your setup. Essentially, you're restricted to whatever protocols your DAW supports. The good news is that new controllers are gradually becoming less temperamental and easier to set up. Whereas in the past it took a fair bit of fiddling to get hardware and software to work in harmony with each other, most controllers available are now at least close to offering trouble-free plug-and-play operation.

Software-specific controllers

In the past most controllers have been suitable for use with any software, but the popularity of Ableton Live has led to an increase in controllers designed specifically for the loop-based DAW and officially endorsed by the software's developers. The Akai APC40 and APC20 offer hands-on control of Live's clip launching and mix features, while the Novation Launchpad's neat grid-based setup ties in nicely with the software interface. We expect this trend will continue, with companies working together to create neat control solutions for specific software packages. Apple's close relationship with Euphonix, for instance, suggests we may well be seeing more and more control surfaces aimed specifically at Logic users over the next few years.

Furthermore, hardware controllers aren't just aimed at DAW users. A number of manufacturers have also identified the demand for dedicated DJ controllers to integrate with the range of DJ software on the market. Even the turntable and CDJ companies are getting in on the act, with products from the likes of Numark, KAM and Vestax bringing some of the hands-on feel back to laptop DJing.

Even if you can't find a dedicated controller or programmer for your favourite software, synth or plug-in, it's possible to create custom mappings using generic controllers. Some of the most ingenious controllers we've seen use cheap, easily available hardware units such as the Behringer BCR2000 and map them to the MIDI control functions of the software or device. With a labelled overlay or a bespoke enclosure to provide a visual indication of each knob's function, it's relatively easy to create a very neat custom controller setup that works perfectly for your needs. FM

iPhone and iPad controllers

Since the early days of the iPhone, app developers identified the potential of the handheld touchscreen hardware as a music tool. More recently, the larger screen of the iPad has made Apple's mobile platform an even more realistic alternative to dedicated hardware control units. The Wi-Fi capabilities and excellent multi-touch features make it ideally suited to remote software control.

Shockwaves ran through the industry following the iPad's release and it came as little surprise that JazzMutant, developers of the excellent but expensive Lemur controller, announced in November that they were discontinuing the product. Time will tell where the developers choose to focus their efforts next, but it wouldn't surprise us to see the release of a Lemur-style control software for third-party hardware devices. A Lemur app for the iPad would certainly make a lot of sense. However, there are already plenty of options for iPad owners.

Blurring the lines between a software and hardware solution, the iPad's potential as a multi-touch audio controller is so huge that it's spawned dozens of control apps. From simple wireless transport controls (ideal for controlling your DAW from afar, say when recording vocals in a booth or sitting behind a drum kit) to complex customisable DAW control apps, the iPad can do almost anything your traditional hardware controller can.

Of course, there are a couple of downsides to be aware of. Firstly, the tactile feedback of a touchscreen is questionable – you don't feel a touchscreen fader move like you would a physical object. Secondly, there's no real way for programmers to offer realistic velocity control for pads or keyboards. If you're willing to accept those minor issues, iPad control apps such as touchOSC, Griid, ProRemote and touchAble (to name just a few) should be taken very seriously as an alternative to traditional hardware controllers.

KNOWLEDGE BASE
NEXT ISSUE

Make sure you pick up *FM* next month for more studio knowledge and industry insight. *FM237* – **on sale 17th February**

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LOGIC PRO

As another year begins, it's time to check that your Logic use is taking full advantage of its vast array of functions. Join us in the pursuit of smooth and streamlined workflow...

10 Power User Tips

That 'sequencer sound'

1 Get that instant, inhuman 'sequencer sound' using just the Playback bar. Play in a line of 16th notes, keeping as in time as you can. Don't worry about velocity or note length as these will change in just a moment. Once the part is recorded, quantise it to 16th notes, select 'Fixed' from the Dynamics drop-down and 'Fixed' in the Gate Time drop down. Each note is now in time, the same volume and the same length. Add velocity if it's all too quiet, then Ctrl-N to make those changes permanent. Read more about getting a great sequence in the walkthrough on page 47.

Quick Sends

3 If you want to send multiple tracks to the same output or buss, highlight several tracks in the arrange page while holding Shift. All of those tracks will then highlight in the Mixer window, meaning you can set up Channel EQ on each, send all of them to Aux 1, or switch the output of all of them to the same auxiliary for sub-mixing with a single command.

ON THE DVD

> Load this file, then turn off quantise, dynamics and gate time fix to hear my original recording. Re-enable to reconstruct the classic sequencer sound.

Hybrid Ultrabeat kits

2 Load a standard kit and then load a secondary kit from the drop down at the top. Simply drag replacement sounds from this second kit to the first one to personalise your original kit or build a new hybrid one from scratch.

ON THE DVD

> Load this file to launch a one-bar loop playing Ultrabeat's default kit. Press the Import button, browse to a different kit and drag individual samples across to replace defaults.

Super bounce in place

4 When you Bounce in Place Logic provides a number of options. Do you want to include or bypass Insert effects and, if they're being included, do you want reverb or delay tails? And what of the original part – mute, leave alone, or delete entirely? Look through these options before you bounce. Bouncing a copy that you then reverse can often work as a good compliment to an original 'forwards' MIDI part.

ON THE DVD

> You can hear an original MIDI part playing back. I've bounced the audio in place, bypassing effects and then selected reverse.

Reverse reverb tricks

5 These are effective and easy to produce. Bounce the part you want to add reverse reverb to as a stereo audio file without effects. Take this new bounce and reverse it. Send its output direct to an auxiliary with reverb tailored to your own settings. Solo the auxiliary and bounce again.

You'll end up with a reverb only file of the sound playing backwards – drag this onto a new audio track and reverse it. Finally, slot it in under the original part.

Kylie Minogue: Her retro hi-tech Disco kickstarted a craze for sexy 70's synth lines

PRO SHORTCUTS

caps lock

Bring up the on-screen keyboard. Perfect for laptop users

How to Make: Kylie's Chords and Bass

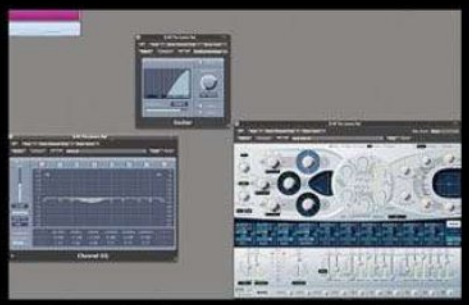
All The Lovers is a classic Electro Pop record and it's dependent on just a few key elements, despite the rich mix. The bubbling bassline and pad sounds are two of these, alongside the detuned chorus lead synth and, of course, Kylie's breathy lead vocal and backing vocal stack. It's a trademark sound of producer Stuart Price.

On the DVD, you can open the session to hear recreations of the bass and pad sounds or simply check out the audio bounces. What's clear is that in addition to programming the sounds themselves, some subtle but essential plug-in treatments are required to really make these sounds become the familiar ones we know.

ON THE DVD

> All The Lovers Bass Dry, All The Lovers Pad and All The Lovers final. Here the three steps of the sound coming together.

1 For the bass, I've loaded the template 'Analog Saw Init' patch from the ES2's Tutorial folder and adjusted the Env2-Cutoff routing to a small amount. I've dropped the cutoff value to about 30% and dropped resonance to about 5%. I've turned the Analog dial up to halfway and set a short Glide time. Lastly, I've dialed in a little Sine Level.



2 For the pad, load the preset 'Dark Pad 01' which sounds incredibly close to Kylie's pad. The key here is the use of EQ and Exciter. Use Channel EQ to scoop out the frequencies around 200Hz by 1.5dB and at 340Hz by 4.5dB. Then fire up Logic's Exciter and set a frequency target of around 5.3kHz. Turn Harmonics up to 107% and select 'Color 1'.

3 The pleasingly washy nature of *All The Lovers* comes from careful and subtle use of reverb and delay. I've set PlatinumVerb up on Aux 1 and Tape Delay on Aux 2 and I'm sending a little of the bass sound to both and much more of the pad to both. The pad, in particular, benefits from the 'smeary' delay.

© Gettyimages.com

ON THE DVD

> Here an Apple Loop is given the reverse reverb treatment. I used the muted reversed vocal on Track 1 to create the reverse reverb via Aux 1.

Better De-Essing

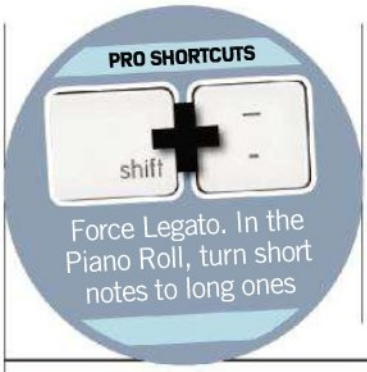
6 This is a useful process but often, if the vocal part you're treating features 'S' sounds at different frequencies or if the problem is exacerbated by the EQ and reverb settings you've chosen, it's sometimes not the most efficient way to achieve the desired result. In such circumstances, turn to automation. Dropping volumes on 'S' sounds often achieves a better result, as does lowering the send level to your auxiliary reverb if your 'S' sounds are filling up your mix unpleasantly.

ON THE DVD

> If your de-esser isn't working as you'd hoped, try automating volume and reverb send level at all of the problem spots.

Flip your filters

7 Inverting filter envelopes is a great way to create 'sucky' basslines and this effect can be achieved with a single mouse movement in the ES2. Take a preset such as 'Punch Trance Bass' and you'll hear a sound with filter attack. In the Router below, you'll find that there's a routing location where Envelope 2 is routed to filter cutoff. Invert this shape by moving the green 'amount' triangle below the central 'off' position and vary the cutoff position to taste. On the project included on the DVD, you'll find 'regular' and 'inverted' bass alternatives. Have a listen.



ON THE DVD

> On Tracks 2 and 3 you'll find the same bass part but with contrasting filter envelopes, courtesy of the ES2 Router.

Copy Automation Data

8 Copy blocks of automation data to a specific instrument by setting up a new track assigned to the same instrument. Draw the automation curves you want over the top of blank regions and then copy these underneath the lines of note data you've recorded. The data lines will appear on both the new track and the one above.

ON THE DVD

> Load this file and you'll see I've created the same bar of automation data under a MIDI sequence which is changing notes. Set up a new instrument on the same channel and copy the automation separately to save time.

Change default MIDI

9 By default, software instruments will be set up to transmit MIDI over 'all' channels but you can change this by enabling the pane below the Playback bar. It's essential if you're working with third-party plug-ins that allow you to set up different instruments on separate MIDI channels. This is great if you're using plug-ins such as the free Kontakt Player or VSL libraries and allows you to set up autoload templates with groups pre-loaded.

Channel strip hijack

10 One of the most powerful features in Logic 9 is the ability to browse into other Logic projects to load content and/or plug-in settings. This is great if you know you've created the perfect channel strip somewhere else and want to load it in an instant. Open the Browser tab under the Media button and browse to the track of your choice. Double-click the project to access the files. Things are easier if you've named your tracks!

Five Ways to Work Faster And Smarter

Save Templates

1 If you're a composer who needs a similar sound set for each project you start, why open an empty template each time? Selecting 'Save As Template' from the file menu allows you to create an autoload of say, pianos, strings and orchestral percussion each time you start. This way, rather than losing the first few minutes of each session to instrument load, you can boot Logic, put the kettle on and come back to a fully-loaded and inspiring sound set.

Convert Sampler Tracks

2 Convert audio files to sampler tracks to make loops your own. This is particularly effective when working with Apple Loops. By converting an audio file using Transient Markers, you'll be left with a sampler track with each hit assigned to its own key. You can then re-program to your heart's content, swap sounds with other instruments, or use the EXS24 GUI to apply synth-style parameters to audio slices.

Save Presets

3 A simple but super-important tip: Save your own presets! If you find a killer EQ treatment for a vocalist you'll be working with again, a whole channel strip which works beautifully or even if you build a synth sound you're proud of, save it! So many people start from scratch each time and while you don't want to use exactly the same treatments and sounds in each mix, using your own preset starting points rather than Logic's makes sense.

Draw Harmonies

4 If you're building chord parts with harmonies too complex to play in real-time, draw the notes in where you want them quickly. Remember, you can change their velocities and lengths with a couple of quick key commands so just get the notes in and worry about sustain and volume later. This saves oodles of time as programmers tend to get into a recording cycle of making the same mistakes in performance and starting from scratch each time. Let the Pencil Tool become your new best friend.

Audio Archive

5 Future-proof your projects by bouncing each file out as a separate audio file at the end of important projects. Who knows if you'll still be using the same plug-ins in two years? There's nothing more frustrating than opening a great-sounding archive project to discover the bassline plug-in is incompatible with your new system. Bounce each file in place, complete with effects and you'll have an audio only 'future proof' mix arrangement.

Creative Sequencing

Follow these six-steps to sequencing success

Repeat-note sequences can sound great if you're trying to drive a track forwards yet sequences can pall in the ear of the listener if they're over-used or if the sound you employ to carry out this essential work doesn't move, change or evolve as the track around it grows and drops.

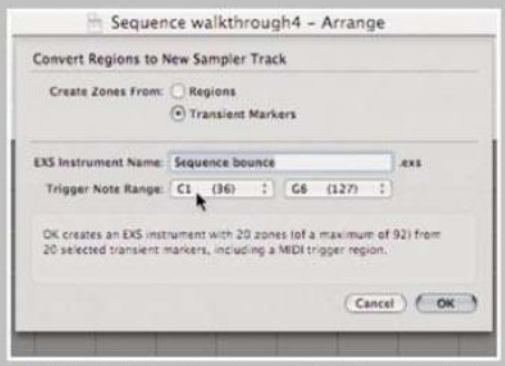
ON THE DVD

> 1 Set up the 'Analog Saw Init' patch and tweak to produce a fatter, sync'd sound. Here's how it sounds 'straight'.
> 2 Vector Points: Once targets are set for X and Y parameters, click on all eight steps of your Vector loop and select points to control cutoff and resonance.
> 3 Slice Reverse: Once the loop has been converted to a new sampler track, reverse a few slices via the EXS24.
> 4 Sequence Final: The final sequence, complete with insert and auxiliary effects.

1 Open the ES2 and load the preset 'Analog Saw Init' from the tutorial folder. Open up Oscillators 2 and 3 and select the 'Sync Sawtooth' waveform for both generators. Detune them -12 semitones. Drop filter 2's cutoff to a halfway setting and select 24dB/octave as the slope. Record a note which lasts four bars.

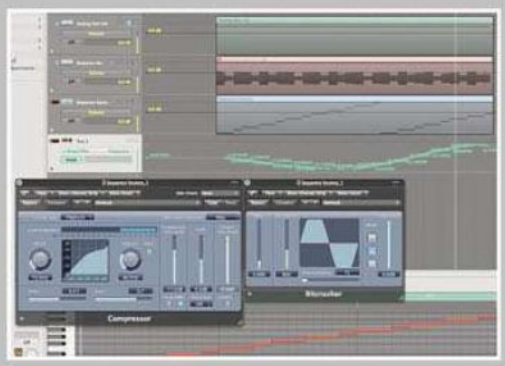
2 Click the Vector button and select Cutoff 2 as the X target, turning the Int amount to 1.00 (maximum). Select Reso 2 as the Y target, turning Int amount to 0.40. Then ctrl-click the Vector line, selecting 8/8 loop from the drop-down menu.

3 Enter an X-Y value for each stage of the eight-note phrase by clicking on each point and dragging the spot in the X-Y pad to a unique location. Right = more brightness, left = less, up = more resonance, down = less. You'll hear your held note become a sequence if you press 'play' as you edit.



4 Ctrl-click the four-bar region and select 'Bounce in Place'. This will convert the sequence to audio on a new audio track. Ctrl-click the audio file and select 'Convert To New Sampler Track'. Select the option to convert via Transient Markers. And select C1 as the lowest note (not C-1!)

5 Now your sequence is playing back via a sampler channel with each slice assigned to each key. In the EXS24, click the edit button for the sequence and set a few slices of your sample sequence to reverse by checking the boxes. Press play to check your selections work.



6 Insert compression and bitcrushing (set to 8-bit) as inserts and route the sound to Auxiliary 1. On this, set a quarter-note delay followed by the Ringshifter plug.

Optimise Your System

Get the most from your pride-and-joy

Buffer Size

Ensure that your buffer is appropriately set for recording and playback. The smallest buffer size possible should be used while recording to prevent latency problems, while on playback, this can be increased to prevent those dreaded 'System Overload' messages.

Go 64-bit

Logic can now work in 32-bit or 64-bit modes but will default to 64-bit mode if you're running Snow Leopard. If you prefer 32-bit mode for support with third-party plug-ins, Apple-I the Logic Pro application logo and click the box for '32-bit mode' in the Info pane.

Software Updates

Update to the latest version of Logic, currently 9.1.3, via the Software Update pane in the System Preferences – some useful things, including being able to draw Automation 'boxes' up from minimum settings are now available.

Plug-in Buffer Problems

Be aware that plug-ins like the Adaptive Limiter will produce their own latency problems, so don't use these until all recording is complete. The Multipressor will cause similar issues as will the use of too many 'regular' plug-ins. Bounce a file of your track if you need to record audio over a 'busy' backing track.

System Profiler

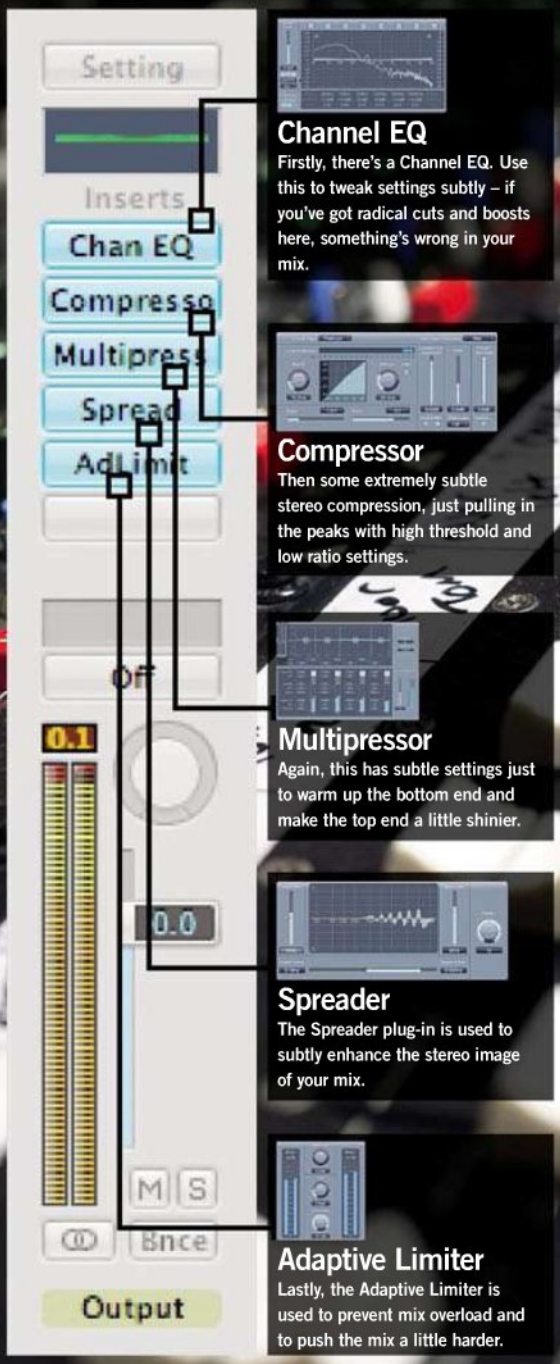
If you're using 64-bit mode, you can now access as much RAM as you have in your system and, as it's cheap, expand at will! 4GB is the most memory 32-bit mode can access, so make this your bare minimum. Check how much you have installed in the System Profiler.

The Perfect Master Channel

One of my highlights this year was putting Logic's mastering plug-ins up against those of an engineer from Abbey Road and it was really pleasing to hear how 'competitive' a master could be produced using these.

ON THE DVD

> You'll find a whole session to open up and inspect. All tracks feature Logic 9 instruments, so open it and check out the master channel settings. If you like this strip, save it for future use!



Channel EQ

Firstly, there's a Channel EQ. Use this to tweak settings subtly – if you've got radical cuts and boosts here, something's wrong in your mix.

Compressor

Then some extremely subtle stereo compression, just pulling in the peaks with high threshold and low ratio settings.

Multipressor

Again, this has subtle settings just to warm up the bottom end and make the top end a little shinier.

Spreader

The Spreader plug-in is used to subtly enhance the stereo image of your mix.

Adaptive Limiter

Lastly, the Adaptive Limiter is used to prevent mix overload and to push the mix a little harder.

5 Power User Tips

In Chains

1 X1 now supports Effects Chains. Just right-click in an effects Bin and select Effects Chain. You can then right-click in the Effects Chain and add effects at will. When you are done, right-click and you can save your chain a preset. There are 25 example presets that ship with the package.

AudioSnap 1: Timing tinkering

2 SONAR's AudioSnap feature works by detecting transients in an audio part and placing a slice marker at each transient. You can then change the start point and the audio between will automatically timestretch. It's non-destructive and virtually imperceptible. Change the edit filter from Clips to 'Audio Transients' to start AudioSnap. Use the smart tool to pick up and move the markers. On the DVD you'll find two acoustic guitar clips slightly out of time. Check the original and the timing-corrected versions on the DVD.

AudioSnap 2: MIDI from Audio

3 Try extracting a groove from an audio file to a MIDI track. Select your track and change the Filter to 'Audio Transients'. Slide the threshold slider until all transients are detected then press AudioSnap Options in the AudioSnap palette. Choose the MIDI note to convert the transients to.

You can choose to vary the velocities of the generated notes from the volume of each hit or set them all to a particular velocity figure. Hit the 'Copy as MIDI' button and the MIDI file is pasted to the Windows clipboard. You can then paste it back into your arrangement with the standard ctrl+V.

AudioSnap 3: Audio and MIDI Timing and Tempo

4 Extracting the groove from an audio file creates a temporary groove map that can then be applied to other audio or MIDI parts to perfectly synch them.

SONAR X1

SONAR's features some unprecedented audio processing abilities. We show you the best and most useful of the bunch...

FILES ON THE DVD

PRO SHORTCUTS

F

Fit all tracks to the size of the current window

Alternatively, you can go in reverse and apply a MIDI groove to your actual audio. You can also sync the start times to the project grid, effectively quantising your audio tracks, or even sync your audio in real-time to a tempo change, and all with just a few clicks!

Learning Fast

5 SONAR uses an ACT (Active Controller Technology) module to assign MIDI values. Click ACT learn then click as many controls as you wish to map. Then twiddle the physical knobs in the same order to assign them.

Groove Extraction and Sound Morphing

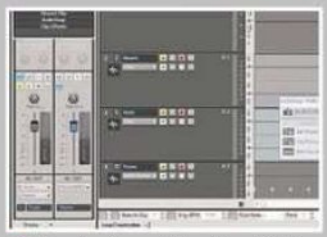
Stealing a groove and making it your own

Being partly owned by Roland, Cakewalk have included fully multi-sampled versions of the 606 and 909 drum machines sampled from the original instruments back at Roland's HQ. I'm going to illustrate how easy it is to hack a groove pattern from a drum track and transform it into MIDI.

ON THE DVD

> You'll find the original multi-tracked drum recording on the DVD alongside the finalised 909 loop derived from it.

1 From the browser, select Instruments and double-click Session Drummer. On the Session Drummer GUI, click PROG to open the preset browser and in the Rhythm Machine folder you'll find the selection of classic 606s and 909s.



2 One at a time, click on the edit filter for each track and select Audio Transients. The AudioSnap window will pop open. Use the threshold slider to detect beats. You could also quantise your audio now if you wish.

3 Click the AudioSnap Options button and select the key to send MIDI to. Hit the 'Copy As MIDI' button. Create a MIDI track and press ctrl+V to paste the MIDI into the track, then change the output of the track to Session Drummer.

Optimise Your System

Five tips for SONAR system bliss

Free your sound(card)

> SONAR has a habit of hogging your soundcard drivers, leaving you stuck if you want to use Skype etc in the background. Go to the edit menu, select devices and untick the ones you wish to free up to pass them back to Windows control.

Dumping the decoders

> SONAR uses DirectX plug-ins alongside VST and it can find DVD decoders or MPEG encoders and present these in your effects bins. Not very useful. Sort it using the Plug-In Manager. From the Utilities menu, click Plug-In Manager, click DirectX Effects, select the rogue decoders and hit exclude.

Organising plug-ins

> Your plug-ins menu can quickly become crowded. Speed up your workflow by organising them into sensible folders. Again the Plug-in Manager allows this. Create a new folder and add those DLLs at will. It will save you hours of menu-hunting.

Better browser

> Quickly export audio and MIDI clips to a file by dragging them into the browser. Effects and instruments or even whole projects can be dropped and merged straight into the project you are working on.

Screen sets

> Get SONAR to remember your screen layouts and you can achieve certain tasks much faster. Set up a layout for mixing, one for arranging, one for editing and so on, and save them using the Screen set tool docked in the toolbar.

REASON & RECORD

Reason and Record have won fans in every popular genre the world over. Self-contained doesn't have to mean basic…

10 Power User Tips

DIY de-esser

1 One thing that neither Reason nor Record offer is a de-esser for sibilant vocals, but there is a workaround. Take your vocal channel path and insert a Spider Audio Splitter, sending the signal to an M-Class Compressor and an M-Class Equaliser. Now cut out all the bass and mid on your EQ and add some tightly-focussed gain to the highs. Now route the EQ into the compressor's sidechain input and the compressor's output into your mixer channel. Set the attack and release to very fast times play the vocal back and adjust the threshold and other controls so that when the highs get loud it ducks the level like a de-esser. You can sweep the EQ's gain frequency to focus on the problem sounds. We've included the Combinator patch on the DVD.

King Kong

2 Kong isn't just a drum machine. By using Kong's external inputs you can just treat it like a multi-effects unit featuring its awesome effects.

PRO SHORTCUTS

Calls up the QWERTY piano keyboard for MIDI-less playing

Clip automation

3 It's easily missed, but Reason and Record let you record automation right into a clip, rather than a clip lane. If you have done a tasty modulation trick on a part, the automation will be copied or moved with the clip.

Reason live

4 A lot of people, including legends like A Guy Called Gerald and Rock legend Todd Rundgren have taken Reason on the road for live gigs. Version 5 allows you to lock multiple controllers to different instruments, meaning that you could feasibly have a whole band playing different instruments in Reason. But let's say you're just using it for one instrument with another band and you need to tune it? In the Preferences you will find a master tune control that affects the entire output from Reason. It even works in ReWire mode, letting you tune the output of Reason to your Master project.

PRO SHORTCUTS

Automatically groups connected devices in the rack

Mix Master

6 Reason lets you have full control of your mixer structure, which allows for some exciting possibilities. A lot of producers use extreme modulation over their whole mix – at the top of a breakdown, for example. But this doesn't allow one sound to stand out properly. In Reason, you could, for example, apply a filter sweep after your main mixer, and then run this to another sub mixer before the system output, and then run the vocal, effect or other noise you want to be unaffected into the same sub mixer.

Quantise on the fly

5 It's amazing how many people completely overlook the Quantise During Recording option in Reason. And quite funny that they tend to be the people who could do with using it. It's on the transport bar and, when engaged, it means that as you play in notes over a loop it automatically quantises them to the selected value. So the time it comes around again they will be in time. It's a much more fun way of building up rhythms than drawing them in, and allows you to play basslines without having to stop to quantise. Just be sure to set the value to something that suits the level of your natural timing.

Stereo Effects

7 Reason doesn't contain any artificial stereo effects, but you can make your own easily. Create another copy of the channel and send the left side into the left in of an M-Class Stereo Spread device and the right side into the right, then run the Spread's output into your mixer channel. Assign the two channels to two ReGroove channels and use the Slide function to offset the sides – one forward and one back. You can then use the Slide function to increase the width and the Spread device to control the cutoff if you want to keep the bottom end mono.

Back to back

8 One of the coolest things to do with a drum sound or vocal hit is to play a reversed version of it before the main sample comes in. This usually takes a few clicks and processes in other DAWS, but you can do this with just one key in Reason 5. Open the sample in the audio editor, reverse the sound and then set the playback mode to Forward + Backward, so that the sample swells into itself. It sounds great and it's very quick and easy.

Vocal synth

9 Record's new Neptune device is awesome for creating cool harmonies on your vocals, using the voice synthesizer. But these can often sound odd coming out of nowhere, so it's worth playing in the notes of your vocal so the synthesizer follows the melody of the vocal for the rest of the track. You can then modulate the voice synthesizer level to emphasise the changes but keep the more subtle effect for the rest of the track.

Deep impact

10 The Tool window's Groove section has an awesome control called Note Length Impact. Try assigning all of your parts to ReGroove patches and then sliding this value up to create an ever more stuttering gate effect. You can't automate it currently, so if you get something cool, re-sample it as live audio and then drop that into your track at the appropriate point in your arrangement.

How to Make: A Powerful Detuned Lead

They're the textbook sound of the club – here's how to make them

If you chart the history of Dance music, there is one type of synth patch that keeps coming up time and time again – the de-tuned and stacked patch. But it's not as simple as just de-tuning oscillators one, two and three.

ON THE DVD

> On this month's disc we've got the Reason project, the synth patch, a Combinator patch (including processing devices) and some audio snaps of our riff at every stage of the process. Dig in!

1 We start with a basic resonant detuned lead. Play in a riff and then tweak the portamento. This is best done after you've recorded your riff so you can adjust the speed of it to match.

2 Now add some powerful compression with a fast release but slightly slow attack, to give a percussive punch to your sound. A low cut on the EQ below 30Hz will help this too. We top it with a Maximizer for overdrive and weight.

3 This kind of sound is ripe for distortion, thick chorusing or phasing, as it accentuates the rich harmonics. If your patch is stereo, these can accentuate the spread too. You can reign this in using the Spreader to narrow the sound.

FILES ON THE DVD

Optimise Your System

Read on to maximise your machine

Latency issues

> A lot of people moving to Record from Reason come up against some new concerns, and one of these is latency when recording. Singers like to hear themselves in real-time (in fairness, for once they aren't just being prima donnas, it's important), which will usually mean monitoring themselves through the computer and Record. So open up the preferences and use the buffer to set your latency without affecting the sound. You want it as low as it can go – 64-128ms should be OK for them.

Record drive

> When working with Record, you can often be recording large amounts of data, and often simultaneously (a good drum kit recording alone will usually take seven channels) so it's important to know where you want this to go. If you want to specify the drive (perhaps using an audio-only drive which should be faster and have plenty of space), go to the preferences and change the default to the drive of your choice. It can save recording problems that you might not notice until it's too late.

Future proof

> Self-containing your songs really makes your life easier in the long-run, as while modern computerised studios should, in theory open exactly how you left them. But it only works if you have the samples! To avoid tears in years to come, engage the option in the General Preferences to Self-contain Samples When Loading From Disk.

The Perfect Master Channel

Reason's self-contained plug-in suite mean there aren't any surprises in terms of the tools for your perfect master output strip (the default masting Combinator patch is perfect for most occasions), so the trick comes down to how to use them.

Mastering in Reason

The mastering EQ features a low-cut that we often use. When engaged it can tidy up a lot of the very low subs (below 30Hz), allowing the bassline to breathe better. Close your eyes and flick it on and off. If your track gets punchier, clearer (subs often overdrive limiters like Reason's Maximizer device) and your bassline cuts through the mix more, it's probably worth keeping on!

Record's Master Compressor

Record users, on the other hand have arguably one of the finest mix channel tools of all time – a faithfully recreated SSL 9000k master buss compressor.

Countless engineers the world over swear by its ability to pull together a mix. Our settings of choice are Attack 10ms, Release on Auto, the Ratio on 4 and the Make-Up on 0.

We then start playback with the threshold at 12 o'clock and dial it clock-wise until we're getting peaks of about 4dB on the compressor's meter.

5 Power User Tips

Auto auxiliary

1 In most DAWs setting up an FX Send buss can be a pain, but in Studio One just drag the effect preset you want from the browser into the Send pane of the mixer channel and the program will automatically create a new FX channel. Add the effect to it, create the needed buss on the channel, and open the FX plug-in window so you can edit the preset!

Slices and pads

2 Each REX file listed in the browser works like a folder containing all the slices of audio contained in the REX file. Click on the triangle to open the folder and you can audition each slice individually – or use them as drum hits! Make an Instrument track and add the Impact drum machine to it. Now you can drag individual REX slices to each of the pads in Impact and play them as hits or program something new! There's more Studio One REX goodness in step three so make sure you keep reading.

Flex the REX

3 Studio One makes using REX files a breeze. Right-click on any REX file in the browser and choose the command 'Send to new Sample One'. Sample One will turn it into a multi-sample preset with each slice of the REX file on a different note. A MIDI file that plays back the loop on the sampler will also be created in the Arrange window. Now you can just edit that MIDI file to change the feel of the REX loop. Love the loop but don't like the snare sound? Just take out the snares and leave the rest of the loop running! Try it with the REX files included on the DVD – you'll be amazed!

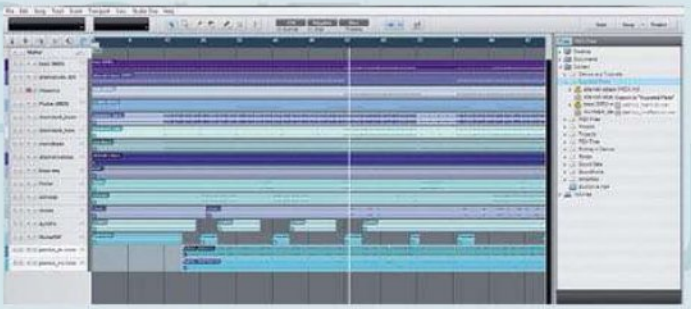
STUDIO ONE

PreSonus Studio One is famous for its ease of use, but underneath that simple exterior are some incredibly useful features for power users...

FILES ON THE DVD

Project importing

4 Got some great presets in another song that you'd like to re-use? You don't have to open the project to use them. Just find the song in the Browser, right-click on it and choose 'Show Package Contents'.



Handy Export

5 A simple but really useful tip: you can drag to the Browser as well as from it. To export audio and MIDI parts just drag them into the appropriate place in the Files section of the Browser and your save is done!

How to Make: Kraftwerk-style Gated Synths

Craft a classic retro synth sound in Presence

Presence is the killer instrument in Studio One and you'll fine an exclusive soundset for it on the DVD.

ON THE DVD

> To install the soundset just drag the file from the DVD to any open Studio One window or drag it directly into your Studio One soundsets folder. Go to Instruments > Presence, right-click and choose Refresh to see the new preset list appear. To load one, drag a preset into a blank space in the Arrangement, or on an open Presence window.

1 Let's start with the most basic sound, Bread & Clutter. Drag it into the Arrange window to load it up. To thin the sound out a little, switch the filter to band-pass. Drop the cutoff slightly and give it a touch more resonance.

2 Click on the Edit FX button. Switch on the Gate and choose the Pulsorate preset. It's mono, but we can make it stereo by pressing the Stereo button on the right. Edit the left and right sides differently to make it ping-pong.

3 For a classic '70s synth sound, turn on the Mod generator and choose the Phaser. You might want to leave the Delay and Reverb off depending on how busy your mix is. Now all you need is a vocoder and a German accent...

Optimise Your System

Get your system up to speed for Studio One

64-bit precision

> In Studio One Pro's Audio Setup menu you'll find an option for 32-bit or 64-bit Process Precision. If you've got the processor, set it to 64-bit to have all internal plug-ins and the entire mix buss run at double precision and hear the quality difference!

Location

> By default Studio One keeps all files inside the user's Documents folder. For those with multiple hard drives Studio One's Options include a set of Location preferences. Here you can tell Studio One where to look for song data, soundsets, VST plug-ins, etc.

Reset blacklist

> If a rogue plug-in crashes your system, Studio One will automatically blacklist it so it won't be loaded next time the program starts up. Handy, but if you want to reset this blacklist click the button under Locations/ VST Plug-ins.

New tab

> Files section in the Browser getting too cluttered? Right click on any folder in the Browser and select "New Tab from Here" to customise the Browser any way you need.

Power settings

> Power management under Windows 7 and Vista can occasionally be problematic. To optimise Windows for audio try copying the 'audio-power-settings' folder from the cover disk to your C:/ directory. Navigate to the 'addconfig.cmd' file, right-click on it and select 'Run as Administrator'. A pop-up window will very briefly appear, indicating the command is running. When this disappears, the new power profile should already be selected and in use.

CUBASE 5.5

Cubase is music production legend but with so much on board there's much to learn. From features and functions to effects and sounds, we're here to clear the mist…

10 Power User Tips

Reusing audio parts from old tracks

1 One of our favourite time-saving cheats – sorry, power tips – is to reuse audio from old tracks. If you've got a particular drum loop or FX hit in mind (or even if you need inspiration), you can easily grab it from an older project. Simply leave your current project up, open an older one (but don't Activate it), and just drag any audio elements you require from the old into the new. It even copies track settings, if you drag into open space.

Audio pre-record

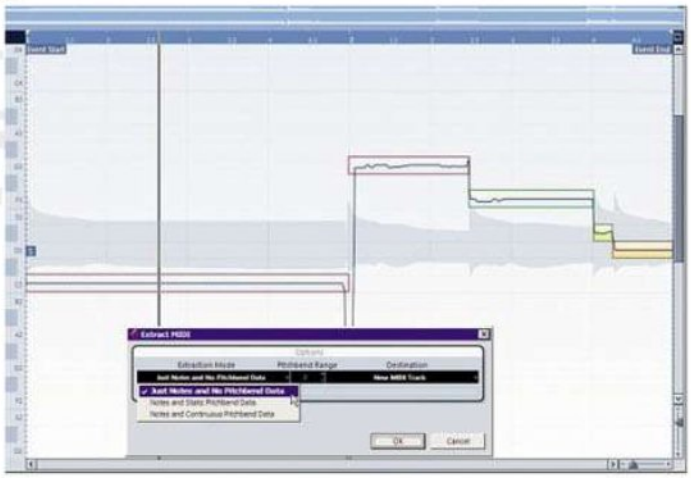
2 One important feature that's somewhat hidden-away in Cubase is Audio Pre-record. This great feature allows Cubase to record whatever arrives at a record-enabled track's input. To make sure it's ready, go to the Record section of the Preferences window and enter the size of the pre-record buffer (in seconds).

Utilising the pre-recorded audio is simply a matter of dragging the start of any newly recorded audio event to the left.

Auto fades

3 When you use digital audio, at some point clicks and pops will raise their ugly heads. If these are always in exactly the same place, this isn't down to CPU spikes and it could be due to badly chopped transients. When editing mono audio events, make sure 'Snap to Zero Crossing' is enabled to minimise the risk of this.

In the case of stereo audio files (with a large left-right difference) enabling Auto Fades (from the Project menu or Track Inspector) can help, but be careful that it doesn't soften the attack transients of important sounds.

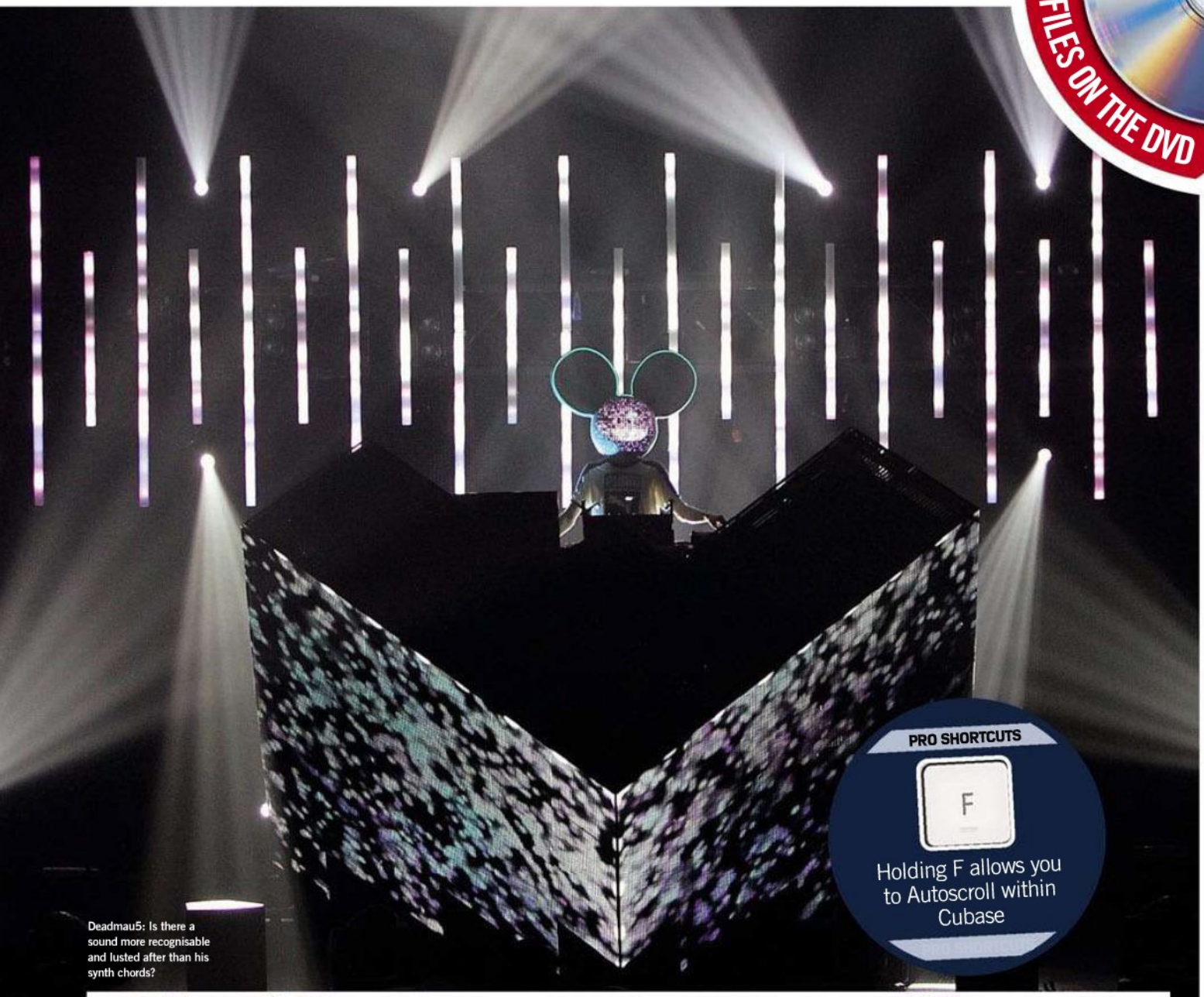


Converting Audio Events to MIDI

4 VariAudio added some great pitch correction and manipulation capabilities to Cubase, but it's also a good starting point when looking to convert (monophonic) melodic audio lines to MIDI notes. To make the most of these, you'll need to double-check the detected pitch segments in the VariAudio tab of the Sample Editor window, then go to the Functions menu and select 'Extract MIDI...' There are options for creating just MIDI notes, or notes and two different styles of pitchbend data.

Quantise, trim length and fix velocity fix in one go

5 Although there are individual functions in Cubase for fixing many aspects of a MIDI part, it is nice to bring them together into one super-function. This is where Key Command Macros come in. Create a new Macro in the Key Commands menu, then add the following functions 'MIDI – Fixed Lengths', 'MIDI – Fixed Velocity' and



FILES ON THE DVD

PRO SHORTCUTS

F

Holding F allows you to Autoscroll within Cubase

Deadmau5: Is there a sound more recognisable and lusted after than his synth chords?

How to Make: **Deadmau5 Synth Chords**

Here, we're going to take a look at a modern classic in House circles, but it can also easily form the starting point for other timbres that will work in many styles. The key here is to use a harmonically rich starting point (a Sawtooth wave, for example), and filter it in a through a low-pass filter so that it closesoff the high-frequency content quite quickly. This can be easily achieved using one of Prologue's envelopes. To add extra interest, the oscillators can be doubled (or tripled) and slightly detuned against each other. This can be accentuated with vibrato and the use of additional effects, such as chorus, delay and some reverb to add depth.

ON THE DVD

> Check out the sound in action in the demo project on the DVD. There's also audio of the finished product so that you can hear what we've made.

1 Start by selecting a Sawtooth wave for both Osc1 and Osc2. Set Osc2 to a slightly lower level and pitch fine-tuned to +5 cents. Osc3 can be added an octave higher (fine-tuned to -5 cents), but keep it quite low in level so as not to overpower the original sound (as Square waveform can be subtler here).

2 In order to keep things simple (and in the spirit of some classic, but limited spec synths from the past), let's share Env1 for both amplitude and filtering duties. Go to the Env1 section and ensure that both Volume and Cutoff are added to the Mod Dest column. Now adjust the ADSR for a fast Attack and moderately fast Decay (no Sustain).

3 Vibrato can be added using an LFO to modulate the pitch of both oscillators (Osc Pitch in the Mod Dest column of LFO1). In the Event tab, add cutoff to the Mod Dest in the Modulation Wheel section. Finally, add some gentle Chorus and some Stereo Delay from the EFX section, and some REVerence reverb via an FX Send.

'MIDI – Quantise'. Now select a MIDI part and apply the Macro (from the bottom of the Edit menu). Instant robotic feel!

MIDI processing plug-ins

6 Most MIDI data editing occurs after it has been recorded from within an editor windows or using functions in MIDI menu. However, the Inspector has many useful features for quick editing, such as the Modifiers for speedy access to pitch, velocity and length processing. The real power lies in MIDI Insert effects, such as Transformer, Quantiser and Arpache. Don't forget that 'Freeze Modifiers' in the MIDI menu makes the settings permanent – even, usefully, newly created arpeggio parts.

Create your own presets

7 While not the most glamorous of pursuits, storing presets of any commonly used sounds will stand you in good stead at later dates. Make it your mission to save great synth sounds and customised effects. This will enable you to build your own library that can be searched (and even tagged) from within MediaBay. It's especially useful for recalling commonly used reverb and delay settings. All you need to do is select 'Save Preset…' from the drop-down at the top of the plug-in window.

The Project Logical Editor

8 The Project Logical Editor made only a relatively recent appearance as part of the Cubase feature set. It's easily forgotten, buried as it is in the Project menu, but can wield immense power. A good place to start is with the Presets – which can be accessed directly, or loaded into the editor itself. One of our favourites for tidying up a Project is 'Delete muted elements' in the 'Parts + Events' section. You can even assign key commands to the presets.

Audio pitch-bend

9 One of my favourite audio processing tricks is 'audio pitchbend'. Select some audio, go to the Audio menu's Process folder, open 'Pitch Shift' and find the Envelope tab. Clicking in the user interface window will add new nodes, and allows you to draw elaborate pitchshift curves.

With a little creativity, it's easy to create 'tape-stop' effects, or even crazy pitch-rise effects, from almost any source. Check out some ruthlessly tweaked audio on the included DVD to hear this process in action.

ON THE DVD

> A Cubase Project with some of the tips doing their thing. Head to the disc and have a listen.

MIDI Programming Plug-ins

10 The MIDI track Inspector comes into its own when programming drum patterns. The Beat Designer plug-in makes this simple, and offers a lot of flexibility in terms of level, swing and offset of individual beats. If you setup a drum map for different instruments, beats can be saved and reused very easily. Once you have a groove you like, you can even drag it straight into the Project page. The example Project on the DVD makes us of this with Groove Agent ONE.

Five Ways to Work Faster And Smarter

Group Channels

1 Faced with a ticking clock and mix to finish, you need to find ways to cut to the chase. One of my favourite simplification tips is to route similar sound sources through Group Channels for much of the processing. For example, running all of your drums through a stereo Group, then compressing and EQing in one go. This is particularly successful when dealing with multiple vocal parts, and can even help them to gel together better in the mix.

Folder Tracks

2 The aesthetic parallel to mixer grouping is the use of Folder Tracks. These are a great way of bundling similar elements together for editing en masse. Place Drums, Bass, Synth, FX all in different folders, and maybe keep one for everything else (Instrument, FX, Group tracks), and you'll have a much clearer, easier to navigate Project page. This is especially useful when revisiting projects, particularly those with large amounts of automation data.

Autoload Templates

3 Rather than start from scratch each time, it can be useful to save frequently used mix Project elements as a Template file. A good start is perhaps to set up a few audio and MIDI tracks, but I also like to configure two or three different reverbs and maybe a stereo delay on FX tracks. Now is a good time to add a few Group tracks for use later, as this minimises routing problems.

Mixer Shortcuts

4 Cubase has three possible mixer windows, although only one has a pre-defined shortcut key. My chosen method for speedy mix navigation is to assign all three mixers their own keys, and customise what's shown in each one. My preference is to use Mixer One for audio tracks, Mixer Two for Instruments (and ReWire, if you use it), and Mixer Three for FX, Groups, Ins and Outs. Use the icons to the left to specify what's seen

Simplify the Interface

5 Cubase often has many ways of achieving the same thing, but this can lead to confusion with such a profusion of menus and icons. Remember that a simple right-click on many of the window elements in the Mixer, Inspector and Toolbar (among many others) allows you to tweak what's shown, and where. If you spend a little time, it's easy to simplify the interface and streamline the way you work.

Effects Programming

Spice up your mix with advanced programming

An essential component of any DAW is its effects capability, from the right plug-ins to the appropriate routing possibilities. However, great production isn't just about the power at your disposal, but how you apply it. Choosing the right reverb, for example, is important – but applying it effectively in terms of level can greatly alter the perceived depth of a mix.

Here, we're going to take a look at some different reverb examples and when to use them. We'll also explore some creative delay effects, as well as the more extreme end of the sonic spectrum utilising automation and use of Cubase sidechain functionality.

ON THE DVD

> On here you'll find some before and after examples of this programming, along with some more intermediate processing, too.

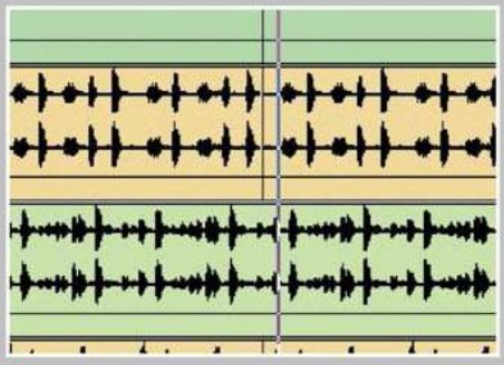
1 You should generally avoid processing percussive sounds and loops with longer reverb treatments. Many of the REVerence factory Programs make use of the ER Tail Mix setting. Set to zero, only the Early Reflections (initial delay component) will be heard, avoiding the possible muddiness of the reverb tail.

2 Longer reverbs work well as a special effect, but it's also worth exploring their use on sounds that have a mostly high-frequency content. Try triggering very short, high-pitched synth notes with an arpeggiator and running them into a long-tailed reverb. Filtering with a high-pass filter can help here.

3 Here, we take a dry snare and use an FX Send to route it to a medium-length reverb. Now the crafty bit: insert a Gate after the reverb, and route the snare track to its sidechain. Tweak the Threshold and Release to achieve a short burst of reverb.

4 As an alternative to reverb, and in a similar vein to the first example, we can use the StereoDelay plug-in with two short (but different delay times), to open up a mono source (routed to a stereo Group track).

5 Don't forget that automation can also be used for turning effect sends on or off. Here, we trigger a feedback delay effect coming off the end of a synth phrase. Of course, there's nothing stopping you from automating the feedback level, as well. This works well with reverb.



6 Reverse reverb is a useful standby effect, but the technique can be used with delay, too. Copy the audio track to which you want the effect applied, reverse the audio, insert your delay (100% wet) and export the result to a new track. Now reverse this new audio segment and line-up appropriately.

Optimise Your System

Flex your computer's Cubase muscles

Disable unused ports

You can grab back a few resources by disabling unused audio I/O in the Device Setup window. This is especially relevant for those of you with massive output counts (don't forget those unused digital ports).

Buffer size

There isn't a 'best' buffer setting, but consider changing the size depending on the task in hand. During the writing process, use small sizes and disable specialist master buss plug-ins. At the mix stage, switch to larger buffers sizes for extra processing power.

Freeze tracks

If you run really low on resources, there is the very useful Freeze button. This really comes into its own with Instruments. Although you do forgo some flexibility, it's always possible to Unfreeze while you make any changes.

Tweak your prefs

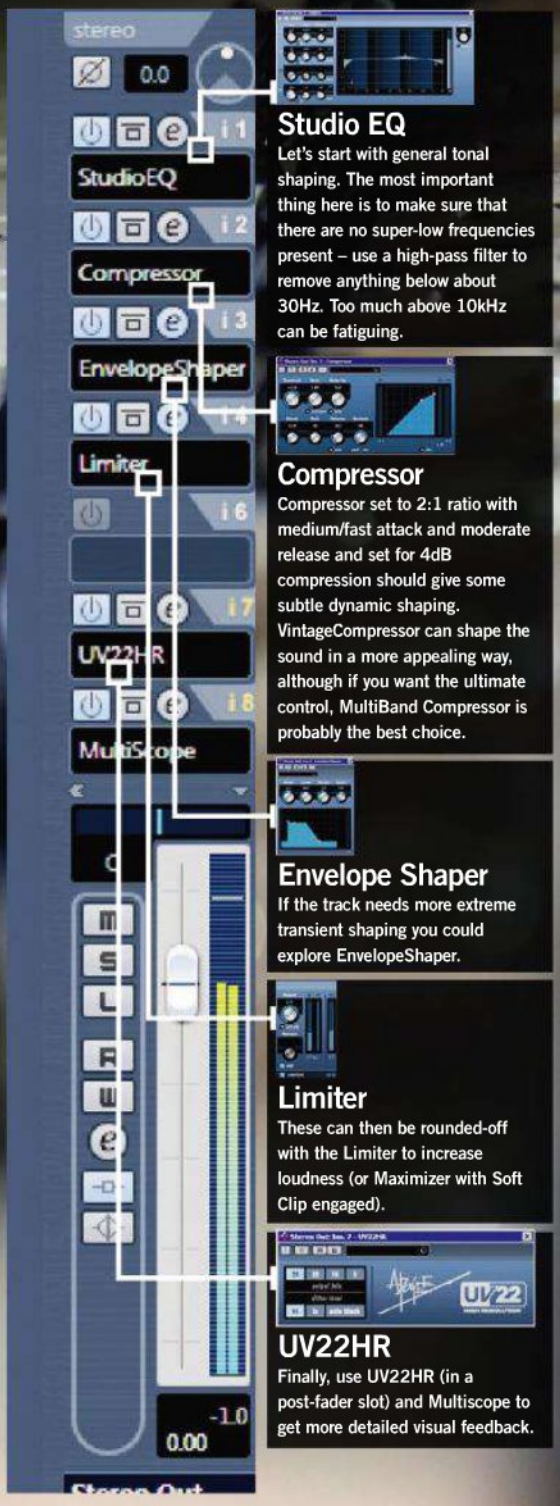
Although the Cubase preferences amount to pages within pages of tweakable minutiae, it is worth paying attention to a few of the graphic-orientated settings, such as 'Background Color Modulation'. Don't forget to save your preferences for future use.

VST Audio System settings

Dive into the Device Setup window again to ensure that you're using 'Multi Processing'. You may find that changing the Audio Priority may benefit certain projects. 'Disable CPU Energy Saving' is worth checking on certain newer CPU systems, but see what works best.

The Perfect Master Channel

Despite most definitely lacking the glamour of some of their third-party cousins, Cubase's factory-supplied plug-ins are capable of very good results, albeit lacking in the non-linearities that might add that extra sparkle. So, which should you use?



Studio EQ

Let's start with general tonal shaping. The most important thing here is to make sure that there are no super-low frequencies present – use a high-pass filter to remove anything below about 30Hz. Too much above 10kHz can be fatiguing.

Compressor

Compressor set to 2:1 ratio with medium/fast attack and moderate release and set for 4dB compression should give some subtle dynamic shaping. VintageCompressor can shape the sound in a more appealing way, although if you want the ultimate control, MultiBand Compressor is probably the best choice.

Envelope Shaper

If the track needs more extreme transient shaping you could explore EnvelopeShaper.

Limiter

These can then be rounded-off with the Limiter to increase loudness (or Maximizer with Soft Clip engaged).

UV22HR

Finally, use UV22HR (in a post-fader slot) and Multiscope to get more detailed visual feedback.

5 Power User Tips

Create a session template

1 You might find yourself repeating some steps to create the session that you need, every time that you start a new project. Many times, these sessions end up with similar layouts. Well, that's your style and workflow, so why not create a session template that you can recall with your favourite routing, track types and plug-ins? In order to achieve this, create a session with your preferred channel-strips, routing and instruments, and select 'Save as Template' in the 'File' menu.

ON THE DVD

> You can find a session template with Drums, Bass, Piano and Synth

virtual instruments, two audio tracks for vocal recordings, a reverb channel and a Master fader on it.

Use 'Save Copy In'

2 The 'Save Copy In' command, allows you to create a copy of the session, including all the media and the plug-in settings. This is very effective for transfering the projects between systems or for archiving purposes. Make sure that you remove all the unused media in the session. Delete unnecessary playlists (Playlist selector > Delete Unused). After that, select unused files and regions from the Region List (Command+Shift+U), and 'remove' them from the session

Use The Master to Avoid Clipping

3 You can have the perfect balance of relative levels, but what if the overall mix or a buss is clipping? Pro Tools uses a 32-bit floating point mixer so the internal summing of signals virtually never clips, but when its brought back to 24- or 16-bits, it might go beyond 0dBFS. The master helps in adjusting this range. This is useful for decreasing the level on each channel, while keeping relative positions between them.

PRO TOOLS 9

Improve your workflow and productivity in Pro Tools with these power tips. Time to work faster, be creative and make better music…

(Command+Shift+B). This will ensure that you only copy the files that are actually referenced by the session.

Organise your sounds, loops and samples

4 Catalogues are databases created and modified within the Workspace in Pro Tools. They're very useful for handling large collections of samples and loops.

Each catalogue stores information about the files, including additional data such as tempo, format and comments. The DigiBase browser (Tools' own browser) allows you to search files by any criteria. To give you an idea, you can put your own references on the files.

Real-Time MIDI properties

5 The MIDI Real-Time Properties window allows you to try different MIDI properties on the fly, without committing to them. They can be applied on either a region- or track-basis, and when you're happy with the results, you can then apply them permanently. The MIDI Real-Time Properties window can be found in the 'Event' menu.

Identify beat

6 Create a tempo map, based on a tracked performance. It works more effectively on rhythmic sources such as drums. Having a tempo map will provide you with a grid that matches the recordings, to edit with accurate cursor position, loop manipulation and song section arrangements, effectively. It can be created from the 'Identify Tempo' window

How to Make: A Minimoog Clone

Using Vacuum to model the Minimoog

Here's how to create a version of a well-known Minimoog sound. Although there's nothing like having the real synth in front of you, when it comes to your DAW, you need to explore the tools, as the right answer might be there.

ON THE DVD

> On the DVD you will find a Pro Tools session with the sound loaded up as a virtual instrument with additional processing, as well as a bounced audio demo of the patch at work.

1 Let's start by generating waveforms. On the first osc, select square, with around 6% of saw. Set the second oscillator to a full saw wave. Set ranges of 16 and eight respectively to create distance between the fundamentals.

2 Set the envelopes with medium attack, short decay and high sustain for the first envelope and the opposite for the second one. Mix both signals, roughly with the same levels. Enable both filters with moderate resonance and saturation.

3 The AIR Fuzz-Wah will give you a dynamic filter to the input signal. Add chorus with the DB-33, as well as tone control and stereo rotary speaker emulation. A slow mod rate and boost of presence will help the sound cut through.

FILES ON THE DVD

Optimise Your System

Maximise your Pro Tools machine

Disable updates

> Disable automatic system updates. This ensures system compatibility with the current version of Pro Tools, as recent OS versions might have unsupported elements. Always check Avid's website for latest versions, compatibility and supported systems.

Hardware buffer

> Adjust the Hardware Buffer Size appropriately in the Playback Engine setup window. As a general rule, keep it low (up to 128 samples) for recording to avoid latency, unless you use the low-latency monitoring options, in which case, any processing on armed tracks will be bypassed. Use a high buffer size for mixing, to maximize processing.

Hard drive formats

> Run all the media from separate hard drives to optimise data transfer rates. Avoid using the system volume, and keep audio and video in dedicated disks. For externals, use a FireWire connection for steady rates. Make sure that the drive's file system is compatible for playback and recording in Pro Tools: Mac OS Journaled (Mac), and NTFS (Windows). FAT is not fully supported by Pro Tools running on Mac systems.

Delete Preferences

> If you start experiencing issues with the performance of the software, it might be a case of corrupted DigiSetup, DAE Preferences or Pro Tools Preferences. You can delete these files from: '[user]/Library/Preferences (Mac)', or 'C:\Documents and Settings\[user]\Application Data\Digidesign' and 'C:\Program Files\Digidesign\DAE\DAE Prefs' (Win). Pro Tools will re-generate them after rebooting.

The Perfect Master Channel

To polish your mix, a master channel with an EQ, a stereo-width processor, a compressor and a limiter would be the preferred choice. Bear in mind, however, that if you are sending the track to a mastering house, you should leave these processes to the minimum, to allow room for the mastering engineer to do their job.

ON THE DVD

> A Pro Tools session along with a bounced mix emulating a multi-track session.

Seven-band EQ

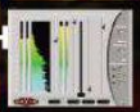
Adjust the overall tone of your mix, using a basic equaliser with five fully-parametric bands and filters. Make sure you keep the low-end under control.

AIR Enhancer

Add harmonics in the upper frequencies to add sparkle or beef up the low end with some sub-harmonic content.

AIR Stereo Width

Control the stereo spread of your mix, but be careful, your brain gets used to phase-incoherent signals very easily.



Maximise

Maximise the level of your mix, by setting the threshold to affect all the peaks. Avoid destroying the dynamics, though.

Phase Scope

Check for phase-coherence of your mix, and have a Peak and RMS metering of the levels.

(Command+I), with the 'Conductor track' enabled for the session. You'll find it time-consuming at the beginning, but it becomes so simple that you'll finish in no-time using 'Tab to Transient' to move between hits.

ON THE DVD

> Tempo map to drum recordings.

Preview samples in context with your session

7 You can analyse and listen to your loops and samples in sync with the session. This will give you a more realistic perception of the audio files. Simply select the files in the workspace, analyse them with the correct elastic algorithm and enable the 'Audio Files Conform to Session Tempo' option. Then, when you drag-and-drop these files into your session, they will be adjusted to the current tempo.

Set default EQ and Dynamics plug-ins

8 In the Pro Tools preferences (mixing tab) you can select your preferred EQ and Dynamics plug-ins to appear at the top of the list. You can also create a default preset to be activated every time that you open a particular plug-in, using the plug-in menu within the corresponding window ('Set as User Default').

Display individual parameters

9 Press Command+Ctrl+Click on the parameter (Mac) or Ctrl+Start+Click (Win). This will toggle the edit window view to display the current parameter that you want to modify. This will also allow you to monitor any real-time automation changes, or to refine them with the editing tools.

Rotary Simulation

10 The DB-33 offers rotary-speaker simulation, vibrato and chorus controls in the same plug-in and sounds can be routed through it for effects. This can create an interesting effect on guitars, piano and synth sounds, for example.

ON THE DVD

> On the DVD you can compare the sound of a rotary speaker and chorus from the DB-33, applied to a piano part.

Momma Said NOX You Out

Kick Ass with the New NOX DJ Mixers

BEHRINGER's new NOX Series DJ mixers pull no punches—they're comin' in swinging with pro-level feature sets that'll make the competition throw in the towel.

These technical knock-outs include contact-free optical Infinium crossfaders and USB audio connectivity, plus Beat-Syncable FX! All these features are standard across the NOX series' five weight classes—and the NOX606 even features assignable VCF's.

There's no split decision when the choice is this clear—pound for pound, these are the best mixers in the arena.

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ABLETON LIVE

Claw back some me-time by accelerating your Ableton Live working methods and optimising your setup! We'll teach you some vital tips and techniques to help avoid workflow obstructions

10 Power User Tips

Context Menu

1 This might not seem like a 'power user' tip exactly, but you really mustn't forget the context menu – it's a fast route to the most immediately useful commands. Depending on how your mouse or trackpad is set up, all you have to do is right-click or control-click on any element of the Live screen, and see what menu commands pop up. My most-used context menu commands are probably Freeze, Flatten, Grid Value and Crop Sample.

Renaming stuff

2 Command-R (rename) is a very useful tool for labelling and identifying clips and tracks, alongside my other nerdy favourite, colour-coding. When you use renaming with scenes, in the master track it has an extra special super power: add a bpm value, like '120bpm' to a scene name, and the project will change to that tempo when you launch that scene. Awesome! This works with time signature changes too, and in combinations, like '125bpm 5/4'.

Save it for later

3 If there's a routine task that you find yourself doing every time you create new Live sets save them to a template. Go into Preferences, then to to the File Folder tab, and choose 'Save Current set as Default'. Now, when you start Live, or create a new blank set, your chosen setup will be ready – plug-ins, mappings, clips and all.

Lock it and leave it

4 If you have a 'collection' of controllers, you might want one controller to be dedicated to a particular device in your Live set – the Operator synth might be a good example. Assuming your controller's already set up in Preferences, just Ctrl/right-click on the device title, and choose 'Lock to Control Surface', and specify your chosen controller from the list. Any time you want to undo it, repeat the process.

Pull the chain

5 You might have an instrument or effects rack, or a group track, where you wish that you could isolate one chain from the others, so you can use it in another track. You know where I'm going with this? Yeah...it's easy to do. Ctrl/right-click on the chain you're interested in, and choose Extract Chain from the context menu. If you Shift-click to select several chains, they'll all be arranged together in a new rack in a new track.

The min of max

6 When you're making controller assignments in MIDI Map Mode, open the Browser to see a list of channel numbers, CCs, and note numbers. You can also use the Min and Max columns to edit the high and low values for each control, or to flip them over completely, so if you want a knob to cover only a certain range, or a fader to 'crossfade' between two mixer channels, this is where you can make it happen.

FILES ON THE DVD

PRO SHORTCUTS

delete

Force the currently selected control to default value

Magnetic Man: Spearheading the incredible basslines of Dubstep

How to Make: **Dubstep Basslines**

There are basic 'rules' to follow if you want to achieve a satisfying Dubstep bass tone. We spoke to DJ Moyma, an up-and-coming Dubstep producer and DJ, who has a new podcast and blog at **moyma.co.uk**: "The key to Dubstep bass is to make sure it works with rest of the track – spaces in the bass gives room for other instruments and EQing helps make the layers of your bass work together. Sometimes less is more." Here we're using a Live set with a basic beat, and some other simple parts, all produced using Live's instrument and effect devices. The MIDI clips and basic instruments are already in place, so all we have to do is concentrate on the bass tones. If you don't have Operator, run Live in demo mode while you try this.

ON THE DVD

> Audio examples and a Live set containing the sound we've built.

1 On the example Live set on the DVD, there are two Operator bass tracks, with a before/after for one. Double-click the Bass 2 track header to view Operator – this is the default Operator preset, with a sine on Oscillator A. Change the Attack of A to 1ms. Turn on the LFO, set it to Sync, Rate to 1/6, and Amount to 25%.

2 Turn on the Low 12dB Filter, set Freq to 198Hz and Res to 1.00. Click the Operator title bar, use cmd-G to put it into a rack, then use cmd-D to duplicate the chain. Rename one 'Sub', and the other 'High'. For High, change Pitch Env to -20%, Spread to 70%, and Transpose to +12.

3 Set Oscillator A+B Attacks to 1.25ms. Change the waveform of Oscillator B to Sw16, and set the Level to -3.5dB. The 'finished' example track Bass 1 has clip envelopes automating LFO rate, while Bass 2 has a macro assigned to control it. Bass 1 is a lot more complex than 2 in general. Try them together, too!

© Gettyimages.com

MIDI curves

7 Use the MIDI Velocity Editor to change note velocities. Click the triangle at the bottom-left of the editor, then click, shift-click, or click+drag to select the notes you want to edit. Use the pencil to quickly draw curves.

Freeze and Flatten

8 If you've got a MIDI track in Session View, and you want to convert those clips to audio, Ctrl/right-click on the track header, and choose Freeze. Then ctrl/right-click again on the same track, and now choose Flatten. Instant audio clips!

Movie mash-ups

9 Drag a QuickTime movie with audio into Arrangement View. The video window will pop open, and you'll see the movie audio just like any other audio sample. Use the Loop Brace to create movie loops, and use warp markers to radically stretch the audio and speed up or slow down the movie.

ON THE DVD

> A Live set containing material that you can use to try these tips.

Gate Your Loop

10 This can work really well as an effect during live sets. Change a looping audio clip from whatever warp mode it's in, to Beats. Then click the Transient Loop Mode chooser (with the little arrows), and choose 'Off', the top one, with the arrow pointing left to right. As the loop's playing, click and drag downwards in the box next to the arrow, you'll hear the sample cutting off more and more as you go down. It's a cool sound.

The Perfect Master Channel

In general, you can't just apply somebody else's master channel to your music. But what you can do is figure out an optimum master channel for your live set, where you need something that is part utility, and part performance tool.

EQ Three

I use an EQ with the mid band switched off as an effect. I have this mapped to a QWERTY key though, so I can easily switch it on and off.

Auto Filter

Slap this DJ-style filter on your master for quick and easy filtering effects.

Master Slicer

I've racked up my Beat Repeat into this Macro so I can easily map the parameters to a MIDI controller and create stutter effects.

Limiter

Use a Limiter as the last insert in the chain to avoid any nasty digital clipping and distortion.

ON THE DVD

> An Ableton Live set with our live performance master channel already set up for you. Adjust to taste!

Five Ways to Work Faster And Smarter

Get Flirty with QWERTY

1 One thing you can do to accelerate your Ableton Live working experience is learn the keyboard shortcuts. Live's workspace has always been a bit biased towards laptops, and basic keyboard commands improve the coffee-shop-jam vibe. There's a huge amount of control available with a mouse/trackpad, and the computer keyboard. Next time you select a menu item, look at the keyboard equivalent listed next to it!

Analyse Audio

2 You know when you load a new song into Live, and you sit there for what feels like forever, watching Live draw out the waveform as it analyses the tune? Skip it. Use the Browser to navigate to the folder containing your tunes (it's OK if it has subfolders too), and control/right-click on the folder, then choose Analyse Audio. Live analyses all audio files in that folder, so when you drop one in your set, it's ready instantly!

Jump Around

3 Those three folder shortcut icons at the left of the Browser are good places to store your favourite links, but you might want to create more than three shortcuts. Navigate into a folder you want to bookmark, then click on the white bar at the top of the Browser, and choose Bookmark Current Folder. You can create as many of these bookmarks as you like. Note there's also the Remove Current Folder From Bookmarks command for tidy-up time

Under Control

4 A neat way to avoid MIDI mapping hassles is to buy a new MIDI controller - get something that works with Live's Instant Mapping at a high level, like Novation's SL range, or something Live-specific, that doesn't need any mapping, and gives you a lot of visual feedback, like the Novation Launchpad or Akai APC20/40. You could even bite the future bullet and get yourself an iPad so you can run Griid or touchAble, and control Live through a WiFi network.

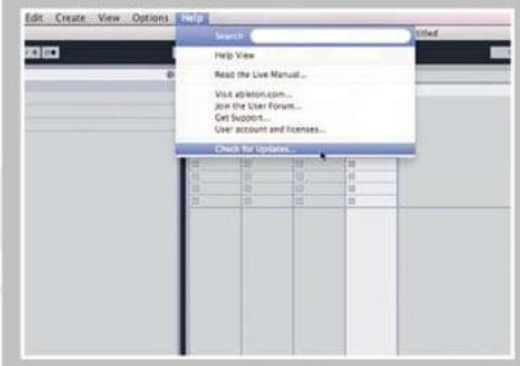
Fast Soundtrack Sampling

5 If you want to grab a piece of audio from a QuickTime movie, for use in Live, don't bother opening it in an editor first. Just drag the movie into an empty slot in one of Live's Session View audio tracks. You'll get an error message telling you that 'Video can only be displayed...blah blah...' In other words, Session View won't import movies, but it will steal their audio!

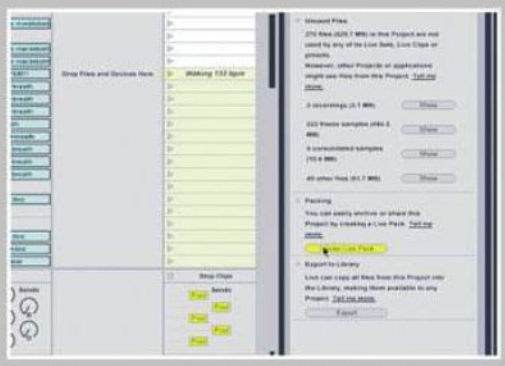
Live Set Checklist

Six crucial live performance checks you need to run

Ableton Live is of course, incredibly flexible when it comes to live performance, but when you're relying on a single laptop and application to run your whole show, you need to make sure everything is in tip-top condition and has been double- and triple-checked. It's important not to over-prepare for your live shows though, because then you feel like you've done the gig already, but you do need to have the practical stuff covered as well as making sure your computer is as well equipped as it can possibly be. It doesn't matter as much if you make mistakes or bad decisions during a gig, but it does matter if you forget your power supply, and your battery goes totally flat during your set or if your CPU is too high. So let's have a look at some of the most important things you should have on your pre-gig checklist.



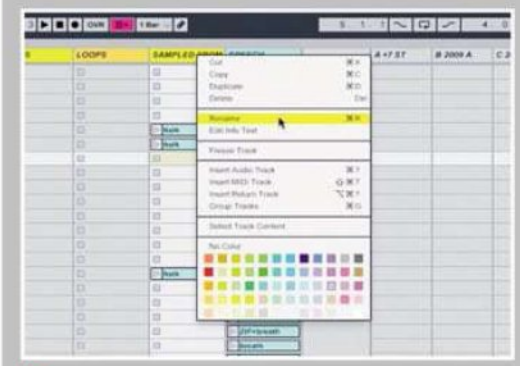
1 Check that all of your software, including your computer OS, is up to date, compatible and working properly. Anytime you update your OS, check online for updated drivers for your audio and MIDI hardware. But if your system's working as it is, don't change anything within two weeks of a gig!



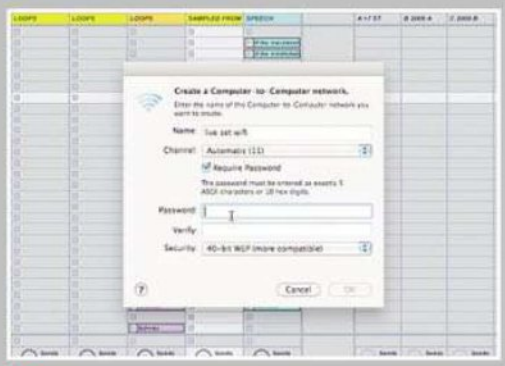
2 File management – the really exciting stuff. Use File/Collect All and Save to round up all your samples into one place on your computer's drive, not an external one that you might leave at home. Use File/Manage Files to create a Live Pack (.alp) archive too, just in case!

3 After the computer, the soundcard and controller are the most important hardware items. Make sure the controller and soundcard are properly configured in Live's Preferences. Check your audio output levels. Use labelling to help you remember any non-standard controller assignments.

4 Starting positions part one. Make sure everything is how and where it should be before you start your set. Zero your controls (or move them to whatever position they should be in), plug your laptop into mains power and quit any unwanted open applications. Turn your phone off!



5 Set your starting tempo and key signature, stop all clips (using the Stop Clips button), make sure your track and master volume faders are at the right positions, and take a minute to label anything that you need to be extra clear about (using command-R).



6 Networking skills. No, not that kind of networking, I'm talking WiFi. If you're using a fancy new iPad app like Griid or touchAble to control Ableton, it'll rely on having an available WiFi network, so you better learn how to set one up, and practice troubleshooting it! Tip: password-protect it.

Optimise Your System

Keeping your Live sets healthy

Be mean

Use the Crop Sample command to trim audio samples – like around the loop brace, or outside the start/end markers. If the clip repeats in your set, copy and paste it to all of the slots, so they use just the one sample. Saves disk space!

One track mind

It's easier for a computer to play a mono file than a stereo one. If you're using stereo samples that you can crunch down to mono, do it. You'll have to use an external audio editor though, but you can link to one from within Live.

Get warped. Or not

Make sure you're using the most appropriate warp settings for your audio clips, and remember that Complex mode is CPU-heavy, so avoid using it as the default warp mode. Turn warping off altogether for samples that don't need looping, time-stretching or pitch changes.

Round 'em up

At the end of a project, use Collect All and Save to gather every sample used by your Live project into the project folder – this is very important for archiving. You could then use the Manage Files commands to create a .alp archive file.

Energy issues

Your laptop performs better when it's plugged into the mains than when it's running off the battery – remember that for more CPU-critical moments – make sure your system preferences are set to highest performance too and enable multi-core support if you need it.

FL STUDIO

FL Studio is one of the fastest DAWs when putting together a tune. We're here to make you even faster, even smarter and even more prolific…

Audio Effects Triggered by Notes

1 Load an Envelope controller, set it to unipolar mode and create a gating envelope with a sustain breakpoint. Right-click the mute switch, select Link to Controller and choose Art 1. Now, a MIDI note will enable the effect.

Per Note Parameters

2 Many native FL Studio generators support additional per note parameters such as Pan and Mod X. Right-click the space on the bottom left of the piano roll to

How To Make: Deep Dub Bass

Quickly craft some devastatingly deep Dubstep drones

We're going to use a raw unfiltered synth tone and Fruity Love Philter to apply a cutoff LFO with the characteristic tempo-synced speed variation. Automate the pattern number selector to change the filter envelope.

ON THE DVD

> An example bassline loop with a tempo-synced filter LFO rhythmically changing in speed. Further automation is applied to add variation.

1 Load a 3OSC generator, turn the VOL of Osc 3 to 0, switch oscillator 1 and 2 to a square waveform, set osc 2 to -12 semitones and osc 1 to +12 semitones and apply some stereo detune (check the hint bar for the values as you tweak).

2 Route it to a mixer track and add Fruity Love Philter, load its 'Default' preset. Select the Mango filter, set drive and resonance to 45%, cutoff and envelope amount to 25%. Add further effects such as EQ and Chorus.

3 Create a pattern envelope for the cutoff. Disable 'Sync Pattern Changes'. From the bottom left of the piano roll, right-click and select pattern number. Use the Draw tool to automate the pattern along with your notes.

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Project Data Folder

> In Project General settings set a project data folder to save dragged, recorded and sent to playlist audio for that project, instead of the default 'Sliced Beats' folder. That way you'll be able to find them again!

Use Mixer as Playback Position

> Depending on your soundcard you may find recorded notes are placed slightly early. Enable Use Mixer as Playback Position in audio settings so the recorded note placement reflects what was heard while your were recording. Best used if you are using a low latency.

Instant Velocity Mapping

> Simplify your velocity editing duties by setting a velocity input mapping curve that suits how you play in MIDI Options. You can also set input velocity to go to note Mod X or Y instead.

Auto Select Linked Modules Off

> When using a multi-timbral VST you may want to keep its interface in view while playing the MIDI out channels controlling the different parts. Turn off Auto Select Linked Modules in General Settings to stop the VST window from closing when you select the MIDI out channels.

Override Generic Links

> Use Override Generic Links to save global external controller knob mappings per plug-in window focus. Your links are recalled the next time you focus that plug-in window. Use the Multilink button in the recording panel to link many controllers.

Automation Clip Range

3 Automation clips have minimum and maximum range parameters which themselves can be automated. Double-click an automation clip to bring up its channel settings and create automation clips for its min and max knobs. You can then use the new automation clips to effectively shift, multiply or invert the original automation. You can also copy and paste a parameter value to the min or max range knobs via right click, to limit the range of the automation clip to exact values.

select them. Making changes here is a super fast way to make great morphing riffs and give you absolute control of every element.

For example, when Mod X is mapped to a parameter in a generator such as Slicex, you can set different notes to slice in different ways. Also, when you place a slide note, these values will also slide as well as the note pitch.

Controller Link Formula Mapping

4 Internal and external controller links can have specific mappings by using formulas in the link dialogue. This means when you link the same MIDI control, knob or fader, to more than one parameter, each can have different behaviours. For example use Tension(Input,13)*0.8 and Tension(1-Input,13)*0.8 on two mixer volume faders to crossfade between them with one control.

Piano Roll Swing Automation

5 Link an LFO from the Peak controller plug-in to the offset knob in the FUNC tab of generator channels to apply an automatable swing for piano roll notes. Use a square LFO shape, right-click the speed knob, set it to two steps, VOL to -100%, PHS to just before half way. The BASE knob becomes the swing amount.

Use four-step speed for 8th note swing or apply further automation for other grooves. Note this isn't possible with Layer channels. FM

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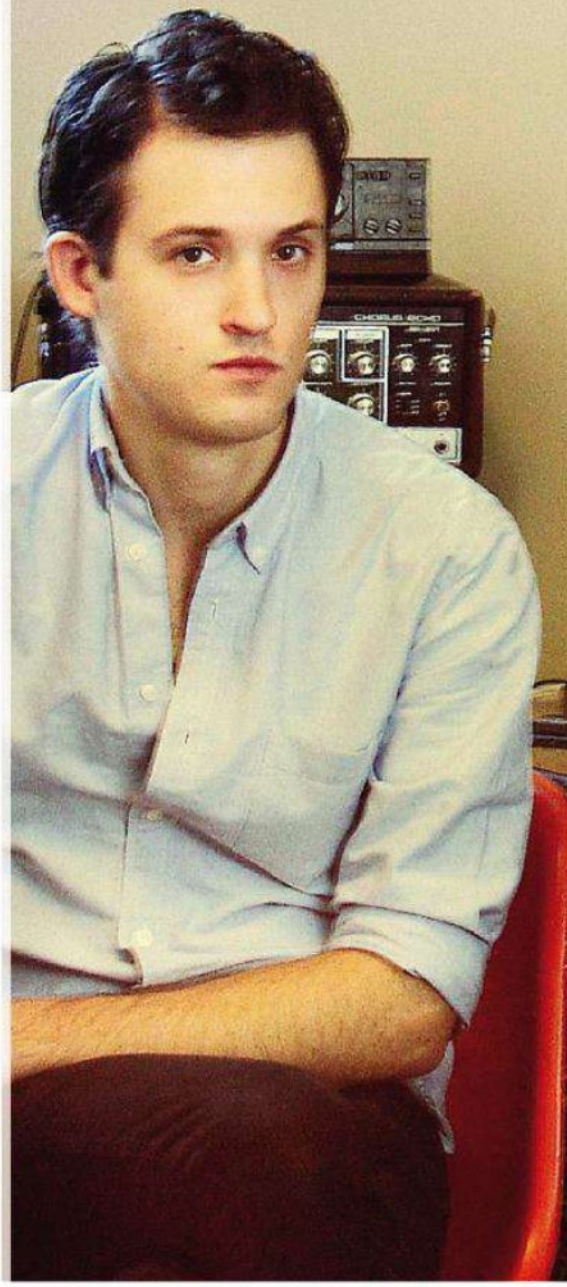
The Disco duo continue their rise to success. ***Declan McGlynn*** tracked them down to talk DFA, modular synths and Philippe Zdar

Holy Ghost!

IN THE STUDIO WITH...



New York's DFA label has churned out some of the best and critically-acclaimed 12"s and albums of the past decade and has risen to become one of the most prolific labels around for Electronic music fans. Holy Ghost! first manifested in 2007 with the release of their 12" *Hold On*, to much acclaim. It was two years before the Ghosties released another original, but in that time their remixing pendulum was in full swing tackling Moby, MGMT, Phoenix, Jazzanova and Cut Copy and turning them into finger snapping modern Disco gems.

Next single, *I Will Come Back*, was one giant leap in production and it was clear HG! had come a long way. Their collaboration with Friendly Fires and the excellent *Static on the Wire EP* landed around the same time and established their sound and name with a much wider audience.

If you've never heard a Holy Ghost! track or remix, it's fair to say it's classic DFA – snapped claps, grooving synth basslines, live drums with a tight-twist and plenty of electronic appreciation. But like most DFA releases, there's depth beyond the throwback traits and while we may currently be marinating in a Disco rebirth, when it's dried up, there's little chance Holy Ghost! will go with it.

What better time then to get the scoop on the Ghost's gear and their fairly new live show setup?

FM: How difficult was it to take your studio-based sound to the stage?

Nicholas Millhiser: "Yeah it was pretty difficult. We're pretty indulgent in the studio, as far as not thinking about playing them live or whether or not it would be difficult to play live or not. So there are a lot of unique sounds that just happen once and aren't used on any other song, but for that song they're really crucial. So in a way, the easy thing to do would just be to bring everything.

"The biggest obstacle was finding a few synths that can multi-task really well and handle the role of the bass such as our modular or the [Yamaha] CS-15 and for poly synths, finding something that could sound like a Juno or a CS-60. And they also had to not break, and be light!"

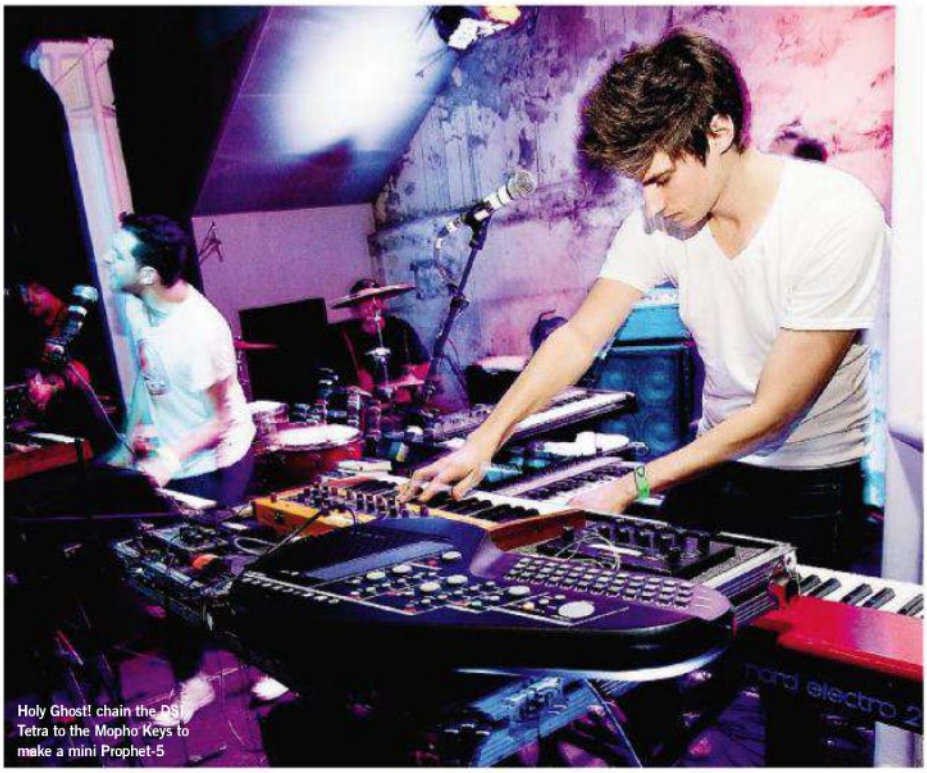
We spoke to Juan MacLean last year and he said no DFA artists are allowed to use a laptop on stage…

Alex Frankel: "What makes it really difficult is that, on this tour, we don't have a crew and we have so much equipment so it's very stressful and, to be

frank, it doesn't always sound better than it would if it was just coming out of a laptop.

"The frustrating thing as an artist is that the majority of people in the audience couldn't give a fuck where it's coming from, but what they do notice is when things go wrong or when it doesn't sound exactly like the record. We're not like LCD, who can bring whatever they want because they have the crew, so we're kind of adjusting to consolidating stuff – not necessarily with a laptop. It mostly has to do with monitoring actually.

"Nick doesn't have headphones on the drums – that's another DFA rule, no headphones on stage – so the monitors have to be decent and when you don't have your own monitor man and your just screaming 'SH-101, up, up!' it can get pretty chaotic, so we're trying to figure out a way to make it more pleasurable for ourselves too."



Holy Ghost! chain the DS Tetra to the Mopho Keys to make a mini Prophet-5

© Kevin Lake

So talk us through your stage setup…

NM: "It's basically a traditional drum kit with an MPC that's the master clock that has kick and clap samples and that's what's coming out of my monitor as a click. It also sends any really busy sequences that could never be played by hand as well as holding some samples that Alex can play from the keyboard.

"Chris the guitarist has a modest pedal board and he's also controlling the bass synth that is all sequenced. We use a lot of Dave Smith stuff through Nancy Whang from LCD, they were really great about getting us what we needed. We love the Mopho Keys, it's really great and it ticks all the boxes for live performance. Eric the keyboard player has two of those and one of them is daisy-chained to the Tetra, so it's basically a tiny Prophet-5.

"Then there's a second Tetra, which takes care of some sequencing and some white noise hi-hats, and that sort of thing. There are three pieces of vintage kit on stage: a Roland SH-101 for leads, mainly because they're really light and remarkably stable, an old Roland RS-09 string synth and then Alex plays a Rhodes."

> "We're lucky because DFA have never said 'no' to us, which is remarkable as we haven't really made them any money yet"

Tell us about recording *Static on the Wire EP*.

AF: "It was recorded in a couple of different places, we did the majority of it with the album batch which has been recorded over the past two-and-a-half years and we did some bits at Nick's house where he has a studio."

NM: "We worked with a really great guy called Chris Zane [Passion Pit, Walkmen, Shy Child] who helped us with cleaning up the last stages of some of the songs. Juan MacLean and Tim Goldsworthy really helped with the engineering too."

AF: "We're lucky because DFA have never said 'no' to us, which is remarkable as we haven't made them any money yet, but at the same time we were never able to go rent a studio for two months, so we had to do it piece by piece and then edit at home.

"We work and write at home and almost all of our remixes are done there, but it's the tracking of drums that we can't do at home because we don't have the mics and the Neve pres and all that."

NM: "It's funny because all the vocals on the EP, we originally did at a bigger studio and then didn't like them and ended up redoing them at home. In fact, they were probably redone four or five times at different places."

AF: "I think it was about performance too – we started rehearsing the live stuff towards the end of the recording of the EP and because of that and singing every day and really going for it, we felt there wasn't enough attitude in what we'd recorded. We eventually ended up going with what we did on the [Neumann TLM] 193 at Nick's place."

NM: "Alex has a really easy voice to record, it's not like it needs a specific signal chain or room or anything. The go-to DFA mic is probably the Neumann TLM 193, for kicks, for snares."

AF: "The snares will blow it out occasionally, James [Murphy] goes through a bunch of them. There was a time when it was the only mic we had, and it kind of still is."

NM: "They're not cheap, but for how they sound and for what they can do they're fantastic. It was a lot of money for me to spend when I bought that a few years ago, especially on a microphone."

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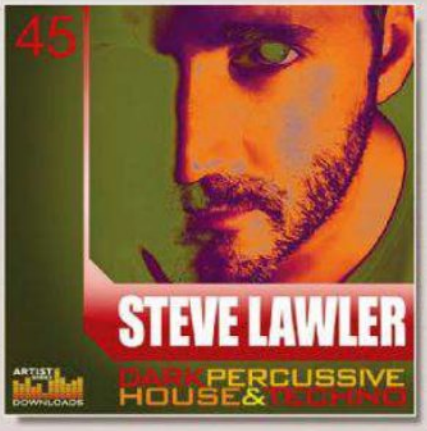

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You can sometimes feel a little bitter about spending a lot of money on something that doesn't make a sound…

NM: "Totally! Like converters and stuff. But you know, a couple of years later you appreciate it so much more. I'd like to buy a whole lot more of them now."

What are the main synths in your studio?

AF: "We use a lot of organic keyboards like the Wurlitzer 200B and Rhodes. I've got a Yamaha CP60 that I love dearly and we've got a Clavinet too and they get used a lot. Synth-wise, we've got a [Yamaha] CS-60, [Sequential Circuits] Prophet-5, Nick's [synthesizers].com modular – which is all over the tracks on the EP – Yamaha CS-15 and Roland [RS-505] Paraphonic."

NM: "I have to say though, one of the main parts of our modular setup is a module that Gavin Russom [DFA synth guru] made. It basically takes a rhythmic input and creates a gate output. We use it for maybe old string synths that don't have MIDI and it sounds almost like a tempo-sync'd LFO."

On a lot of the Holy Ghost! remixes, you just come up with a whole new backing track for the acapella. Have you ever thought 'you know what, I'm gonna hold on to that'?

AF: "I don't think we've actually ever kept anything, but on almost every remix we do, there's a point where we get excited and I'm usually the one that's like 'we should keep that dude!' When we're looping it up and play over things, I start to hear a whole new song in my head."

NM: "The closest we ever came was the Phoenix remix. We'd basically finished it and we said 'let's spend three days and if we can come up with something that we feel is as good or almost as good then we'll keep it', but we didn't do it."

How important has remixing been for you?

AF: "Remixing and DJing taught us an enormous amount – we couldn't go to DFA and say 'we need a budget to record drums or horns for this remix' so the way we learned to do that, or even simple things like guitars, was through remixing. We had to figure out how to do it on our own."

> We finished the Phoenix remix and we said 'let's spend three days and if we can come up with something as good, we'll keep it'

What are you guys tracking on at home then? Pro Tools?

NM: "Yeah Pro Tools with a Soundcraft 500A desk. I've grown really attached to the EQs on that desk, it does certain things really well – it sounds great on hi-hats. It's really early solid-state so it's tough. If you put a 707 or a 909 through it and ramp up the pres, it sounds like every classic House record."

AF: "It's really great for vocals and mid-high stuff, it just sounds great. Even now we're talking about getting another board but it's one that we'd definitely have in a B-room or something."

NM: "Even if I had the money, I'd buy the same console they have at Plantain [DFA studio HQ] and I'd pay someone to rack up eight-channels of the Soundcraft which would probably cost ten times more than the board itself! It's 24-channels but we only have 16 I/O for Pro Tools."

What's the interface?

AF: "We're using a Digi 002 rack, and it's hooked up to a Behringer ADA8000. When Nick set up his place, I basically had the same setup at mine with the dbx compressor, a smaller Soundcraft, the Behringer, almost an identical rig. I took a picture of it and posted it on my personal Facebook and James and Juan [MacLean] just laid into me – comment after comment – just taking the piss out of it [laughs]."

When is the album coming?

AF: "We felt like there were things missing from the album. It was essentially done with the songs from *Static On The Wire* included but we didn't have everything we wanted to explore on it and there were some label things to sort out, so we just thought, let's take this opportunity to put something out, we've waiting this long. We're still looking at next year for a release though, could be March but then, it could be 2012…"FM

© James Cumpsty

Holy Ghost! on Philippe Zdar

NM: "Going back to the Phoenix remix, when we were listening through the stems we got sent, we were amazed – there's some crazy shit on that album as a whole. There was a part for example I could have sworn was a live bass but when we got the stems, all the bass on that song was a CS-80. When you listen to it by itself it's totally a CS-80 but in the song it becomes something else. We learned a lot from listening to stems too.

"I've always loved Philippe Zdar's mixes. We both definitely learned from James Murphy that there's a certain aesthetic with gear. He tends to be very narrow. If James finds a preamp he likes, he'll just use that for everything. For example, he's got eight UA 610s and he doesn't give a fuck about Neves, so I never gave a fuck about Neves because I've never really used them. But then when we went to Zdar's place, his studio is like the antitheses of James' place [see *FM221* for an *In The Studio with Philippe Zdar*]. We were talking about reverbs and he showed me his reverb room and he has every one of those AKGs, the BX-10, BX-20, BX-25, two plates, Lexicons – it really is a remarkable studio."

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FutureMusic KNOWLEDGE BASE

A Brief History of GarageBand

It's time to shine the *Knowledge Base* spotlight on Apple's GarageBand. Join ***Greg Scarth*** as our DAW history series continues

This month in Knowledge Base we're going to take a look at the history of Apple's groundbreaking entry-level DAW, GarageBand. Despite only being around since 2004, GarageBand is firmly established as a favourite software package for beginners and professionals alike.

Background

The story of GarageBand starts with Apple's purchase of Emagic in July 2002. As we saw back in *FM232* when we examined the history of Logic, Apple's acquisition of the German software company also led to the arrival of co-founder Gerhard Lengeling as Senior Director of Software Engineering (Music Applications). At the time, the stage was nicely set for Apple to expand their interest from professional music applications to home users and beginners. The first generation iMac, released in 1998, had revitalised Apple's profile in the home computer market so it made reasonable sense that Apple should also target consumers with their audio software. On his arrival in Cupertino, Lengeling didn't just set about working on Logic 6 for the Mac, he also took charge of a team developing a new product based on a simplified version of the same audio engine.

The new software, known as GarageBand, was announced at the Macworld Conference & Expo in early January 2004. Featuring digital audio recording, MIDI sequencing, plus support for plug-in effects and virtual instruments, GarageBand offered a taste of pro music software in a friendly, intuitive style. The horizontal timeline setup was familiar but more importantly it was simplified just enough to make it appeal to beginners.

GarageBand's GUI has remained remarkably similar since its inception in 2004

Back in the garage

Regardless of its audio capabilities, for most users the single most important feature of GarageBand was its price – or rather, the absence of price. From the introduction of version 1.0, every new Mac has included a full, unlimited copy of GarageBand as part of Apple's iLife software suite, which also contains iMovie, iPhoto, iDVD and now iWeb. The latest version of the iLife suite is also available as a £45 upgrade.

Although GarageBand offered many of the features found in much more expensive DAWs, its critics argued that a handful of omissions marked it out as a toy for amateurs rather than a serious music production tool. Most notably, the maximum recording quality of 16-bit resolution and 44.1kHz sample rate was markedly lower than most of the competition, and GarageBand was only capable of recording one track at a time. Nevertheless, there was no doubt that underneath the fun user interface lay a powerful sound engine. Traditionally, the synths, drum machines and effects bundled with cheap DAWs weren't up to much. In the last decade however, software developers have really stepped up their game and even the most basic DAW comes with a handful of useable synths and effects. GarageBand is no exception, offering a little of everything the user might require.

Scan down the list of GarageBand Modules under the Sound Generator menu and you'll see that the focus is distinctly on virtual emulations of real-life instruments. Electric piano, guitar, horns, strings and the like mean that instrumentalists can fill in the gaps around their own performances. For those of us seeking electronic sounds, the selection of analogue, digital and hybrid synths offer a variety of sonic options. The instruments may only offer basic editing options but they're more than capable of producing excellent sounds. The effects cover the most common bases with simplified editing options. Load up the compressor and you're presented simply with sliders for threshold, ratio, attack and gain. No valve emulation modes, vintage modelling or sidechains here. The simplicity of GarageBand's effects makes them far easier for beginners to master and once you outgrow them you can always upgrade.

Additional content

From the first version, GarageBand came loaded with a broad selection of virtual instruments, effects and loops (both MIDI and audio), but Apple also provided a number of expansion routes. GarageBand was notable for its introduction of two new proprietary formats from Apple. For samples, Apple Loops arrived, based on the AIFF file format but with added metadata to store

information such as tempo, pitch, loop length and time signature. The Audio Unit format was also adopted for effect and instrument plug-ins, allowing the sound palette to be upgraded with ease.

Over the next couple of years, GarageBand was slowly updated to introduce new features with each iteration of iLife. 2005 saw the arrival of score editing and multi-track recording, while GarageBand '06 finally introduced mid-track tempo changes. During this period of the product's development, Apple focused heavily on promoting the optional Jam Packs, collections of loops, samples and software instruments designed to expand the creative scope of the basic package. The pack concept helped keep GarageBand fresh for users while also simplifying the expansion process. Although you could achieve similar results with Apple Loops format sample libraries and Audio Unit plug-ins, Apple's themed collections took the uncertainty out of expansion for users who may never have added a plug-in to any software before, let alone music software.

For users who felt they may outgrow GarageBand, Apple ensured that the software maintained strong links to their pro audio software. All GarageBand projects open in Logic (as, for that matter, would all their Apple Loops and AU plug-ins).

Accessories

Audio content and plug-ins aren't the only optional extras Apple recommend for GarageBand. The company's close working relationships with Apogee and Euphonix have led to a range of top quality hardware accessories aimed at GarageBand users, with the official endorsements offering wary buyers reassurance that everything will play nicely together. For the money there are very few audio interfaces which can beat the Apogee ONE or Duet. M-Audio also got in on the act, with products like the iControl, a simple low budget control surface released in 2005, aimed directly at GarageBand users. More recently, the Apogee GiO interface takes the form of a guitar pedalboard and control surface which integrates neatly with GarageBand's (or Logic's) effects and amp simulators. There are plenty of generic alternatives on the market too, but the safety net of official Apple support can't do any harm when it comes to helping prospective buyers choose their product.

> "The Artist Lessons offer advice from Sting, Norah Jones and John Legend"

Magic and Lessons

In the summer of 2007, iLife '08 brought with it a new version of GarageBand, a major upgrade which introduced 24-bit recording and export, multiple takes on one track, note and chord name displays for software instruments, the ability to print musical notation, new effects and more advanced automation controls. On a slightly more wacky note, the new Magic GarageBand feature allowed users to piece together custom jam sessions and backing tracks as easily as selecting a genre and choosing a few instruments.

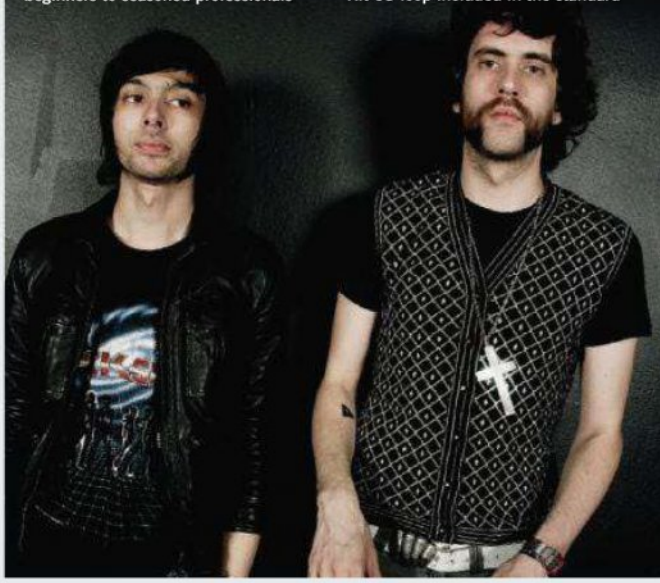
The idea was interesting, and it demonstrated Apple's increasing focus on GarageBand as a learning tool, but the release of GarageBand '09 in January 2009 took things to another level with the introduction of the Lessons feature, which allowed users to download additional content to help them master their instrument. The wide range of Artist Lessons on offer features video advice from the likes of Sting, Norah Jones and John Legend on how to play some of their most famous songs. GarageBand '11, announced in October 2010, introduced a handful of updates to ensure the package stayed up to date. Most notably, Flex Time, only introduced to Logic in 2009, was brought in to enhance GarageBand's time-stretching, allowing users to apply note timing correction and Groove Matching features typically found in more advanced DAWs.

In the garage

GarageBand may be simplistic in comparison to most other DAWs, but it's still a highly capable program in its own right. Rather than concentrating on what it can't do, consider just how remarkable it is that so many top features have been crammed into a program which is given away free with every Mac. While it's a stretch to call GarageBand a stripped-down version of Logic, both programs are based on the same audio engine and GarageBand can definitely be seen as a suitable first step for musicians who will later graduate to Apple's pro software. Having said that, for many users GarageBand does everything necessary to record and produce complete tracks. Consistent, well-focused development by Apple has ensured that the program remains ideally suited to beginners and experienced producers alike. As a low budget DAW there are few comparable packages. FM

Pro tool?

Following its announcement in 2004, GarageBand very quickly attracted legions of fans ranging from complete beginners to seasoned professionals and it wasn't long before bundled content began to appear on hit records. First Rihanna's *Umbrella*, produced by The Dream and Christopher 'Tricky' Stuart, was based on the Vintage Funk Kit 03 loop included in the standard installation. Then the following year Usher's *Love In This Club*, produced by Polow da Don, featured the Euro Hero Synth loops from the Remix Tools Jam Pack. Clearly even experienced big name producers working for million-selling artists weren't afraid to use a program occasionally derided as less serious than other DAWs.



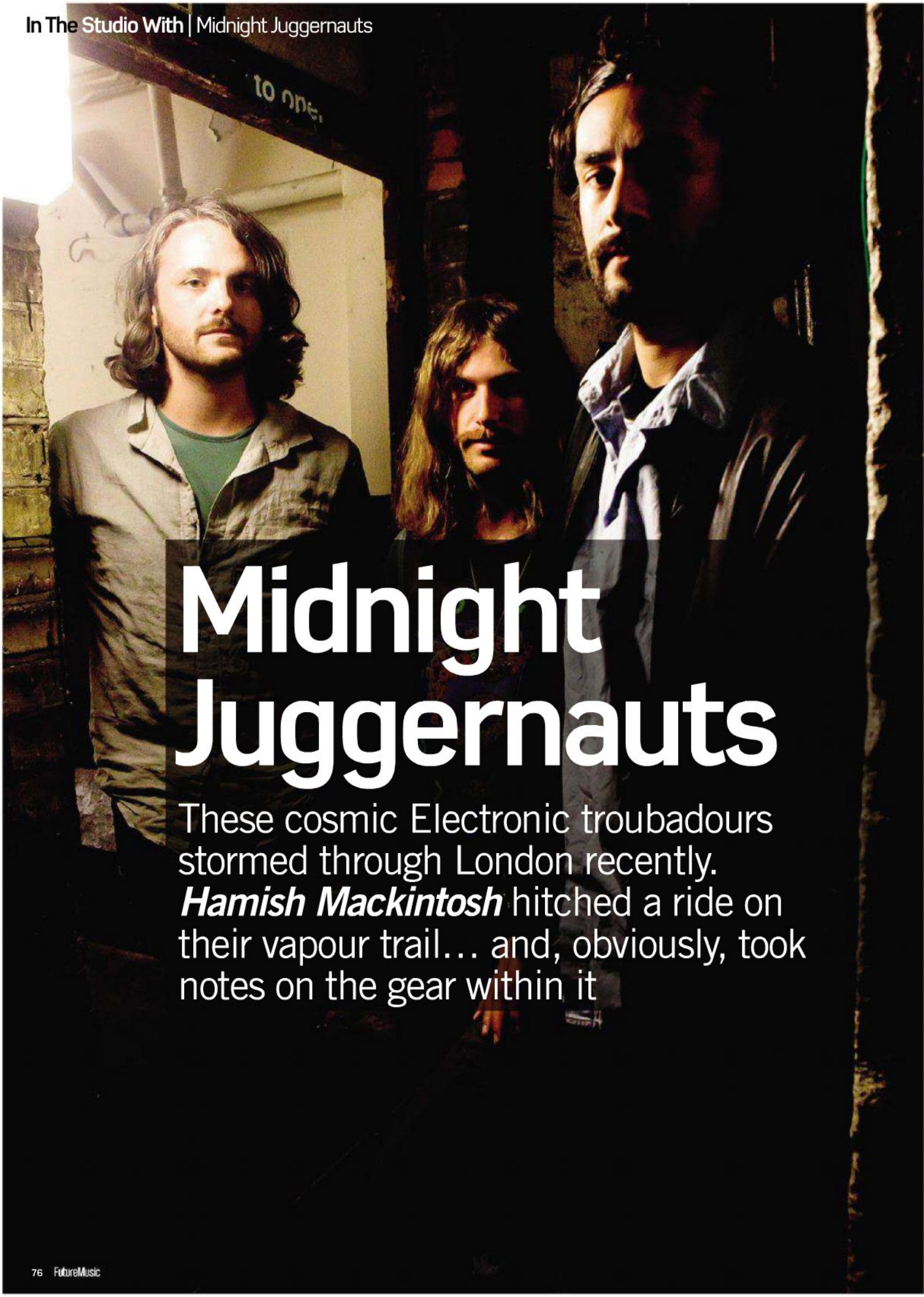
Dance music aficionados sat up and took even more notice when Parisian Electro heroes Justice announced in interviews that they'd used GarageBand to create their debut album, †. Whether the duo used it to create demos, work on final tracks or just to jam ideas is unclear. There's even a chance they were merely spreading misinformation. Either way, the truth is that GarageBand can be used to create tracks that sound as good as anything else. Even if you start writing in GarageBand then import your track into Logic to mix, there's a lot to be said for working with a simple, intuitive package to get ideas down as quickly as possible. GarageBand may look like a toy in comparison to some DAWs, but it most definitely isn't.

ON THE DVD

You'll find a collection of GarageBand classic sounds that show that it punches well above its weight.

KNOWLEDGE BASE NEXT ISSUE

Stay tuned to *Knowledge Base* for more unmissable studio wisdom and industry insight. *FM237* **on sale 17th February**



Midnight Juggernauts

These cosmic Electronic troubadours stormed through London recently. ***Hamish Mackintosh*** hitched a ride on their vapour trail… and, obviously, took notes on the gear within it

© Kevin Lake

Midnight Juggernauts are a three-piece from Melbourne, Australia, consisting of keyboardist/guitarist Vincent Vendetta, drummer/samplist Daniel Stricker and bassist/keyboardist Andrew Szekeres. Their 2007 debut, *Dystopia*, showcased their precocious talent for writing groove-ridden, spaced-out Dance music. 2010's *The Crystal Axis* cements their place as one of the brightest rising stars in the musical firmament, not to mention one of the most incendiary live acts around.

FM caught up with the Juggernauts as they soundchecked for their headlining show at London's City Arts & Music Project (CAMP) in between some extremely well-received UK support slots with Canadian Electro-Funkers Chromeo.

Keen to discover more about the Juggernauts' blissful fusion of traditional Rock instrumentation with decidedly non-traditional Electronic samplers and sequencers, we spoke with Daniel Strickland to get the lowdown on how they take that cosmic Electronica from their Melbourne studio HQ and translate it into the blistering live shows they're becoming renowned for.

FM: How has the tour been going so far?

Daniel Strickland: "It's going really well… It's been one of the busiest tours we've done; in a way, also the most organised one, as well. We've been playing nearly every day back-to-back, but it's been great, as the shows have been busy, with lots of sell-outs. Playing in the UK has been great again, too."

In these days of file-sharing, is it pretty essential for bands to take an album out on the road again?

"Yeah, definitely. I think live is everything these days, as people aren't necessarily buying records: they're listening to your music, then coming to see you play. I'm into that idea, though – I'm not against the fact that people aren't buying records. I think that if you get yourself out of that headspace, I don't see why it can't work the other way."

Midnight Juggernauts have certainly had a good word-of-mouth vibe going for them. It was no less than Tom Findlay of Groove Armada who first alerted this hack to your wonderful music…

"Tom's a great guy. We met him at a festival in Australia and he's been a real champion for us ever since. We see him all over the place."

What was the genesis of the *Crystal Axis* concept that underpins the new album and your stage show?

"We'd been working on the album for a while, and with all of our music we try to set a mood or create a world to take people to with the music – that's the genesis of all the actual material. Dylan Martorell [Melbourne artist who helped create *The Crystal Axis*] is a friend of mine, and we've been wanting to work with him for a while. Vincent [Vendetta] had an idea to create this whole structure that was symbolic of the meeting of the three of our minds and our influences, so we got a whole bunch of friends on board to help put it together. I think that we came up with the concept and then our extended family of friends helped build it; it was quite an organic process, really."

Is the *Crystal Axis* theme pivotal to the live set-up?

"We definitely spent a lot of time in the studio trying out new things with this record. We had all these ideas and wanted to explore a lot of them. This record ended up having so many layers, ambient layers and a lot of stuff going on. Putting that all together live was a very interesting thing to do. It was a real challenge, as there's only three of us and it's quite a big sound. I found recreating that to be one of the most enjoyable things we do. I don't know, you get all these musical toys together and it's not the same as the record; rather you create something that can change and evolve. That's really important, especially with Electronic music."

Does having that ability to improvise live help to keep you sane on tour?

"Yeah. I think it's an easy trap to fall into – particularly with Electronic music – to do the same thing every night, maybe because you're reliant on some stuff that's out of your control when you've got sequencing going on. I think it's really important to kind of push away from that and to find ways of creating Electronic music that you can really move around in."

Despite your electronic infrastructure there's a real warm, organic sound. Is it important to you guys to surf that analogue/digital cusp?

"Well, we try… [Laughs]. I don't know how good we are, but at least we're trying. We do lots of things with the live kit and MIDI and a bunch of looping, distortion and pitch-shifting pedals. What we'll do is have one of them connected via MIDI to another interface, which will trigger sounds and sequences. So instead of having something that's running along the whole time, like a backing track, we can be playing a song completely live and then trigger a chord or a section or something that we can't physically possibly do – and that adds a layer to the song. It's happening in a way that's not completely tied-down to a sequence then.

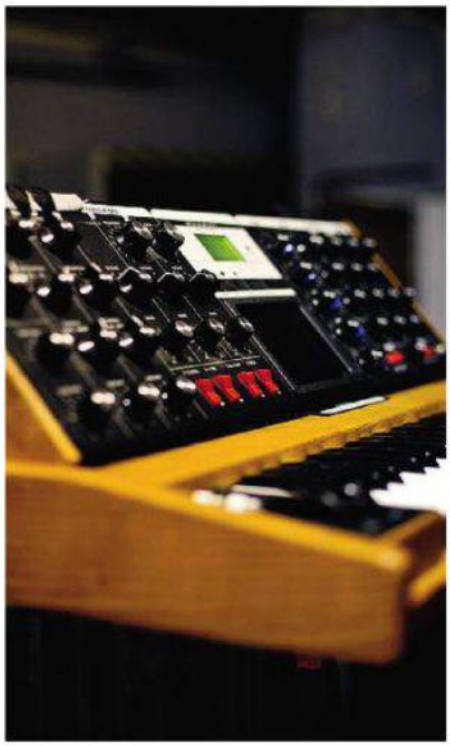
"So we've got that, but we also create live loops between the two SPDS pads when we're onstage, which we'll then play along to. We use a whole bunch of different pedals and keyboards on top of the traditional stuff."

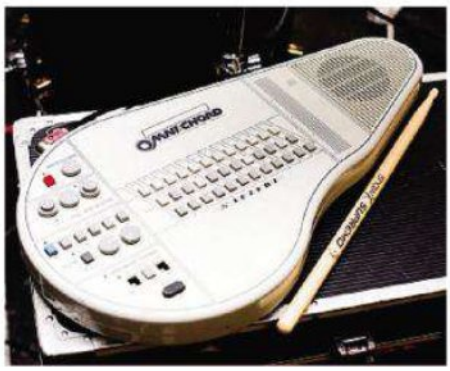
Is it quite nerve-wracking to incorporate the machines, or do you trust the technology?

"I think the more technology you add, the more nervous you get about the whole thing – but when it's stuff like physical pedals or drum pads that you hit and press, I feel a lot less nervous about it! When you're running solely with something like Ableton behind you or something sequenced… I mean, we have elements of that going on, but if you're running completely on it and it breaks down, you're done for. I don't think you really want the technology to become too much of the focal point."

So the ubiquitous Ableton gets a place in the Juggernauts' hearts?

"We do use it a lot, as it's an awesome program – especially for the live environment. We run a lot of the samples that we trigger from the SPDS pads from Ableton. For some people it's their whole show, though, and if you're using it like that for its simplest means and it breaks down on you, it could be a nightmare."





Ableton certainly seems to have opened the box for musicians who want to do a bit more with computers in the live environment, doesn't it?
"Absolutely. It's a fascinating bit of software in many ways, over and above in a live setting. We use it a lot to write sketches and ideas when we're on the road. When we did our first major touring a couple of years ago, I was really surprised at how much Vince and Andy [Szekere] were using their computers to make music. I came from a more traditional, 'get in a room with a bunch of people and jam stuff out' kind of background. Then I got opened up a lot more to the world of writing within the computer. Now I'm probably somewhere more in the middle. That's where this new record is, too: a mix of writing stuff on computers and writing together in a room. Now, when we're touring, we'll all be writing stuff on our laptops all the time – although it's still a mix in some ways as, before we came out on tour, I'd been working on a bunch of new tracks and I went to a friend's studio to lay down some drums. I've spent the past couple of weeks editing them and chopping them up on the computer."

Is it good to be able to take all your studio ideas out on the road with you?
"Yes, but it is limited, too, in that you still can't get some of the sounds or the improvised nature of being in a room with other musicians. As long as you realise that then it's great and it definitely serves a purpose, it's fun to explore with it."

Any plans as to how the Juggernauts' live show will develop from here?
"Even now, there's a whole load of things that we'd like to try out live but just haven't had the time to. We're been touring a lot, and also writing and recording the album. I guess it just depends on the songs; it's always good to get new gear, experiment with sounds and incorporate them in the studio, before the final step of realising it all live. I think if you've already been playing in a room then it's not such a crazy leap."

> At the moment, it feels like we've been playing around with running traditional instruments through new digital effects

Is there anything that you guys want to take back into the studio from the live experience?
"Sure – and that's the whole thing. The reason we ended up with the record we did this time around was because we'd been playing live so much. The reason we played live like we did on the first record was because we'd worked on an album that was done on a computer and with electronic instruments. So it's very much back and forth. This time, I'm not sure where it's going to go. At the moment, it feels like we've been playing around with running traditional instruments through a lot of new digital effects that will make it sound weird and interesting."

When you're messing around with the old stuff there's always the chance of the happy accident?
"There definitely is. I think the main thing, though, is that the music you make is, at the end of the day, about the song underneath it all. We like a lot of the classic '60s and '70s bands that just wrote really good songs with classic, simple-sounding production."

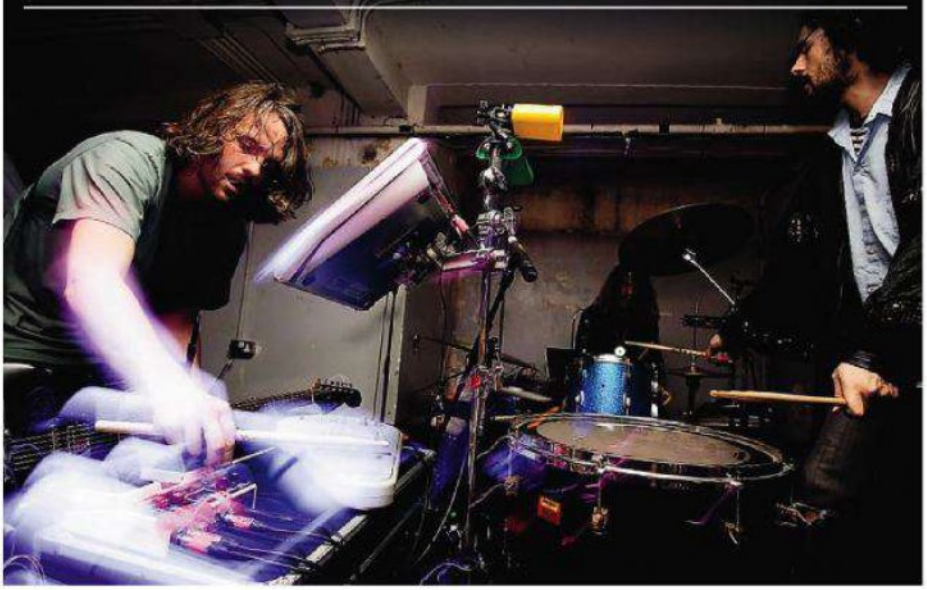
One quick final question… Have you bought any choice bits of gear on your travels?
"When we were in LA a few months ago I bought something called the Glamour Box, which is this crazy, dual-oscillator pedal with heaps of knobs. It's a real DIY pedal, which I found in a great out-of-the-way music-store in LA. You can run inputs into it and use its amazing filter to make stuff sound really crazy and warped. We're driving from San Francisco to LA again in a couple of weeks, and we're going to go to San Jose and visit Sequential Circuits and check out their stuff."

Dave Smith is an Electronic music legend…
"Absolutely. We've got a PolyEvolver and a bunch of his other stuff. His new stuff looks great, too. It's going to be a quick visit but, seeing that the US dollar's quite low at the moment that's probably not such a bad thing!" FM

Midnight Juggernauts' Live Rig

"We use a whole bunch of stuff. We have your fairly typical guitar, bass and drums, obviously, and a couple of keyboards. The keyboards are different to the ones we use at home in the studio, but that's because travelling around with old analogue synths can be a bit of a nightmare. So we use a Moog Voyager onstage, which is a reliable Moog to take around with you, but it also lets you do a lot of the things you can do with a Minimoog.

"We use a Nord Stage Ex, and there's a microKorg, too. In terms of triggering some of the other stuff, we've got two Roland SPDS sampling pads – it looks like a drum pad, but you can actually put samples on it. They're really cheap these days, and I remember getting my first one maybe about eight years ago when they certainly weren't cheap. You see a lot of them out there now because of the price, but they're also really quick and easy to sample on to and then trigger."



WANT TO KNOW MORE?

The Crystal Axis is out now on Siberia Records via ADA Global. Visit: midnightjuggernauts.com to find out more about upcoming gigs and releases.

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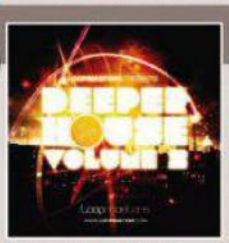

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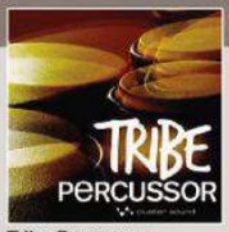

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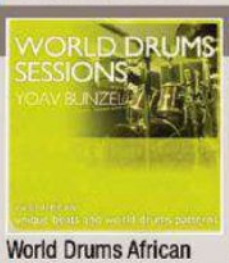
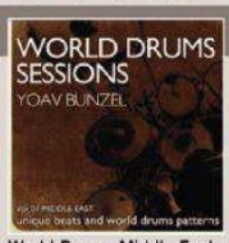
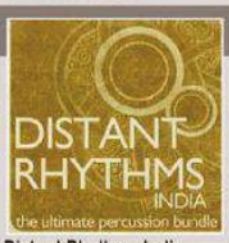


World Drums African

World Drums Balkan



World Drums Middle East



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Reviews

The month's studio essentials on the *FM* test bench...

Highlights this issue...

SSL Nucleus
82 It's a DAW controller, it's an audio interface. It's a thing of beauty. And we so want one.

Glansman 4midiloop
86 Built like a tank and bristling with controls, this DJ deck packs major heat.

2Box Drumit Five
92 With gorgeous futureretro looks and a genius soundbank this new kit kicks ass.

FXpansion Geist
96 The plug-in makers tackle the DAW. Could this be the key to reinventing your workflow?

Waldorf PPG Wave 3.V
100 Give your ears a dose of digital nostalgia via this remarkable classic PPG emulation.

SSL Nucleus

| £3,525

A multi-DAW controller, soundcard, monitoring path and dual preamp in one. ***Robbie Stamp*** investigates

WHAT IS IT?

Ethernet DAW controller and USB soundcard with analogue monitoring and dual preamps

CONTACT

Who: Solid State Logic
Tel: +44 (0)1865 842300
Web: solid-state-logic.com

HIGHLIGHTS

1 The Little Phatty engine at reduced cost
2 Very portable
3 USB MIDI compatibility

SSL have successfully implemented comprehensive multi-DAW control across their range of analogue consoles, and with the Nucleus they've taken one step further into the project studio world by combining a 16-channel controller with an analogue monitoring path, two preamps and a USB soundcard. Of course, this is SSL – so the preamps and monitor amplification use the SuperAnalogue signal paths (like the Duality and AWS consoles), the control is networkable to switch between three different DAWs, the preamps have balanced inserts and the soundcard offers up to 192kHz sample rates.

The Nucleus looks and feels much like its bigger siblings, from the faders and knobs to the jog wheel and transport controls. The control surface has two eight-channel sections flanking a centre section that houses the transport controls, utility function buttons and preamp/monitor controls. Each channel comprises a fader, rotary pot, backlit buttons for cut/mute, solo and channel select, and a 10-segment level meter at the top. The two channel sections also feature a row of eight buttons for assignable functions.

The analogue I/O at the rear is accompanied by the soundcard USB socket, four USB sockets for keyboards/mice/hubs, optical S/PDIF I/O, an RS-232 terminal (for SSL only – do not touch!), a quarter-inch TRS footswitch jack (for play/record), an SD card socket for set-up storage and an Ethernet socket for the controller data linkage.

Networker

The DAW control uses Ethernet-based ipMIDI to connect to up to three workstations, which the user can switch between using two buttons in the centre section (DAW 2 and DAW 3) – a function suited to post production studios, for example. USB ports at the rear of the Nucleus allow a keyboard, mouse, memory stick and dongle, for example, to be routed to the recipient workstation without the need for duplication – though a USB switcher is necessary to re-route the Nucleus to each DAW. For a single workstation, a direct Ethernet crossover cable between

Protocols To Go

The Nucleus offers three protocols for DAW control: HUI, MCU and MIDI CC. The first two were created by Mackie, with HUI used by Pro Tools. The MCU protocol is incorporated into Logic and Nuendo/Cubase with slightly differing command sets, and this is what you'll find in the Logic and Nuendo templates.

For DAWs that don't support these two, there's MIDI CC protocol. Though this sounds like total freedom, it does require a lot of mapping in the DAW, and the Nucleus manual doesn't give a control map – using a MIDI monitor inside the DAW while moving the controls will allow you to make your own, though!

the Nucleus and the computer is the simplest and most effective method.

So which DAWs can be controlled via the Nucleus? Any that allows remote control via HUI, MCU or MIDI CC protocols (see Protocols To Go). The unit ships with base set-ups for Pro Tools, Logic and Nuendo/Cubase, as well as a MIDI CC set-up. These can be copied and customised via the Nucleus Remote interface and stored on the supplied SD card for transportation.

For this review I used the Nuendo template for my DAW, as well as creating a custom MIDI CC set-up, which was also used to control synths. From the Nucleus Remote utility, the basic template can be quickly loaded to the unit and – provided your DAW is ready for remote control – work can begin. Like any new control surface, it takes a little time to get oriented, but after a couple of hours' work I was familiar enough to start customising the control layout.

Scribbler

The main channel controls (Fader, Channel Select, Solo and Cut) aren't directly editable, and neither are the Bank/Channel navigation, Layer/User Toggle and Cursor buttons, but everything else is fair game. Right off the bat, 75% of my editing/mixing needs were met, still leaving over 32 controls available for assignment. This is made possible by the upper row of eight buttons (V-Sel switches) on each side and the rows of push-button pots (V-Pots) beneath them. In the base mode the V-Pots function as Pan controls and double as Insert/EQ/FX Send controls when necessary. The V-Sel switches can be assigned to a list of available functions through the Remote utility. The User 1 and 2 buttons pull up two more sets of control assignments for the V-Pots and V-Sel switches, only some of which are filled in the basic templates. The two LCD screens (Scribble Strips) that separate the rows of V-Pot and V-Sel switches function as labels for the controls in the two User modes while displaying channel names and pan/parameter values in the base mode. It's a surprisingly intuitive system that rarely foxed me, even during the initial stages; pretty soon I was merrily flipping between User control sets and working a project as quickly as ever.

> "Right off the bat 75% of my editing/mixing needs were met, leaving over 32 controls for assignment"

The process of control assignment within the Nucleus Remote is quick and simple, with any changes taking effect instantaneously, meaning that set-ups can be tweaked on the hoof. Clicking on the virtual V-Pot or V-Sel switch in the Remote utility presents the user with a choice of either standard DAW commands from a list or a keyboard shortcut. The V-Pot/Sel can then be given a six-character label that will show on the adjacent part of the Scribble Strip. The possibilities are further expanded with a 'Menu' option for the V-Sel switches, allowing you to select a sub-set of functions for the eight V-Pots beneath, permitting 64 possible commands per row of V-Sel/Pots. Obviously that could take some time to program, but key command set-ups and working practices evolve with time, and this way the Nucleus stands a good chance of keeping up.

Panner

The quality of the physical control interface is excellent, making the Nucleus easy and responsive to work with. The motorised faders use a pitchbend MIDI assignment that has over 16,000 increments, so mixer level changes are smooth and accurate. The pan pots have 11 LED position markers around them, with a single red LED to indicate the centre position. Eight Channel controllers are no doubt useful, but having 16 channels at hand reduces navigation movements, allowing more time for hands-on mixing. The big backlit transport controls and the weighty jog wheel are real highlights, in particular the navigation and scrubbing accuracy made possible by the latter. Because the V-Pots are continuous rotary controls, manual panning sweeps can be wayward, but the Flip switch swaps the faders and V-Pots, and panning can be approached like the cross-fader when scratching.

The audio side of the Nucleus-DAW relationship is carried via the USB connection. Alongside the two mic/line/instrument preamps (with balanced inserts), there's optical S/PDIF I/O, two headphone outputs, a balanced stereo line input, monitor outputs on balanced XLR and unbalanced RCA, and a mini-jack input for iPods and the like. As previously mentioned, the preamps and monitor signal path use SSL's SuperAnalogue circuitry, so the sound quality available here is high. Plenty of

SPECS

System Requirements:
Mac: OS X 10.5.8 or greater (Leopard or Snow Leopard), 1.2GHz or faster (Intel only), free USB2.0 and Ethernet connection
PC: Windows XP SP3, Vista SP1 or higher, Windows 7 (32-bit & 64-bit), 1GHz or faster CPU, free USB2.0 and Ethernet connection

Compatible DAWs: Any that can be remotely controlled via either MCU, HUI or MIDI CC protocols (supplied with Logic, Cubase/Nuendo and Pro Tools control templates)

Preamp Input: 2x XLR combo jack socket (Mic/Line on XLR, Line/Instrument on ¼" TRS/TS)

Preamp Output: 2x XLR (parallel with Insert send, i.e. preamp only)

Insert: 4x ¼" TRS (balanced) for two sends and two returns for preamp channels

External Input: 2x XLR

Monitor Outputs: 2x XLR (balanced +4dBu) and 2x RCA phono (unbalanced -10dBV)

Headphone Outputs: 2x ¼" TRS jack sockets (~75)

iJack Input: 1x 3.5mm TRS jack socket

Footswitch: 1x ¼" TRS jack socket for two circuits

Faders: 100mm throw, motorised

Network Connection: RJ-45 (8P8c), 100bT, Cat5

USB Connections: 1x Type-B socket (for soundcard function), 4x Type-A sockets (for keyboards, mice, hubs, etc.)

Memory Backup: SD card slot (card supplied)

Dimensions:
730 x 385 x 120mm

Weight:
7.5kg

clean gain (75dB) from the preamps is coupled with a full and unfettered response to mics and instruments.

The balanced inserts are a real boon for hitting outboard gear at proper levels. These also work on the final mix output, when the Mixdown button is engaged, so that the processed signal can be recorded as a DAW input. The preamp controls offer the usual +48v, pad, Hi-Z instrument switching, phase invert, 80Hz HPF and insert switching on two rows of buttons beneath the Gain pots.

Arranged below and to the left of these are the monitoring controls. A row of backlit buttons beneath the output/preamp metering switch control the external sources (iJack and line input) and preamp mono/stereo position while monitoring. The main monitor level knob goes up to 11, and to its right is the preamp/DAW mix Blend knob, headphone level and aforementioned Mixdown button. In Mixdown mode the Blend knob is redundant, but when tracking, it proves a simple way to create a monitor mix.

> It may not be a cheap option, but it's probably the best option if you have a need for all of its main features

Winner?

The Nucleus is a well-designed unit that offers an all-in-one solution for a variety of DAW needs, from dubbing to project studio recording and mixing. Although the USB soundcard function is useful and of a high quality (ranging up to 192kHz) it is the controller side of things that really impresses.

At this price you'd want to be making use of the preamps and monitoring, and the equivalent individual units would cost about the same in total – without a DAW controller. The multi-DAW network functionality is a unique aspect that will prick up a few ears, but the fact that it integrates with all platforms without any overt favouritism makes it a real standout.

To add value to the package, SSL are also offering two free Duende Native plug-ins with the Nucleus: the EQ & Dynamics Channel and the Stereo Bus Compressor. It may not be a cheap option, but looking at the competition, it's probably the best option if you have a need for all of its main features. This is a pleasing, easy-to-use unit that has true pro quality, making something you'd want to add to, not improve. Just add DAW and speakers. FM

ALTERNATIVES

Mackie Control Universal Pro and Expander

around £2,000

The original MCU protocol machine is expandable and can communicate with most known DAWs via USB or MIDI. Controller only – no audio capabilities.

mackie.com

M-Audio ProjectMix I/O

£1,215

At a third of the price, this eight-channel (with master fader!) controller talks HUI and MCU, as well as to Ableton Live 5. There's also an 18x14 FireWire audio interface and eight mic/line inputs.

m-audio.com

Sonar V-Studio 700

£3,879

A product similar in price, but not in flexibility – this is Sonar only. If that's your DAW, you get nine motorised faders, eight preamps, 19-in/24-out interface, Roland Fantom VS synth, onboard DSP and expandable I/O.

cakewalk.com

USB and the Ins and Outs

The Nucleus' USB soundcard offers 24-bit 44.1kHz to 192kHz AD/DA for two stereo inputs (two preamp channels and S/PDIF) and two stereo outputs (stereo monitor/mixdown channel and S/PDIF). Not only does the S/PDIF provide an extra pair of ins and outs, it also functions as a source for sending and receiving sample rate clocking. The Nucleus Control Panel soundcard utility is simple, covering the basic sample rate and clocking settings, as well as standard matrix routing. The Mac version features the four input and output channels, while the Windows ASIO/WDM driver gives an extra pair of inputs and two extra pairs of outs – but there's no explanation of what they are for and they didn't actually do anything that I could find an output signal for.

FutureMusic VERDICT

BUILD

VALUE

EASE OF USE

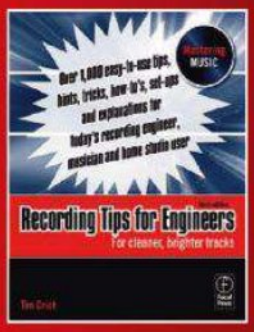
VERSATILITY

RESULTS

A high-quality DAW controller and soundcard that requires investment but will pay back in productivity.

focal press books

FOR CREATIVES, BY CREATIVES



Tim Crich
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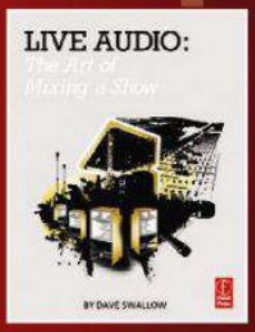
£21.99



Dave Swallow
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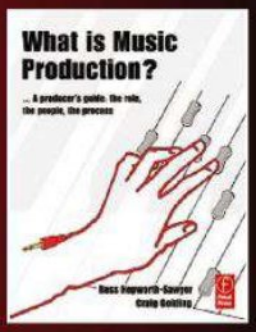
£24.99



Russ Hepworth-Sawyer & Craig Golding
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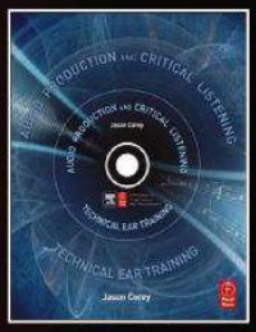
£21.99



Jason Corey
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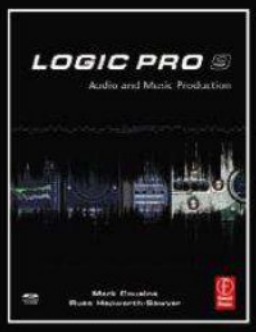
£33.99



Mark Cousins & Russ Hepworth Sawyer
9780240521930
£27.99

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NEUTRIK

Glanzmann Digital DJ Solutions 4midiloop | £1,385

Traktor's four decks have met their match. ***Declan McGlynn*** gets to grips with the 4midiloop

WHAT IS IT?

A four-deck hands-on controller for NI's Traktor Pro.

CONTACT

Who: Glanzmann Digital DJ Solutions
Web: 4midiloop.com/en

HIGHLIGHTS

1 Every control at your fingertips
2 Fantastic build quality
3 Complete four-deck control

As a concept, the 4midiloop has been around for a while. When Traktor Pro was launched in 2008, its four-deck option raised many creative eyebrows and provided a whole new performance aspect for heaps of digital DJs. One Traktor-adopter, Ivo Glanzmann, was particularly taken by the concept but was deterred by the lack of hands-on four-deck controllers with comprehensive internal mixer control.

He set about creating the ultimate four-deck Traktor experience, with the help of Faderfox, the boutique German manufacturers whose well-built and highly portable controllers became a standard for early Ableton Live adopters. The concept behind 4midiloop is 'quality' – it's built from the same aluminium used in the Swiss aircraft industry and boasts the 'world's best' faders in the Pro X Fade. Removing it from the box, that premise is confirmed. It's very solid, but lighter than you might expect, without feeling empty.

Top heavy

The 4midiloop is probably the busiest DJ controller we've seen, and for good reason. It's designed to avoid shift-functions almost completely, meaning everything you could need to access on screen, is instantly available at your fingertips. Considering this is the case for all four decks, while the unit is comprehensive, they've done a pretty good job of including everything while keeping the size down. It has to be said, it's not going to fit in the majority of laptop bags or even some rucksacks so make sure you check the dimensions.

Listing all of the controls would easily eat up both these pages so we'll just focus on the important parts. The faders do indeed feel solid, responsive and smooth to use. As a nice bonus, their curves can be adjusted using the System Mode, where you can also change MIDI channels.

Each channel has its own transport and sync section where cueing, playing, syncing and bending is taken care of. There's also a nice Phase Meter LED that indicates when your track starts to drift out of sync. While this is a nifty addition, with only four LEDs, it's very much a reference rather than a fine-tuning device. The Hot Cue section is one of the few places Shift comes into the equation, but you only really need to use it if you're creating markers on the fly.

Search and seek

There are no jog wheels on the 4midiloop for obvious reasons, something that may deter some users. Bearing in mind that the 4midiloop also lacks a soundcard – only a single USB port makes up on the back panel – all indications point towards use with

Traktor Scratch. However, there is some basic seek functionality in the form of a Seek/Scratch knob. While this isn't exactly very glamorous, it works surprisingly well and while playing some less snap-friendly tracks, it was put to great use. This is kind of the general consensus with the 4midiloop – simplicity. Ease of use was going to have to be a priority for such a busy controller and, against the odds, you'll find yourself at one with the 4midiloop in no time at all.

The colour coding effortlessly guides you to where you need to be and every component is of such high quality, your creative flow is never interrupted by a loose knob or a dodgy button. Speaking of which, despite the deep inset, the proximity to each other and similarity, not once did we hit the wrong one.

Moving on up

4midiloop's EQ section is based on the four-band setup and each one has a kill, something I missed on NI's Kontrol S4. Everyone's favourite one-knob filter makes an appearance, again favouring the S4 with an on-off button rather than having to make your way back to 0° for the drop. All of this leans heavily towards a traditional mixer. What makes it feel even more so is the lack of endless knobs. Maybe it's a personal thing, but I've never been a fan of endless rotaries and much prefer taking my chances with 270° knobs and relative MIDI mapping. Aside from the Seek/Scratch and Browser knobs, it's a 270-affair, and the 4midiloop is definitely all the better for it. The effects section is one of the biggest pulls of the 4midiloop with all four sections given heaps of space and a clear layout.

Thanks to this, the effects feel like part of the hardware, and once you set up your favourites, you won't need to look at the screen again. Finally, clicking down the Browser knob will switch to Browser Preview and turning it will scroll through your library. Good thing too, as running four decks on a standard 13" laptop gives you little to no room for track selection.

Price wars

Let's cut to the chase – forgetting the build quality, ease of use and genuine uniqueness of the 4midiloop, you are paying over a grand for a controller with no soundcard. Putting it up against Native's Kontrol S4 – which it will inevitably be compared to – the S4's jog wheels, slightly smaller booth footprint, built-in soundcard, sampling triggers, NI-endorsement and four-hundred Euro saving means it's tough competition but also not a fair comparison.

The 4midiloop isn't trying to drag you away from the S4 – it's a totally different concept. This is complete four-deck control, executed almost to perfection. If you don't need four decks, and I stress 'need', you'll more than likely scoff at the price tag.

But it's the self-contained, high quality and hands-on approach that makes the 4midiloop literally one of a kind. If you're playing four-four House or Techno and jog wheels aren't a priority, the 4midiloop is worth pushing your budget for. FM

> The 4midiloop isn't trying to drag you away from the S4 – it's a totally different and original concept

Going 4ward

There are many gaping differences between the S4 and the 4midiloop but one that would probably swing the favour one way or the other is the S4's Sample Deck. In short, it's possible to load a total of four loops per deck into Traktor Pro S4, or sample into them on the fly. This is a nifty way to incorporate four decks, if all you're looking to do is support your set with loops and one shots. However, it's nowhere near the level of four-deck control that the 4midiloop offers.

What you want from your four deck experience will be the deciding factor here and, as I've said, if all you want to do is keep things moving behind the scenes with some sample library beats, one shots and effects, the S4 will more than likely suffice. Not only that but you get a dedicated version of Traktor to work with. What the 4midiloop offers is next level four-tracks-at-once, hands-on control with zero confusion or menu diving. And that's essentially what you're paying for – it's up to you to if you can justify that expense for what you need in the DJ booth.

FutureMusic VERDICT

BUILD
VALUE
EASE OF USE
VERSATILITY
RESULTS

Not cheap but full four-deck-control executed flawlessly. Easy to use and beautifully built.

SPECS

Hardware Specifications
47 rotaries, 9 endless encoders
152 LEDs
166 Push buttons
5 faders
USB power

System requirements
PC: Windows XP (SP3, 32-bit), Vista (SP1, 32-bit, 64-bit), Windows 7 (32-bit, 64-bit), Pentium IV or Athlon 1.4GHz (SSE1), 1GB RAM
Mac: OS X 10.5, Mac OS X 10.6, Intel Core Duo 1.66GHz, 1GB RAM

1024 x 768 screen resolution, USB 2.0

Dimensions
290 x 60 x 450mm

Weight:
3.6kg

ALTERNATIVES

Native Instruments Traktor Kontrol S4
£779
The logical competitor. Less instant access to parameters but with a built-in soundcard.
native-instruments.com

Allen & Heath Xone:4D
£1,799
A traditional mixer with modern add-ons. Analogue filters, USB soundcard, SPDIF and Optical I/O, plus jogs and eight MIDI faders.
xone.co.uk

Denon DN-MC6000
£649
Recently announced Denon controller with four faders, two jogs, effects control and a two-I/O soundcard.
denondj.com

ON THE DVD

WHAT IS IT?

SSL-endorsed clones of the E-Series Channel Strip and G-Series Buss Compressor

CONTACT

Who: Source Distribution
Tel: +44 (0)1837 55200
Web: uaudio.com

HIGHLIGHTS

1 E Channel Strip features two 'Low Frequency' options
2 SSL endorsed – a quality benchmark
3 They sound sumptuous

PRICING

E Channel Strip
$299

G Buss Compressor
$249

4K UAD plug-in owners
$50 upgrade per plug-in

UAD-2 SSL Plug-ins | from $249

UAD's SSLs are now endorsed, but do they sound different? ***Jono Buchanan*** gets his oscilloscope out...

SPECS

System requirements:

PC: Microsoft Windows XP (Home, Professional, or x64 Edition), Vista (x86 or x64), Windows 7 (32- or 64-bit)

Mac: OS X 10.4.x or 10.5.x

All Platforms: UAD-2 card, 256MB RAM (512MB is strongly recommended), 200MB available hard drive space for UAD-2 card install, 1024 x 768 or higher resolution monitor, CD-ROM drive or internet connection for software installation, Internet connection required for registration and plug-in authorisation, Compatible VST, RTAS, or Audio Units plug-in host application software, AGP or PCIe graphics video adapter card (PCI graphics not supported)

In addition to the Studer A800 tape machine emulator released with UAD's 5.8 software update, two SSL-branded products are available, in the form of the E Channel Strip and G Buss Compressor. As this is the first time SSL-badged products have been available on UAD's platform, you might expect these to have justified their own release but, as UAD devotees know, the sound of SSL was captured with the release of UAD's 4K channel strip and buss compressor last year. I was keen to discover whether the new plug-ins produce a different sound to their unbadged predecessors or whether UAD got it so right first time around that sonic differences are negligible.

E before G

The E-Series SSL channel strip has been the trusted choice of so many producers that listing the hits created would occupy the word count of this entire issue. The UAD E Series faithfully recreates its tone and dynamics controls and there are some subtle variations to the original 4K strip that have been added at SSL's request.

Users can now toggle between 'Black' and 'Brown' EQ modes, which change the performance of the low frequency section of the plug-in. 'Black' produces a deeper, slightly richer sound while the 'Brown' option is a touch less aggressive. The 'Brown' response was that which featured on the original E Series console, whereas the switch to 'Black' came via a new '242' EQ circuit released in 1983, featuring an additional 3dB of cut/boost and a steeper, 18dB/oct slope.

Bass extension aside, I've strained my ears to hear the difference between the 4K and E Series strips and I detect next to none.

On the Busses

The same rules apply to the G Buss Compressor that again supersedes UAD's original 4K clone. This plug-in, in terms of sound, is even less modified in its new form than that of the E Channel. The only enhancement here is the addition of SSL's 'Auto fade' feature whereby a user selects a fade time and punches the 'On' button to begin the fade process. Lastly, there's the issue of cost. For users yet to buy, the SSL branded plug-ins cost the same as their predecessors but for existing 'clone' users looking to upgrade, the price per plug-in is $50. Bearing in mind just how right UAD got their original models, I'd advise thinking long and hard about whether you can justify the $100. FM

FutureMusic VERDICT

STABILITY
VALUE
EASE OF USE
VERSATILITY
RESULTS

Officially endorsed but only subtly different – A/B the clones before spending on the upgrade.

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Computer Music 9/10

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£8.99

Distributed by:
www.loopmasters.com/wavealchemy

wave alchemy

ON THE DVD

WHAT IS IT?

A protocol for performing and perfecting mixes

CONTACT

Who: Ableton
Tel: +49 (0)30 288 7630
Web: ableton.com

HIGHLIGHTS

1 Record DJ performances as an Ableton Live Set
2 Use decks to tweak effects and launch loops
3 Turntable-style control of multi-track productions

Ableton Serato The Bridge | £Free

Ableton and Serato join the gap between music production and DJing. ***Roy Spencer*** takes a trip across The Bridge

The yawning chasm between the workflows of DJ gear and pro-audio production tools has been one even Evel Knievel would have been unwilling to jump, (even on a re-imagined Tron Light Cycle). If DJ/producers wanted to mangle beats like a turntablist, right there within their on-screen arrangements, there were little in the way of realistic solutions on offer.

The idea of taking a live recording of a two-or-more-channel, plus effects, DJ set and being to entirely unpick and polish every single crossfader and upfader movement is one that isn't exactly new – hand-held DJ device Pacemaker offers post-mix tidying, but never to this extent and between such established DJing heavyweights. When a digital DJing system announced it had teamed up with a popular DAW and solved the problem, the gasps of forum users could be heard all over the internet. The resulting, stealth-like work yielded a new protocol: The Bridge.

Imagine it operates on similar principals to ReWire, in such that it allows the control and transfer of data between digital audio-related software, then times the idea by several large numbers. They say it enables you to seamlessly DJ selections from an Ableton Live set, or doctor and tweak recorded Scratch Live mixes like a track. Full integration between Serato and Ableton? Cue mass DJ light-headedness and fainting behind the decks. But does it live up to the hype? Let's put it to the test from both angles.

Perform your beats

At the foot of the Ableton side of The Bridge you launch both programs and an Ableton Live Transport Track appears in your Serato library. Dragging the Transport Track on to one of the virtual decks means you're now ready to use the deck to control Ableton Live's tempo and playback.

Now, in Ableton, the transport 'Stop' is greyed out to show sync with a Master i.e. Serato. Pressing play on your deck will start Ableton's transport, with all active clips playing as standard – and responding to any control vinyl scratches and speed adjustments. The innovation here is that as well as playing out your clips, effects and devices, The Bridge gives producers the medium of traditional DJing to handle their multi-track sessions with. It's like Ableton has been given the ultimate DJ controller: the turntable. What makes it next level is that every effect or instrument on the channel is pulled through to Serato's interface, where you can scroll through and adjust effects from one window.

With smooth functionality you can mix tracks, trim the parameters of effects and virtual instruments, or cut up or launch loops using an Itch controller, or the encoded vinyl or CDs of the Serato Scratch Live hardware, on-the-fly, and with your hard-earned DJ

skills. Controlling Session view tracks in Serato is a piece of pie, and the way you can drop in Serato library tracks alongside Ableton clips into your mix means you can really layer up the sounds and get away with some creative mixing, like beefing up transitions with extra drum loops and acapellas.

A bleak track marker timer grid system replaces Serato's usual chunky, colourful waveforms in this mode, which means using the dips in size and changing colour of your waveform to find that nice drop or easy mixing point isn't as visual. Using The Bridge from Ableton to Serato is simple, rewarding and a joy to use. And if any other additional dedicated controllers, like Novation's Launchpad or Akai's APC were on hand, the interface would have graduated from the pointy click-click from a mouse to the bashable, dance behind the laptop type of play you can get from these sturdy bits of kit.

It's worth raising the niggle, however, that some users with more miserly processing power may feel a bit of a drain as both programs have to be running at the same time, add to that a host of extra plug-ins and you might experience some twitchiness and slowed traffic.

Mix Maestros

The general consensus is that its Serato owners who are the ones who have lucked out, feature-wise. It's the DJ who wants a top-flight mixtape-making machine that has the biggest grin on launching this software.

DJs that have utilised everything from the bog standard shareware of Audacity up to shelling out for Ableton to craft their painstakingly selected and blended mix CDs on, will nearly weep at the level of control they now have over their recorded sets. Every move, cut, fader adjustment, crab scratch or effect can be doctored after you've pressed record. Pro turntablists can now fine-tune that mid set drill scratch till their heart's content.

Whether using it to touch up the club mix or tweaking your next national radio set on, The Bridge is un-paralleled. After trialing it heavily to create a mix, it's worth pointing out that to get the full range of post production capabilities, users are gonna need to stump up for the Rane TTM 57SL or SIXTY-EIGHT mixers. With these you get full gain, EQ, pan and fader automation to mess with, which a shame if you've already commited to a mixer or can't afford a new one.

Refine your mixtapes

Trip-trapping across to the other side of The Bridge, Serato to Ableton, things are equally bountiful on the reward tip. The way you can now polish recorded DJ sets using the fully malleable raw data of a mix session means that your next promo mix or radio set need never miss a beat again. It's like auto-tuning in the world of shit Pop – everyone can sound ace. For this to work, you don't even need Ableton to be running, so there are no latency issues.

Simply press record and start mixing. The results will be saved as a fully mess-about-able Ableton Live Session file. Every tune you've dropped is separate, and every fade, transition and crossfader action is tweakable with full automation on display in the track.

Came in too early or too loud twenty minutes into your latest mix? Using the DAW as a post-production platform, you get full control over effect parameters, tempo, pitch and so on. The whole process is quick and fun, and reassuring to work with but you will need the Rane range of mixers – more in the *Mix Maestro* box. Truly a landmark moment in the mix game.

Purists may gripe that it does mean that the old live C-90 tape-type mixes are a thing of the past. The warts and all, 'sold as seen' DJ sets of yore, done in real-time, will fade into time. Now every DJ can sound pinpoint perfect. But, is that a bad thing?

> The whole process is quick and fun, and reassuring to work with. Truly a landmark moment for Serato users

A Bridge too far out

On the plus side, it's also technically a free protocol but there's a serious amount of money to be spent to take advantage of everything it offers. However, it still gets a 10 for Value as it could easily be a paid-for update. As we've said, The Bridge favours the Serato user more than the Live user in terms of functions and because the hardware requirements will be taken care of. Serato users who dabble in production or who want to add a third-element to their sets, you need this on your hard drive. FM

Getting busy using Scratch Live to DJ Ableton sessions

FutureMusic VERDICT

STABILITY

VALUE

EASE OF USE

VERSATILITY

RESULTS

A very sturdy Bridge indeed. And toll-free to owners of Scratch Live and Ableton Live.

SPECS

Software needed
Serato Scratch Live 2.1.1 or higher
Ableton Live/Suite 8.2 or higher

Minimum requirements:
PC: Intel Core 2 Duo 2.4 GHz, 4GB of RAM, XP SP3, Vista SP2 or Win 7 SP1
Mac: Intel Core 2 Duo 2.33 GHz, 4GB RAM, OSX 10.5.8 or higher (10.6.4 recommended)

ALTERNATIVES

Traktor Kontrol S4
£779
NI's DJ controller. Bursting with effects. Includes Traktor and four-channel DJ mixer with a built-in 24-bit/96 kHz soundcard.
native-instruments.com

MixMeister Fusion
$330
Flagship version of MixMeister's software, combining DJ performance techniques with music production editing tools. Designed for crafting studio quality mixes.
mixmeister.com

EKS Otus Raw
499 Euro
Compact with decent-sized platter. Controls decks, mixers and effects and can replace a two CDJ/mixer set up on its own.
eks.fi

2box DrumIt Five | £1,799

2box add a splash of colour to the world of electronic drums. ***Robbie Stamp*** does some virtual tub-thumping

WHAT IS IT?

'Open sound' electronic drum kit system

CONTACT

Who: 2box
Tel: +44 (0)1752 696633
Web: 2box.se

HIGHLIGHTS

1 Offers an excellent playing experience
2 Limitless kits with open sound structure
3 Simple editing and control interfaces

With a little help from the relatively well-written instruction book, this remarkably lightweight metal mounting frame is quickly and easily assembled. The clamps are all fitted with rubber pads, and so grip onto the frame without the need for much torque, though a little extra tightening can be needed as the kit settles. The basic frame may be straightforward, but it still allows for enough adjustment to fit most set-up needs.

The footings for the frame (as well as the kick and hi-hat pedals) are all made from an orange rubber material that is intended to keep the kit stationary when played. This wasn't completely successful on my studio carpet, as I found the kit often drifted away from me while I played. The kick and hi-hat pedal spikes weren't enough to prevent this motion, but a proper drum rug may sort this out. The frame, even when loaded, is light enough to be easily moved by one person.

As you like it

The two cymbal and three tom pads mount via clamps which use a standard ball joint to allow for placement at any angle; there's plenty of scope for customisation. The mounts are all sturdy, and rarely slipped from their positions no matter how hard a beating the kit was given, and there's also an impressive lack of wobble. The kick drum mounts onto the frame via a somewhat complicated clamp, but this does allow for a good degree of rotation to accommodate a range of set-ups.

The snare pad is mounted on a normal snare stand, and the kick drum pedal is also a familiar design. The hi-hat, however, has a bespoke clamping system that removes the need for stand legs – leaving more space for towels, beer cans and drumming magazines. Cabling the pads to the brain unit is aided by a pack of cable ties and couldn't be simpler.

After an initial pad-positioning tweak, the first thing that struck me was how easy the kit is to play. The mesh heads make the pads very responsive – fast, accurate strokes are easier than on normal drum heads. The standard tuning lugs mean that the tensions can

be adjusted to taste, although this has no bearing on the sound. The pads are really quiet in the room, making this ideal in the bedroom as well as for live or studio use.

The only initial calibration needed is the hi-hat open/closed positions. I found this a tad tricky to get just right in order to achieve a lifelike hi-hat pedal response, but the setting is easily found in the OS and quick to adjust. The cymbals have bell, bow and edge sensors, and can be hand-clamped to choke the ringing. The kick drum pad does have a tendency to wobble back and forth when struck, as it is clamped at the base, but this rarely causes double-hits or off-time strikes. All in all, the kit behaves very realistically and is a pleasure to play.

Technical realism

To translate the playing realism into the sonic realm, each pad can trigger up to 128 samples (one for every velocity level) – though around 20 samples for a snare or tom is often ample. The brain unit uses a 4GB flash memory to store samples and this can be edited via USB (see DrumIt Editor). The 100 drum kit slots are ample for even the most indecisive drummer.

There are ten trigger input sockets, so there's room for two more pads on top of the basic set-up. The six audio outputs can be assigned in any combination, and the headphone output can be hijacked for two more line outs if necessary. The stereo jack line input allows for monitoring backing tracks. The LCD screen is well laid-out and editing is refreshingly easy – each pad's parameters can be scrolled through swiftly, too. Control is provided for pitch, envelope, trigger response, MIDI note/channel assignment and audio routing. As well as the on-board metronome, the user can load backing tracks (stereo 16bit, 44.1kHz) to the memory.

Open Sound

The supplied sounds offer a wide variety, from classic Electro to roomy acoustics, and many of the factory-set kits are instantly appealing, thanks to the quality of the samples. These are totally user-editable, and any sound can be loaded up within the memory – hence 'Open Sound'. There are also plenty more sounds available via the 2box website.

The DrumIt Five is a well-designed system that presents a dash of colour in the otherwise monochrome, utilitarian world of electronic drum kits. The Open Sound structure means there are no real restrictions, – beyond the 4GB of memory – with regards to sound palette and quality. The overall playing experience is the best I've come across, and with the prospect of different sized pads in the future, there's room for expansion. Though I've only tried the mesh heads, the user can change these for regular drum heads – as well as a new rubber head that has yet to be announced. As a package, the DrumIt Five comes in at the upper end of the market, but the physical quality, set-up flexibility and Open Sound basis make it an investment that will last. **FM**

> The kit's pads are really quiet in the room, making this ideal for bedroom as well as studio use

DrumIt Editor

In keeping with the simplicity of the main 'brain' unit, the USB user interface requires no manual – though there are guide materials available. Once connected to the Mac/PC, the kit's memory appears as a standard USB storage device, allowing sounds to be dragged and dropped.

The interface allows the user to create or edit kits, setting individual pad volumes, pan positions and output volumes. Samples can be mapped to individual pads via a simple drag-and-drop, using the relative peak dB levels of samples to allocate velocity ranges. These sample assignments can be saved as individual sounds (.dsnd files). These can then be dragged onto pads in the Kit Editor and kits saved as .dkit files.

Though samples are mapped to individual velocity ranges there is a parameter that allows a semi-randomised relationship between trigger amplitude and velocity that helps prevent repetitious triggering.

FutureMusic VERDICT

BUILD
VALUE
EASE OF USE
VERSATILITY
RESULTS

A realistic playing experience with a limitless sound palette thanks to the Open Sound source structure.

SPECS

Trigger Inputs: 10x ¼" TRS jack (dual function triggers)
Audio Inputs: 1x ¼" TRS jack (stereo line input)
Audio Outputs: 1x ¼" TRS jack (stereo headphones, 32-600), 6x ¼" TS jack assignable line outputs
MIDI: 1x input, 1x output, standard 5-pin DIN sockets
USB: 1.1 full-speed (12 Mbits/s) connection for editor software package (Mac/PC)
Conversion: DA at 24bit, 44.1kHz
Control Unit Memory: 4GB flash memory
Memory Slots: 100 user configurable drum kits
Sample File Formats: WAV, AIFF and REX
Drum Trigger Channels: 15
Package: Mounting frame, 1x snare pad, 1x kick pad, 3x tom pads, 1x hi-hat pad, 2x cymbal pads, 1x kick pedal, 1x hi-hat stand, 1x 'brain' unit, 1x PSU, trigger pad to 'brain' cable set.

ALTERNATIVES

Roland TD-9KX
£1807
These pads have positional triggering sensor technology, but the base sound samples are factory set.
roland.co.uk

Yamaha DTX550
£1550
A five-piece kit with silicone rubber heads, with zoning on the pads. Also lacks Open Sound benefits, but has over 400 base sounds.
uk.yamaha.com

Alesis DM10 Pro Kit
£999
Realistic mylar-coated heads and metal cymbals with multi-zone triggering, though not truly Open Sound.
alesis.com

Akai MPK Mini | £69

The smallest controllers on the market just got themselves a big brother. ***Greg Scarth*** checks out the latest addition to Akai's portable range

WHAT IS IT?

Portable MIDI keyboard and pad controller with assignable rotary pots.

CONTACT

Who: Akai
Tel: +44 (0) 1252 896 000
Web: akaipro.com

HIGHLIGHTS

1 25-key semi-weighted keyboard with arpeggiator
2 Eight velocity-sensitive pads and eight rotary pots
3 £20 cheaper than buying LPK25 and LPD8 separately

SPECS

Plug-and-play USB connection for Mac and PC. USB bus-powered operation.

Dimensions:
306 x 180 x 43mm

Weight:
0.97kg

Back when I reviewed Akai's LPK25 keyboard and LPD8 pad controller in *FM*224, I rated them very highly and was impressed with the build quality. Akai have now added to the range with the MPK Mini, a product that's effectively the result of grafting the LPK and LPD together to create a multi-purpose hybrid controller.

You may well wonder why Akai would introduce a bigger product to a range specifically designed for its portability, but this isn't simply a case of trying to plug every last gap in the market. The MPK Mini isn't intended to replace the LPK or LPD, nor will it make you consign your full-size MIDI controller to the scrapheap. What it does is provide a neat solution if you want keys, pads and rotaries on the move. If you need a bit of everything, it makes a lot of sense to carry one unit rather than two, saving a USB port and taking up less room in your bag.

Like its smaller counterparts, the MPK Mini is very easy to set up. Just plug it in via the supplied USB cable and everything should work straight away. The supplied editing software allows you to save and recall presets for parameters, including pad and knob mapping, MIDI channel selection and the arpeggiator options. It's good to see that the MIDI channels for the two sections can be adjusted independently, making it easy to control a drum plug-in with the pads and a synth plug-in with the keys simultaneously.

Familiar feel

Anyone who's tried the LPK25 or LPD8 will be familiar with the layout and feel of the Mini. To all intents and purposes, it works almost identically to the other two units, with the obvious keyboard, pad and rotary functions supplemented by a useful – if slightly fiddly – arpeggiator and the handy Program Change and CC modes for the pads.

Although it's a portable controller, as with the rest of the range it's worth pointing out that the MPK Mini is at its best on a solid surface. Attempting to rest the unit on your knees is unlikely to be too successful, especially given the absence of adjustable velocity curves. There are still no dedicated mod wheel or pitchbend controls, and I have my reservations about those fiddly little rotary pots, but even so it strikes a good overall balance between features and portability.

Conclusion

The MPK Mini might look like a good all-rounder, but it certainly won't replace your full-sized controller. Even something as compact as Akai's own MPK25 offers far more functionality. What the Mini does very well is provide all of the basics in a convenient portable package, with build quality that should ensure that it stands a chance even if you just chuck it in your rucksack and hope for the best. It's also good to see it's been priced very sensibly, working out at about £20 cheaper than the combined price of an LPD8 and an LPK25. Whether it's for writing music while travelling or as part of a bare-bones live setup, the MPK Mini offers a great-value solution. FM

FutureMusic VERDICT

BUILD
VALUE
EASE OF USE
VERSATILITY
RESULTS

Even better value than buying two separate controllers, the MPK Mini proves a great portable option.

DICER

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Marc '01' - Future Music

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ON THE DVD

WHAT IS IT?

A comprehensive beat-production centre – a worthy successor to FXpansion's Guru

CONTACT

Who: Sonic 8
Tel: +44 (0)330 2020 160
Web: fxpansion.com

HIGHLIGHTS

1 Intuitive and quick drum programmer and sound design tool
2 Well-organised sampling features open worlds of sonic possibility
3 Great internal content for beat-building and instant inspiration

FXpansion Geist | £185

FXpansion's Guru has proved popular with beat-makers the world over. ***Jono Buchanan*** falls in love with its new big brother, Geist…

Despite its name being most synonymous with acoustic drum library BFD, FXpansion also has a proud pedigree as a provider of sampled and electronic drums. Back in 2005, the British-based company released Guru, offering MPC-style pad-driven drum pattern programming and a native library in standalone and plug-in form.

Five years later, with Guru still popular, the company have revisited the drum machine concept and gone large. Their new instrument, Geist, combines a sampling drum machine, a pattern sequencer and myriad production options that combine to form a beat-making behemoth with more tricks up its sleeve than Derren Brown. With FXpansion offering a crossgrade path for Guru owners, what's also clear is that Geist is FXpansion's 'next-generation' sampling drum machine.

Geist in the machine

Geist's GUI packs an awful lot of information into a relatively small screen space, and gives a good overview of the program's capabilities. The main LCD area provides in-depth control for Geist's assorted modes and functions; waveform displays of audio loops, pattern steps for beat programming and effects modules for various sonic treatments are just three of the assorted uses for this space. Below the screen are the 16 pads that display the currently loaded kit elements, while 24 Pattern Memory Keys lie in wait to the right, all of which can store a programmed pattern and can be easily toggled between in real time.

However, you're by no means limited to 24 patterns in a single Geist instance, as above the Pattern Memory Keys lie Geist's eight Engines. All of these offer the same capability of containing their own sounds, patterns and effects routings – and can all be run simultaneously, yet be accessed by an independent MIDI channel. To keep things simple, only one Engine can be edited at a time, so the current one is circled in yellow to show its active status. Engines can be toggled between over MIDI (or via a mouse-click), while Mute, Solo and Pattern Power buttons can also be used.

The left-hand side of the GUI is dedicated to the Browser, where content is accessed. FXpansion provide plenty of this, with a new 2GB library developed for Geist alone, but you're also free to browse to load loops or hits that are saved elsewhere on your system. Usefully, shortcuts are provided below your main drives, so that Favourite, Search and Shortlist options provide access to folders you want to mine regularly. The top panel, above the LCD, contains links to Geist's internal pages, enabling you to navigate between Patterns, Scenes, Songs, Pad Layers, Mixer Layers, and so on.

Diving in

As the overview of its functions clearly shows, Geist is a deep instrument – but it's been carefully designed to ensure that its learning curve is friendly. The best place to start is by browsing Geist's own content folders, which are accessible via the Geist Content tab in the Browser section.

Content is organised into Hits, Loops and Preset folders, so you can either load an entire loop in one go, or drag-and-drop individual Hits to pads to create a hybrid sound set. Loops are sorted by genre, and by clicking on one and selecting the 'Auto load' option, each chunk of loop will be assigned to its own pad. Usefully, if you like a kick and snare from one preset but want to load alternative sounds for the other pads, you can lock – and therefore protect – the pads you want to preserve. The waveform display remains active and, neatly, colour codes both the detected hits and their instantly assigned pads, so you can easily see/hear what you're hitting from the pads.

The Pad/Layer tab enables you to assign multiple sound-sources to a single pad, providing a list of eight slots that sounds can be assigned to simply by double-clicking on the sounds you want. Each slot provides its own set of tweakable parameters, with filter controls for each layer, as well as volume, tuning, fantastic time-stretching facilities and amp/filter envelope settings. Needless to say, layers can be separated by velocity switching, too. As you add more layers, the number of dots at the bottom of each pad neatly expands so you can see at a glance how stacked each pad is.

Effects a go-go

The effects options offered by Geist are expansive, with six effects slots available at multiple stages during the sound design process.

The same array of effect types is available for each slot, so rather than being forced to use, for instance, an EQ in Slot 1 and a compressor in Slot 2, you could insert the same filter six times in a row if you so wished. Overloud Breverb algorithms are provided if you use Reverb as one of your effects of choice, and these sound rich and full of body.

The rest of the effects are phenomenal, as well – the extensive filter options are one particular highlight. You can choose to add effects at the Layer, Pad Mixer, Engine or Global stages.

If you haven't quite been keeping up with Geist's architecture, this means that a single sound within a pad, a whole pad, a collection of pads/patterns or the sum total of Geist's output can each have its own effects treatments applied to it.

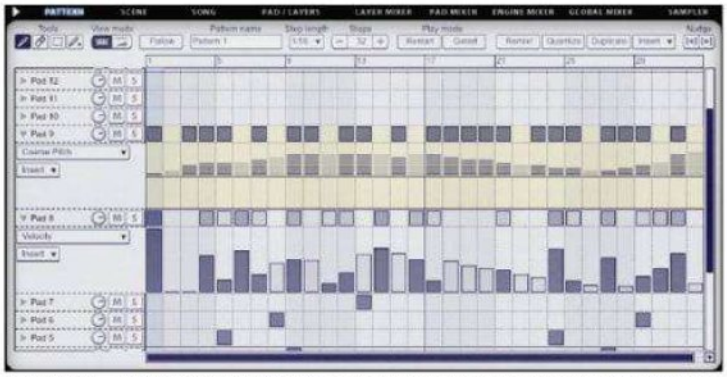
Deeper and down

Once a group of pads is assigned content from Geist, or samples are loaded from elsewhere, you can start programming a Pattern via the pane at the top. What's great is that, as well as simply programming notes, you can assign multiple lanes of snapshot automation data for each note of each sound by clicking the triangle next to each pad name. This is where the sound design aspect of Geist takes over: add filter settings, coarse and fine pitch tweaks, velocity… the list goes on. These lanes can be added either via the mouse or via MIDI control messages, once you've assigned a hardware source to the parameter of choice using the simple Learn mode – see more about how to carry out this control mapping in Map Me Up.

> "Geist is a deep instrument, but it's been carefully designed to ensure that its learning curve is friendly"

What becomes apparent at this stage is how much can be done on the fly. Converting a loop, having Geist detect its transient hits and assign them to pads with a single button-click, then stacking sounds together and treating them is – once you're familiar with the GUI – the work of a few button-clicks. Of course, constant audio playback keeps you in sonic control of the changes you make. That said, keeping track of 24 patterns, multiplied by eight separate engines, is no mean feat – particularly if you're planning to use Geist in a live scenario.

To simplify matters, Geist provides Scenes, which are snapshots of patterns, sounds and set-ups across all eight engines. These can be triggered by



Beat Detective, a great tool for fixing timing issues, or to add flavour to the performance with groove templates

SPECS

System requirements

Standalone or use within VST, AU and RTAS compatible hosts.

Mac: OS 10.5.8 or later, Intel Core 2 Duo 1.86ghz, 2GB DDR2 RAM

PC: Windows XP SP2, or Windows 7, Intel Core 2 Duo 1.86ghz, 2GB DDR2 RAM

Features: Sampling & resampling, Dirac3 time-stretch/pitch-shift, Powerful full-featured slicing and detection, 30 effect types including DCAM circuit-modeled filters/dynamics/drive & Overloud Breverb algorithms, Pattern sequencing, Scene switching, Integrated song mode, Real-time record & retro capture, Step-automation for parameters, Internal Content Browser – 2GB, Full MIDI and audio export.

MIDI notes too, as even though Channels 1-8 are assigned to individual Engines, the remaining eight MIDI channels can also be assigned to functions like this. Once you've created all the patterns you want, you can arrange them into a Song so that a single click of the Play button launches an entire arrangement.

Sample me up

This intuitive approach comes into its own when you use Geist as a sampler, however. The Sampler has its own pane and within this, you can select an output source from within your DAW to act as Geist's input.

Select Threshold as the trigger mode and the sampler will kick into life the moment the volume threshold is breached, while a quick click of the Rec button stops sampling once the loop has been captured. Then, with two clicks, you can have Geist automatically detect the transients and instantly map its results to the pads, turning any loop into a Geist pattern almost instantly. What's particularly great is that FXpansion provide a solution allowing you to sample instruments that don't automatically feed into audio outputs within your host. Click on an empty Insert slot within your DAW's mixer, and you can insert Splitter from the FXpansion folder – the purpose of which is to route such signals directly to Geist in order to be sampled.

Map Me Up

One of the most powerful things about Geist, and that will appeal to studio and live users alike, is the ease with which it's possible to map MIDI controllers to specific functions within the GUI.

The Mapping button is the MIDI cable-shaped one that sits to the left of the transport controls: a single press of this will make every mappable parameter within Geist's windows light up green. Simply click on the control that you want to map, so that it's targeted with a red box, then move the hardware control you want to assign.

Usefully, the specific MIDI control value is then printed in red on top of the dial or switch you've mapped, so that you can easily see the routings you've created without having to memorise them.

For functions such as switching Engines or activating and modifying effects, this is hugely time-saving and adds to Geist's intuitive approach.

> With two clicks, you can have Geist automatically detect transients and instantly map its results to the pads

Impressive instrument

So, is Geist a worthy successor to Guru? Absolutely – and it's more than that besides. Plug-in drum machines have come a long way since Guru's release in 2005, and with the continued development of pattern- and song-based products such as Ableton Live and Reason, it's not surprising FXpansion have decided to go again with an instrument such as Geist.

The result is impressive, with a deeply layered instrument capable of sampling, re-sampling and as many sonic layers as you could possibly desire – as well as a full Song sequencer – customised for stage and studio use in equal measure. If you're in the market for a modern drum workstation, this could be just about irresistible. FM

Advanced automation features available with the Complete Production Toolkit 2

FutureMusic VERDICT

STABILITY

VALUE

EASE OF USE

VERSATILITY

RESULTS

A comprehensive, all-singing and dancing plug-in drum solution with great sound customisation options.

ALTERNATIVES

Native Instruments Maschine

599 euros

Another mouth-watering beat-making command centre, complete with hardware control, its own sound library and much more to boot.

native-instruments.com

Spectrasonics Stylus RMX

£239

A drum library that caters to all styles and is expandable with additional content. Lacks the sampling options and on-the-fly nature of Geist.

spectrasonics.net

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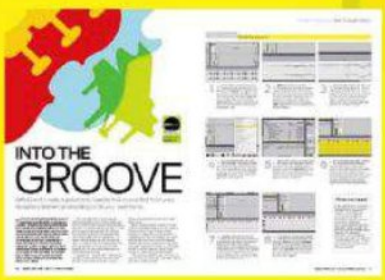

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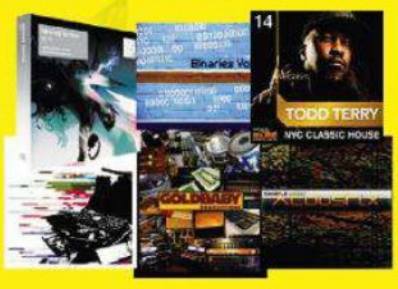

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ON THE DVD

WHAT IS IT?

A virtual instrument plug-in that aims to faithfully recreate the sound and quirky sonic imperfections of a cutting-edge analogue/digital hybrid synth from 30 years ago

CONTACT

Who: Waldorf
Web: waldorfmusic.de

HIGHLIGHTS

1 Authentic emulation of the original's quirky grittiness
2 Importing of user 'transients' (samples)
3 Sonic individuality

Waldorf PPG Wave 3.V | £119

Waldorf have updated their range of instruments with a re-engineered classic. ***Bruce Aisher*** takes a listen and ponders the virtual analogue-digital pioneer

Waldorf, has a history dating back to the late 1980s, though its origins go back over ten years before this (see *PPG Hardware History* box). Very much known for its hardware – with synths such as the Microwave, Pulse and Wave – Waldorf was also one of the first into the game at the inception of mainstream virtual instrument technology. The PPG Wave 2.V (from 2000) was intended to replicate the sound of its earlier (and now classic) forerunner.

At the time, albeit with an absence of much competition, it was generally well received, although in the intervening years one could argue that musicians have grown more picky about 'vintage authenticity', and what it means. Since version 2.V Waldorf have emerged from the ashes of insolvency, and released the well-regarded Largo VSTi, based on their Blofeld hardware and owing more than a little to PPG synthesizers of yore. So, flash forward ten years, and I was very interested to hear of Waldorf's announcement regarding the PPG Wave 3.V.

The PPG Wave 3.V installation is quick and easy on both Windows and Mac platforms. Copy protection is via Soft eLicenser Copy although this may be transferred to an eLicenser USB Key (not supplied). First impressions of the plug-in were those of familiarity and overwhelming amounts of blue! On the face of it the 3.V plug-in looks similar to both the original hardware and the old 2.V plug-in. Sonically, it was definitely PPG-like, with a suitable grittiness, but further exploration was clearly required to see what had been tweaked on the DSP-side in the intervening years.

Under the hood

The PPG Wave 3.V is eight-part multi-timbral and features two ADSR envelopes (as well as a simpler AD type), a clock-syncable LFO, two oscillators and a single filter per voice. On the face of it this may look rather frugal, especially in comparison to many of the software über-synths of recent years. However, this really doesn't tell the whole picture. The reason people were so interested in the original PPG Wave synths was that the oscillators were digital. Not only this, but they used 'wavetables', a series of 64 single-cycle waveforms that can be moved between dynamically under control of the available modulation sources – a big deal at the time. The 3.V also tips its hat to the PPG Waveterm sampling system, by allowing users to import their own samples (called 'transients'). The Wave 3.V software also offers an arpeggiator (including the original 'cascade mode') as well as the up-to-date addition of a multi-effects section.

Unlike the knob-laden front panel, supported by a somewhat cryptic menu-based LCD editing system, the 3.V has an upper panel that provides

graphical overviews of modulation, waveform and filter functions, as well as single-click access to other important parameters via various screens assigned to buttons on the front-panel.

Feeling blue

The critical issue with software such as this is, how it sounds, and how close to the original it comes. In my book it sounds great, and has the distinct character of the original. This is perhaps best characterised in the oscillator grittiness caused by extreme aliasing of the era's limited digital playback technology, and the fact that the filtering duties were taken care of by the analogue circuitry of famed chip-based SSM 2044s. Waldorf say they have explored both of these areas in detail, alongside many of the quirks of the original systems (and they can be turned on or off – even between the WAVE 2.2 and 2.3).

I have been following the progress of PPG fanatic Hermann Seib in his independent efforts to build a PPG Wave plug-in, and was interested to get his take on Waldorf's version, but it turns out that he, alongside Wolfgang Palm (founder of PPG) acted as advisers on the 3.V, and this seems to have borne fruit in terms of authenticity.

> It sounds great, and has the distinct character of the original, perhaps best characterised in the grittiness

Say hello, or Wave goodbye?

So far so good, but are there any failings? Clearly, the Wave 3.V's prime purpose is to emulate the original, but I feel that things could have been taken further in terms of usability with respect to the interface. The upper window attempts to pay homage to the original with its 'backlit' LCD window, but this doesn't necessarily make it easily navigable, and at times the text appears small. An understanding of the original synth certainly helps when getting to grips with the wavetables, which is perhaps less the case with 'ground-up' synth designs. Versatility, is also limited, but this is perhaps not fair in the case of a true vintage-style design, and the Largo is probably the place to turn if you want more options.

However, despite its limitations the PPG Wave 3.V is a charming plug-in, and certainly has a character of its own. It comes with a decent complement of presets (including some '80s classics), and should provide sterling service, as long as you are clear on what does and doesn't offer. FM

The new browser is much improved, allowing drag-and-drop of almost anything

PPG – The Hardware History

PPG, founded by Wolfgang Palm in the mid-1970s, initially developed analogue synthesizers in various forms. The first pointers to PPG's innovative future came with the inclusion of digital oscillators in one of these earlier models. Digital technology was fully embraced with the arrival of the 340/380 Wavecomputer System, and their first true wavetable synths in the 360 series. The big turning point however was the Wave 2, that offered a lot of features for the time, especially the large number of waveforms and the ability to move between them in interesting and novel ways. The two most significant models in this series were the Wave 2.2 (that used 8-bit digital-to-analogue converters), and the Wave 2.3 (that used 12-bit conversion, and added MIDI and multi-timbrality). Both of these could be enhanced with the Waveterm A/B system that offered user sampling, wavetable creation, sequencing and storage via an external rackmount processor/display unit – advanced features for the era. These systems can be heard on a large number of classic albums of the time.

After a costly foray into advanced digital synthesis, that ultimately came to nothing commercially, PPG closed its doors. Later, Waldorf was built from the ashes of the company, and began production of the Microwave, the first of many products that owed more than a little to their early '80s forebears.

FutureMusic VERDICT

BUILD
VALUE
EASE OF USE
VERSATILITY
RESULTS

A distinctive synth that successfully captures the spirit of an unusual digital/analogue hybrid.

SPECS

System requirements

Mac: 1.42GHz G4 PowerPC processor or better (with Mac OS X 10.3.9 or newer) or 1.5GHz Intel processor or better (with Mac OS X 10.4 or newer), and 256MB of free RAM + VST 2.4 compatible host.

PC: Intel Pentium4 or AMD Athlon 1.5GHz processor or better and 256MB free RAM, Windows XP or newer + VST 2.4 compatible host.

ALTERNATIVES

Waldorf Largo

£149

A modern take on the wavetable synth, that includes much of the design philosophy of the PPG Wave, but in more flexible and versatile package.

waldorfmusic.de

Korg Legacy Wavestation

£35

A digital recreation of another classic that utilised a slightly different wavetable technique. Doesn't have the quirkiness of a PPG, but an interesting synth nonetheless.

korg.co.uk

Arturia Prophet-V

£149

Not a true wavetable synth in the mould of the PPG Wave, but an interesting emulated hybrid of digital and analogue techniques from a similar era.

arturia.com

Native Instruments The Mouth | €69

Tim Exile's relationship with Native Instruments develops. ***Jono Buchanan's*** jaw duly drops open…

ON THE DVD

WHAT IS IT?

An effects collaboration between NI and Tim Exile

CONTACT

Who: Native Instruments
Tel: +49 (0)30 6110351300
Web: native-instruments.com

HIGHLIGHTS

1 Unique and inspiring
2 Any audio input can be converted to pitched results
3 Real-time processing

SPECS

System requirements: Reaktor or Reaktor Player
Sound Categories: Synthesizers, Multi-Effects
Number of Sounds: 118
Standalone or compatible with VST, Audio Units, RTAS, ASIO, Core Audio, DirectSound, WASAPI
1GB free disc space, DVD drive

When looking for someone to develop new software toys on their behalf, Native Instruments couldn't have chosen anyone better than Tim Exile. His first collaboration with the German software pioneers produced The Finger, a Reaktor-hosted plug which allowed for wonderful effect mayhem to be configured and then triggered over MIDI, its results proving popular both in the studio and onstage.

The collaboration has now borne its second fruit, this time in the form of The Mouth. Promising conversion of audio input signals of any type into pitched, vocoded or multi-harmonised results, on paper this sounds like another title to inspire creativity. But does theory convert to practice?

Mouthing off

The engine behind The Mouth does something fantastically complicated but presents its findings in an intuitive and easy-to-use way. Any incoming audio is analysed and immediately auto-tuned so that pitch is determined quickly regardless of the source material. This pitched result can then either be played back 'as detected' or tuned to any scale you like over a keyboard so that melodies or harmonic parts can be built up. On one level, this means you could use it as a harmoniser for vocal phrases by creating supporting harmonies under a recorded vocal phrase.

However, you can go further, by feeding drum loops into it to turn these into musical phrases or sequences. This is possible as The Mouth combines clever detection algorithms, converting volume thresholds into equivalent relevant pitches (quieter = lower, louder = higher, for instance) and you can control a whole range of supporting parameters, deciding the pitch width of the resulting sequence between just a few closely related notes or spread wildly across several octaves.

Control your mouth

The Mouth's GUI is dominated by the blue Mixer section where the original audio's input signal and four other parameters, triggered by its detection, are blended to your choosing. These are a Synth generator, a Vocoder signal, a separate Bass generator and an FX channel. All four are 'post-fader' in that the Input slider can be at zero without affecting the others which is just as well, as this is often when results are most interesting. Clicking the name button of each of these sections launches a matrix below from which you can choose from a range of sound 'types' specific to each category.

To the left, eight knobs control Brightness, Resonance, Thickness, Harmony, Attack, Sustain, Release and Nonsense, the latter of which behaves randomly and often inspirationally. The all-important Threshold slider lies across the top of the interface – the further left this is, the more input signal passes through into The Mouth's assorted processes. You can dive in a little deeper still, by clicking the note button, which allows access to additional parameters.

Mighty mouth

I love tools which inspire creativity and whose results are unique – both of which are key features of The Mouth. It combines autotuning with harmonising, both of which are 'known' technologies but thereafter, you're into uncharted territory. Hearing beats converted to Rave sequences or hearing repetitive vocal phrases re-born via massed harmonies is wonderful and The Mouth continues to bring surprises even after hours are lost to its charms. It runs through the free-to-download Reaktor Player and costs just 69 Euros. Three words – get it now. FM

FutureMusic VERDICT

STABILITY
VALUE
EASE OF USE
VERSATILITY
RESULTS

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ON THE DVD

WHAT IS IT?

Versatile algorithm-based reverb plug-in

CONTACT

Who: Time + Space
Tel: +44 (0)1837 55200
Web: robpapen.com

HIGHLIGHTS

1 18 reverb algorithms
2 Ensemble, distortion and three-band EQ
3 Envelope follower for shaping output

SPECS

System requirements:

PC: VST/RTAS host, Windows Vista or XP
Mac: VST/AU/RTAS host, OS X 10.4 or later

Rob Papen RP-Verb 1.5 | £125

Sound-design expert Papen turns his hand to effects. ***Greg Scarth*** embarks on a journey into time and space

Dutch sound designer and all-round synthesis expert Rob Papen finally turned to effects with the release of RP-Verb in late 2009. Now updated to version 1.5, the reverb plug-in's feature set doesn't stray too far from the norm, but it does offer a few unique features that make it an intriguing proposition.

There's a choice of 18 space types (algorithms), and the sound can be tweaked using all of the usual space size, pre-delay, diffusion and reverb length parameters. We've come to expect a lot from Rob Papen's range of virtual instruments, and RP-Verb lives up to the sound quality of its stable-mates. Flicking through the huge selection of factory presets, it's apparent that this is an exceptionally clean effect, with sound quality on a par with high-end digital hardware reverbs.

Whenever presented with a new reverb, I'm irresistibly drawn to the more extreme settings. Testing out a cavernous setting revealed no nasty artefacts, with the signal remaining pleasant long after plenty of lesser reverbs would have descended into grainy mush. For auditioning and tweaking sounds, it's a nice touch that separate elements of the effect can easily be turned on and off, so it's possible to bypass early and late reflections and reverb independently.

Advanced control

The huge range of presets show off RP-Verb's range, but they only really tell a fraction of the story. Delving into the more complex options reveals a versatility that puts most reverb effects to shame. The majority of the parameters are straightforward enough to get to grips with easily, but some of the more unique features take a little work to figure out. The Side and Cross Feedback controls, for example, allow subtle control of early reflections, while the Disorder controls for pre-delay and space size allow the shape of the virtual space to be adjusted.

On a global level, the ensemble settings, tube-style distortion effect and three-band EQ are useful for tweaking the overall tone of the sound, while the Post Audio button moves the EQ ahead of the reverb in the signal chain, which can be incredibly effective for shaping the response of the effect. The most unusual feature, however, is the Envelope Follower section, allowing the input signal to shape the output and making it easy to create gated effects and unusual dynamics.

As an added bonus, RP-Verb handles MIDI control flawlessly. Right-click any knob and the parameter can be latched on to a MIDI controller. It's even possible to save and recall MIDI maps using the ECS (external controller settings) button. Overall, it's an incredibly powerful setup that's great for mixing but also very usable for live tweaking. The only quirk I encountered during the test was the global Wet/Dry knob defaulting to the Wet position when loading presets from the Quick Browse and Favorites menus.

More than a tool

RP-Verb provides a unique flavour of reverb which should appeal to electronic producers looking for something more than the usual bog-standard sounds. With such a range of tones and settings on offer, it should really be considered part of the sound-design process rather than just another mix tool. It doesn't sound organic – if that's what you're looking for, you'd probably be better off with a convolution plug-in – but as a clean, versatile sound-shaping tool RP-Verb is highly impressive. FM

FutureMusic VERDICT

STABILITY
VALUE
EASE OF USE
VERSATILITY
RESULTS

A versatile reverb effect with great sound quality and unique sound-shaping options.

Rob Papen RP-Delay | £42

Rob Papen expands his plug-in prowess with a brand-new delay effect. ***Greg Scarth*** hears the echo…

ON THE DVD

WHAT IS IT?

Ultra-tweakable stereo delay effect with live processing options

CONTACT

Who: Time + Space
Tel: +44 (0)1837 55200
Web: robpapen.com

HIGHLIGHTS

1 Six stereo delay sections
2 Eight modulation routings, eight LFOs and eight envelope followers
3 Four 16-step modulation sequencers

SPECS

System requirements:

PC: VST/RTAS host, Windows Vista or XP
Mac: VST/AU/RTAS host, OS X 10.4 or later

A good echo effect is an essential part of any producer's kit, but we don't see a huge number of new delay plug-ins coming onto the market. Perhaps it's because they're not considered as exciting as a soft synth or the latest analogue filter emulation, or maybe it's just because most DAWs now contain fairly good examples as standard. Either way, Rob Papen's new RP-Delay plug-in aims to change the way you think about the humble echo. After a few days spent playing with it, I'm sure that it will. But maybe not for the better.

Power of six

As delays go, this is pretty powerful stuff. RP-Delay features six separate stereo delay modules that can be arranged in nine different modes, from full serial to parallel multi – and everything in between. Each delay module also has its own filter – with a variety of modes on offer – and a distortion feed with numerous algorithms. So far, so good – but if you're in the market for a delay plug-in, you probably want something a bit more advanced than the basics. RP-Delay certainly doesn't disappoint on that front, with four envelope followers, four LFOs and four 16-step sequencers on offer to help modulate the delay lines.

An effect this complex is never going to be easy to get the hang of, but RP-Delay takes parameter overkill to new levels. Clicking the Easy button allows you to view the six key settings for each of the delay modules simultaneously. There's no doubt that the sound quality is spot-on, but with all the delay lines doing their thing, it soon gets hard to keep track of what's going on. A visual indicator of delay times might help, as would solo buttons to allow quick auditioning of each part of the chain.

Option overkill

If you've ever wondered whether there's such a thing as too many options, take a look at RP-Delay's modulation settings. The modulation sequencers alone can be routed to 110 possible destinations, so it's lucky you've got four of them to play with. But what if that's not enough? Well, you've got eight more modulation routing settings, so we're talking preposterous levels of noodling potential here. Want to use a sequencer to control the rate of an LFO that modulates the level of distortion on a given delay module? No problem.

RP-Delay also sets itself apart from the pack with a series of live performance features, all controllable by MIDI and effectively transforming it into a hybrid instrument/effect plug-in. The two reverse modules are particularly interesting, splitting the signal into chunks and reversing them. With individual settings for Left and Right Channels, plus a tempo sync option, it's a powerful and interesting addition. With so many features on offer, it's a good job there are a few hundred presets to offer convenient starting points, otherwise you could get lost among the options for days.

There's no getting around the fact that RP-Delay is a seriously complicated plug-in, and the page-based user interface doesn't help matters. Despite the constant page-flipping, the main delay line settings are acceptable. The modulation routing options, on the other hand, are so over-the-top that they're likely to alienate as many users as they attract. This is by no means a bad effect – but if you're looking for a simple delay plug-in, you'll be disappointed. It sounds great and the huge library of presets gives you plenty of jump-off points, but you'll need them because the options are so overwhelming. FM

FutureMusic VERDICT

STABILITY
VALUE
EASE OF USE
VERSATILITY
RESULTS

Fiendishly versatile delay effect with great sound but an overly complex user interface.

ON THE DVD

WHAT IS IT?

The classic Studer A800 tape machine in UAD-2 plug-in form

CONTACT

Who: Source Distribution
Tel: +44 (0)20 8962 5080
Web: uaudio.com

HIGHLIGHTS

1 Faithfully models the sound of tape without the setup and maintenance
2 'Gang control' keeps all A800 instances 'matched' across a session
3 Simply lovely sound

UAD-2 Studer A800 Tape Simulator | $349

If you're left cold by the clarity and transparent sonics of modern studio recordings, ***Jono Buchanan*** recommends the latest treat from UAD...

SPECS

System requirements:
PC: Microsoft Windows XP (Home, Professional, or x64 Edition), Vista (x86 or x64) or Windows 7 (x86 or x64)
Mac: OS X 10.4.x or 10.5.x
All Platforms: Available PCIe x1/x4/x8/x16 slot for each UAD-2 card, 256MB RAM (512MB strongly recommended), 200MB available hard drive space for UAD-2 install, 1024 x 768 or higher resolution monitor, CD-ROM drive or internet connection for software installation, Internet connection required for registration and plug-in authorisation, Compatible VST, RTAS, or Audio Units plug-in host application software, GP or PCIe graphics video adapter card (PCI graphics not supported)

It's easy to forget that before the days of DAW recording, studios were 'limited' by the clarity of the recordings they could produce. Indeed, part of the drive to facilitate digital recording was the promise of 'noise-free' results, in the same way that hi-fi dealers were able to herald the arrival of commercial CDs in the early 80s as an alternative to 'popping, crackling' vinyl. However, recent indications suggest that we're fixated with the sound of tape once more, with the warmth and gentle saturation of recording made this way offering an antithesis to the 'cold clarity' of digital.

Of all classic tape machines, the Studer A800 proved all-conquering upon its release in 1978 and it's to this device that UAD have turned their attentions now. Authenticated by Studer, the plug-in promises to provide the sound of tape across every channel of your DAW.

Spin the wheels

As with many other plug-ins, Input and Output controls are offered but what's different here is that rather than merely controlling gain, these dials also control harmonic saturation – remember, tape doesn't approach distortion in the same way that digital recording processes do. The IPS (inches per second) dial offers options of Off, 7.5, 15 or 30 and the GUI animates the tape reels to match. If this proves distracting, clicking the IPS button will switch off the movement while preserving your settings.

These options are worth serious sonic exploration as each tape speed provides individual characteristics with different harmonic emphasis and distortion tone from one to the next, while the four 'Path Select' buttons faithfully recreate the A800's original 'modes'. 'Thru' bypasses the effect, 'Input' sends the sound through the A800's electronic circuit without running it through the tape sound itself while 'Sync' couples the sound in record and playback mode via the Sync/Record head with the electronics included. Finally, 'Repro' offers the sound produced by playback via the reproduction head, again tying this to the electronics.

There are four tape types, with 250, 456, 900 and GP9 options all emulating popular two-inch tape choices of the day, which each providing different sonic flavours.

Warm your mix's cold heart

Clicking the Studer badge reveals a panel of secondary controls for further tone and noise control. Here you'll also find the option to switch on a 'Gang Control' that maps parameter changes from one plug-in A800 to all the others in your mix. This is particularly useful as the best way to use this plug-in is to insert the A800 in the first insert slot of all of your mix channels, providing you with a fully-modelled multi-track tape machine. You can also 'mixdown to tape' by placing a single instance in the stereo output channel but I'd recommend going for the 'full effect' first to hear this plug-in in its full glory.

And glorious it truly is – instantly recalling the sound of classic tape recordings faithfully but offering a control set which really lets you tweak to provide exactly the right brand of retro. The scope of this plug-in should appeal to everyone from producers working on classic Rock projects to Hip Hop producers wanting to add some additional retro authenticity to the beat loops they program. The UAD platform goes from strength to strength. FM

FutureMusic VERDICT

STABILITY
VALUE
EASE OF USE
VERSATILITY
RESULTS

Faithful tape emulation that adds warmth and colour to music of any genre. UAD-2 continues to impress.

PRIME LOOPS

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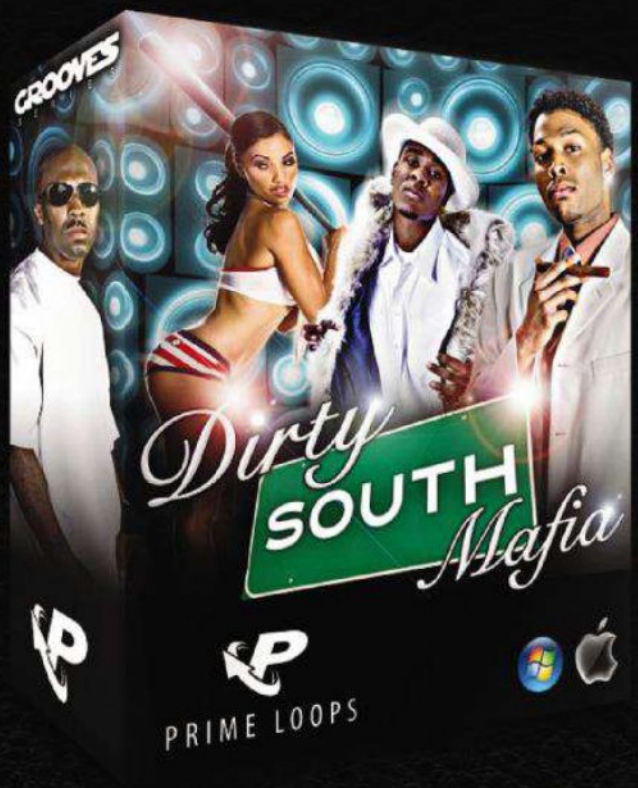

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Mini Reviews

The latest musical bits and pieces racked and rated

Mono The Fader | £109

monocase.com

We've been a fan of nearly all the Mono luggage that we've tested – the quality is second to none and this courier style bag is no different. It's solid and padded for everything from vinyl to laptops and it's got more hidden pouches and pockets than you could need. Plus, it looks super slick while being comfy to wear. Probably the best tech happy laptop bag for the travelling producer or DJ we've seen in a while.

Chris Barker

9/10

Datawind Ubisurfer | £129

ubisurfer.com

This tiny laptop has a much better build than the slender price tag suggests – the slightly rubbery matt black finish is pretty cool and the keyboard is big enough to be easily used. Running a Linux-based OS makes this fairly confusing to get going but navigate your way towards Firefox and you can get online. Now, here's the bad news – it's slow. So God damn slow! Trying to browse the internet on this device was clumsy and it was clear the processor and rest of the innards just weren't up to the job. If they'd stick some fast components in it and charge a bit more, this would be a genuinely handy, value-for-money net browsing device, with real laptop features. Avoid until that happens. *Chris Barker*

4/10

Pioneer HDJ-500 | £90

pioneerdj.com

The HDJ-500s are good looking, open and crispy sounding set of cans but benefit from a tweak of EQ. They deliver a decent mid-range punch, with clear vocals but the top mids and highs can be a bit fatiguing when used for extended periods. Upfront Dance music and heavily compressed Pop really suffers on them. Feed them a more vintage recording or something acoustic and they present the material much better. For the money, they're built well and comfy, but it's worth giving these a listen as they won't be to everyone's taste.

Declan McGlynn

7/10

Nine Volt Audio Organ Explosion | £62

timespace.com

The name may conjure up some horrific mental images, but Nine Volt Audio's *Organ Explosion* features a selection of the funkiest, grooviest Hammond B-3 samples we've heard in a long time. Tempos range from 84 to 150bpm and with right-hand licks and left-hand grooves by the bucketload, there's plenty here to spice up a wide variety of genres. The 706 loops are supplied in 24-bit REX, Acidized WAV and Apple Loops formats with Kontakt patches also included so you can slot them into your productions with ease. The REX format is particularly good, allowing the shorter stabs to be tempo matched without any noticeable time stretching effect. ***Greg Scarth***

8/10

Supalife Dubstep: Smooth Edition | £25

producerloops.com

In last month's issue we reviewed Supalife's *Hard Edition Dubstep* sample pack and were a little disappointed with its well produced but slightly underwhelming content. In the interest of balance, it's only fair that we should also take a look at its companion pack, containing five 140bpm construction kits which blend Dubstep's lazy halfstep beats with ethereal synth pads, D'n'B-influenced riffs and even the odd vocal sample. *Smooth Edition* is a real winner, with highly original sounds by the bucketload and samples in every format you can imagine. If you're a Dubstep producer with an open mind, this one is an absolute must.

Greg Scarth

9/10

Big Fish Audio Heart Of The City | £65

timespace.com

The ever-reliable guys at Big Fish Audio return with *Heart Of The City*, a package of 40 Hip Hop construction kits aiming to represent the 'real and raw' side of the genre. It's not quite the most hardcore set of loops you'll ever come across but it does provide a nice cross-section of contemporary Rap styles, and with over 5GB of content in all the usual formats there's plenty to choose from. The main elements of each construction kit are broken down into perfect bite-sized chunks while drums are supplied as loops plus individual hits. Overall, a solid package at a fair price. ***Greg Scarth***

7/10

Loopmasters present... Ghetto House | £20

loopmasters.com

If you like to whack out the kind of tunage that usually finds itself challenging the suspension of hot hatches with full bodykits, then this could be right up your chrome plated exhaust pipe.

Taking its lead from the likes of Adam F, Redlight and Zinc, this 726MB pack is full of bouncy basslines and filtered beats. The 250 loops run at a very club-friendly 127 and 131bpm and you get another 360 single shots to play on with. As is increasingly common among sample packs these days, 64 soft sampler patches put the Crack firmly in the *Ghetto House*.

Roger Watson

8/10

The Sound Of London Acid Techno – Chris Liberator and Sterling Moss | £23

loopmasters.com

Want a souped up 303 but don't have one? Well get your mince pies round this pack! Chris Liberator and Sterling Moss have put together a one-stop shop for Acid Techno heads and it features some pretty gnarly loops from Chris' own souped-up 303 as well as Battery 3 kits, Kontakt 3 multis and a huge Reason refill option.

The list of gear used to make this collection is truly drool worthy – Roland SH-101, ARP Odyssey and Prophet-5 to name but a few. If the legendary sound of *London Acid Techno* causes you to Stay Up Forever, then this has to be worth a pony (or is that a monkey?)

Daniel Griffiths

9/10

Real Strings Vol 2 'Cinematic Loops' – Organic Loops | £20

loopmasters.com

Real Strings – one of the holy grails of the musician/producer and next to impossible to get hold of without spending huge amounts of cash. Thankfully Pete Whitfield has taken time out from his film and TV work to put together this awesome collection. Aimed at the Hybrid/Cinematic Orchestra end of the Dance spectrum this is a must have. 126 loops ranging from 110-140bpm come as huge (widescreen, if you will) and stripped back versions as well as 12 MIDI files allowing you to program your own parts. 12 construction kits finish of what is for me a complete 'need'. *Real Strings* – the title says it all.

Roger Watson

10/10

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Q&A

Our panel of experts answer your music-making questions, from hardware issues to software ideas, with tips and tricks along the way

Can I build my own hardware synth?

Lee Rutherford asks:

Q I'm not really sure why, but over the last few weeks I've suddenly had a desire to build my own synth. I'm not talking about software here – I actually want to make a real instrument. The problem is that I don't really have any electronics skills so I'm not sure where to start. Could you advise me? My hope is that I can start small, learn the basics and then maybe progress to something bigger in the future.

Mark Gyver replies:

A You don't have to be Bob Moog to build your own hardware synth, but you need to be realistic about what you can achieve.

If you want to go completely from scratch, you'll find countless guides to synth-building on the internet. Typically, these will tell you which parts you need to source and then give you a step-by-step guide to putting them together.

Given your lack of experience, though, I'd suggest that the best place to start would be a kit. One of the cheapest of these is Gakken's SX-150, a stylus-operated instrument that you should be able to pick up for less than £50. However, it's so simple to put together that it might not give you the fulfilling 'building' experience that you're looking for.

A more flexible and practical option is MeeBlip, the new digital synth from Create Digital Music and Reflex Audio (**meeblip.noisepages.com**). This has the advantage of being able to accept a MIDI input, and can be bought in a couple of configurations. If you're looking for instant gratification, you should go for the Quick Build Kit ($129) which gives you everything you need and can be put together without having to pick up a soldering iron.

If you're feeling a little more confident and ambitious, the Full Board Kit ($79) dispenses with the case and overlays and is designed for people who want to make a more personalised synth.

A final option is to take an existing synth and hack it to your own specifications (though the MeeBlip can be hacked too). Korg's Monotron has gained a reputation as 'the most hackable synth ever' (again, Google is your friend if you want to find out how to mess with it), but bear in mind that, if you go wrong, you might just be left with a broken Monotron.

Whichever route you take, I wish you luck. It's worth noting, too, that stripping a synth back to its basics components will teach you more about how these instruments work and might just help you to make better music.

DIY Synth

The MeeBlip Quick Build Kit is a box of bits that you can turn into a synth.

Analogue recall

Simon Sedston asks:

Q I own a lot of old analogue gear and I'm wondering if there's any easy way to capture my control settings for future reference? Obviously most of this gear doesn't have any recall or patch storage built in and if I want to recall any mixes in the future I'm not going to be able to remember all my settings. Is writing all this down the only way to do it, as it's a time consuming task!

Dan Goldman replies:

Unfortunately there is no simple way to do this but it's part of the 'fun' of owning old gear! However, I do have a few tips you may find useful. The first is to go online and look for patch sheets which can sometimes be found on the original manufacturers websites or you can alternatively search for the products instruction manual online which often have patch recall sheets in the back. Then it's just a question of photocopying or printing off the document and filling in the details with good old pen and ink. If the manufacturer is no longer in business or doesn't have a website, or if you can't track down the manual in a net search, then the next alternative is to draw your own representation of your desk or synth's front panel and fill it in.

A good way to document dial settings is by describing them as minutes on a clock. i.e. just close to 12 o clock on any given dial would be '57 minutes to' while the quarter past position would be '15 minutes past'. This works well and is a pretty accurate way of noting down dial positions. For sliders you can write down the value in terms of dBs (normally noted alongside the fader on a desk) or you can alternatively measure with a ruler from the 0dB position (usually in the middle of the fader path) to the middle line on the fader cap and note that down in millimeters so you'll know exactly where to put the fader in relation to 0dB if you need to recall a mix.

THE EXPERTS

Mark Gyver
computer music expert

With 15 years of music production experience, Mark knows everything (and more) about the current and classic software market.

Doug Kraul
technology author

Doug Kraul is an electronics and computer industry innovator, who has designed analogue modular synthesizers and MIDI devices.

Dan Goldman
artist/producer

Aka JD73, Dan is a session keyboardist, producer and remixer, specialising in vintage gear, mixing and production techniques.

To send in your queries you can email us at **futuremusic@futurenet.co.uk** and we'll pass them on to the relevant expert. Or write to ***Future Music*** **Q&A, 30 Monmouth Street, Bath BA1 2BW**

How To Make Live Recordings

Dane Vickerton asks:

Q Please could you help me prepare for band live recording? I've booked a local rehearsal room that I think sounds good and we are going to lay down some tracks live, but I'm a bit worried about the sound not being good enough as we want it to be as tight as possible. Also, it would be good to know what mics to use – we don't have much time, so I need to get things right first time.

I also want to make sure that the material we have can easily be edited when I take it away from the studio. I have my own Cubase setup on my laptop at home and an old MOTU 828 interface that I'm planning to use for the recording, but any tips you can give me would be brilliant! Thanks a lot.

Dan Goldman replies:

A Well, this is a few questions rolled into one but it's a great one so here goes! It's good you've found a room you like the sound of but you need to make sure you have some control over the sound of each instrument because you say you are after a tight sound (which I take to mean quite close mic'd and upfront with little room noise).

In order to pull this off, you need to make sure the room has some kind of isolation gobos around that can at least help stop the sound bleeding too excessively from the drums into the guitar and vocal mics for example. You'll need a few isolation panels (or you could use duvets or other absorbent material draped over a few chairs) around the drums and also around guitar and bass amps too.

If the rehearsal room doesn't have any isolation gobos then you can try putting the amps out of the room (if possible) and micing them up but you will then need to wear headphones as you won't be able to hear yourselves otherwise. So, if at all possible it will probably work best if all involved can wear headphones and thus it'd be worth taking a headphone amp (or buying one if you don't already have one) so that you can route the headphone out from the MOTU 828 and split the signal among your band members so that you can all hear yourselves properly.

This way, although you won't each have a different mix, you can at least have different levels of the same mix in your cans. Note that with limited resources, there are always going to be compromises but you can certainly make this work for you. Really, if you want independent headphone mixes and a totally controllable sound in the end, you'll need to go to a better-equipped studio.

In terms of mics, then in this situation I'd keep things simple and sling a Shure SM57 on the guitar amp, while I'd DI the keyboards and bass too. For the drums, stick a 57 on the snare, an AKG D112 or maybe an Electro-Voice RE20 on the kick and something like an AKG C1000 (or alternative bright sounding mic) on the hats and use a single overhead mic (grab whatever works and sounds good to your ears) as you only have eight inputs. You could also use an SM57 or 58 on the vocal, or if the studio has it, a more expensive vocal condenser mic.

One final tip is, if possible, try to give the drummer a click track so that the track is at a consistent tempo. This will help pull loops out of the recording and means you will find it a lot easier to edit the material at a later date. You can simply put a cowbell and shaker track into Cubase and let the drummer play along with it but bear in mind that everyone will end up hearing this click, as everyone recording will be working off the same headphone mix.

Even so, there is no reason you can't get some great results with this fairly basic setup with a little thought and some compromise. At the end of the recording, you're going to have a multi-track session with consistent tempos across the board to work with, so any editing and replacing of parts you need to do at a later date should be pretty easy. Good luck!

You won't always have the luxury of multi-mic recording so choose a few all-rounders

Further to this, using a digital camera and keeping the picture file in the notes section of your DAW along with the tunes arrange page is a really good way of documenting things too. Always make sure you name any associated files well so that you know exactly which tune and mix version you are dealing with. Sure, all these methods take a little time to do but it's ultimately worth it, as you never know when you might want to grab a particular sound or mix again in the future. Better to be safe and organised than sorry!

Musical tablet

Dean Moore asks:

Q Can the iPad or another tablet device be used for serious music making? There are some interesting applications but I worry that they are nothing more than 'musical toys'.

Doug Kraul replies:

A The iPad already has a number of synthesizer, drum machine, and sequencer applications. Plus many iPhone/iPod Touch applications work well (or even better) on the iPad. Apps are relatively inexpensive so do not be afraid to experiment, even if some turn out to be clunkers.

Try to imagine each application within a possible workflow. Most current applications are single-purpose and not a full-on musical production environment. Inter-application sharing is currently rudimentary at best so plan on using each application more or less standalone. Many apps are instruments of one type or another that can be approached much like any hardware synth or drum machine. This makes the tablet a kind of reconfigurable music device – a drum machine now, a mono synth later. A number offer some method to record what you play (or sequence), or a way to export as audio files.

One way to use these apps is to plug the tablet's audio outputs into your mixer or soundcard and record yourself playing. Use them as additional synthesizers (some with unique performance features) to add parts to your songs. You could even build entire songs one part at a time in classic multi-track fashion.

Other applications are more focussed on 'performing' existing musical elements by triggering and affecting samples and loops. These 'dynamic arranging' apps are good for both live performance and hashing out song arrangements. However they are often weak at creating the loops and samples themselves. Assemble your material using your full studio tools, then use your computer to transfer these sets to the tablet. Finally there are the 'mini studios'. These offer a traditional, though vastly simplified, computer-based song production workflow. They are good for sketching song ideas. Do not sweat the sound quality or lack of features too much – you'll use your results mainly as a guide when recording the 'real' version of the song

Pad Power

Tablet devices offer a number of exciting and novel musical tools, just don't expect to use them like your computer.

Loopy for MIDI Loops

Fred Terry asks:

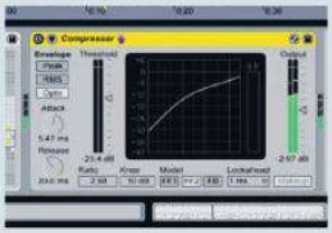
Q I have a comprehensive library of MIDI drum and instrument loops that I would like to use with one of my iPad music applications. Unfortunately, this application only accepts audio loops. Is there a way I can somehow convert the MIDI drum parts to audio?

Doug Kraul replies:

A MIDI loops must be played back through some type of synthesizer in order to create sound. This can be any synthesizer but often the MIDI loop was created with a specific sound or drum kit in mind. General MIDI (GM) compatible instruments are a popular authoring choice but it's best to consult the loop library documentation to learn the author's original intent and recommendations. You can find purpose-built applications on the Internet to do 'MIDI rendering' but if you have a decent sequencer app you already have all you need. Using your sequencer is a bit more work but you gain the flexibility to choose which of your software instruments (or hardware) you use to convert the MIDI loop into an audio loop. Let's look at using Live to render a MIDI loop.

1 Select the desired tempo. Note that while MIDI loops can readily change tempo without affecting the sound some drum loops are intended for a specific tempo range. Drag the MIDI loop into Live's arrangement screen – this creates a new MIDI track with the loop. Adjust the duration as needed.

2 Choose a suitable 'drum instrument' like a Live Drum Rack. MIDI drum loops assume sounds are assigned to specific MIDI notes so you may have to remap some of the instruments sounds to different notes. To help with the remapping, play the loop and watch which pads 'fire' in the Drum Rack.



3 Audition the loop. Adjust the sound and add any desired effects to the instrument's 'chain'. If you wish to use delay or reverb use them as insert effects and not send effects. Note that it is easy to generate different audio loops with different effect settings!

4 When satisfied with the sound select the loop by clicking it, then choose the menu File/Export Audio/Video... . Select the desired track, sample rate, bit depth, then click continue. Next choose a file and destination folder. Repeat this procedure with as many different sound and tempo variations as desired.

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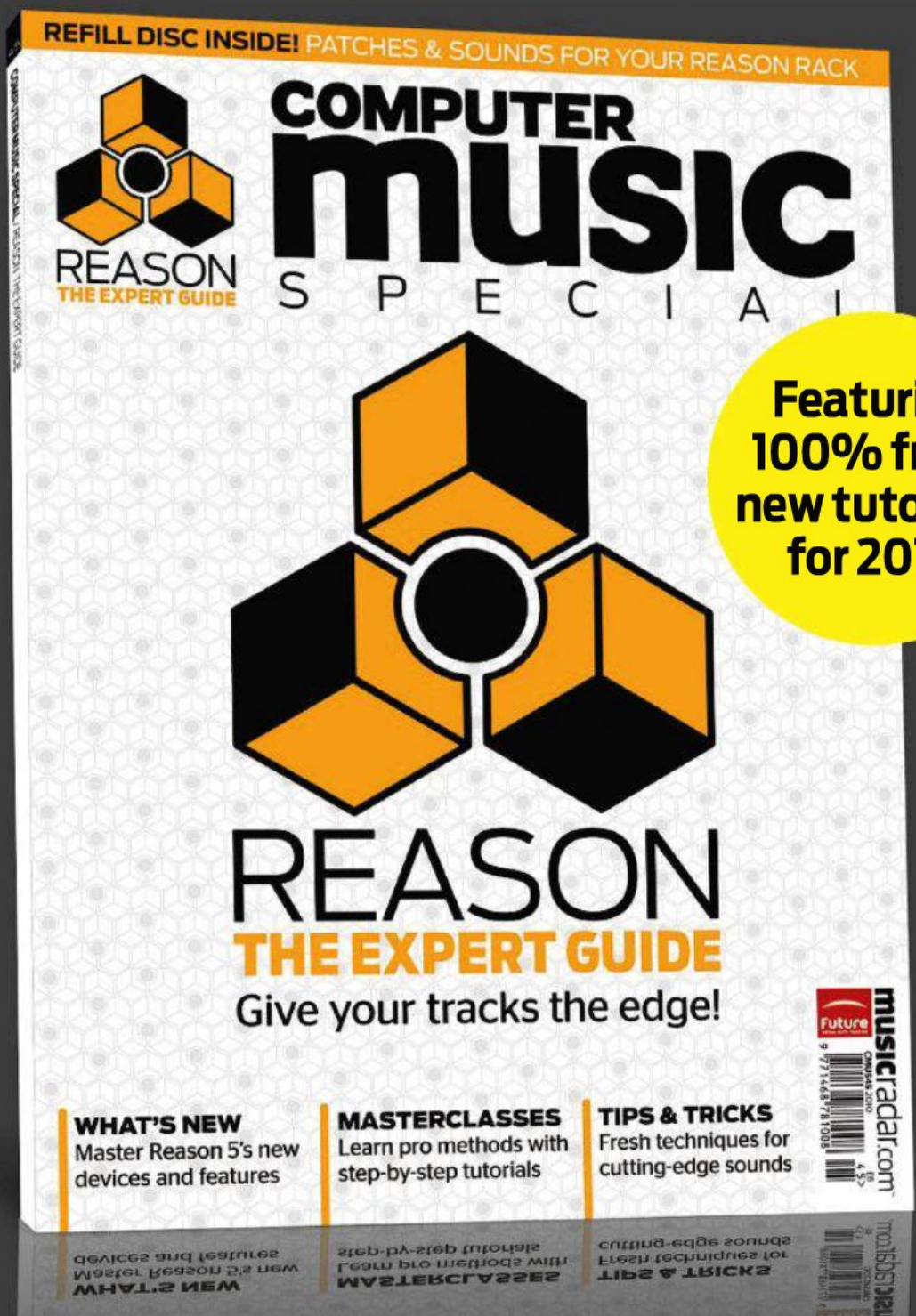

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back in the studio. Tablet device offer a new way of producing music that is somewhere between dedicated hardware devices and a full-on music computer. Expect rapid advancement over the next few years.

Meanwhile avail yourself to what is on offer today to augment your studio workflow.

Jury of peers

Kate Hughes asks:

Q I've been working on my own material for a while and now want to take the next step with my song writing and music production. I prefer to work solo but realise having others involved would be beneficial. What do you suggest?

Doug Kraul replies:

A Try to develop your own 'artistic jury' that you can pass your songs and mixes to for critical comments. This will introduce outside perspective to your writing and mixing. It's important that you use the same circle of people for this – each will offer their unique point of view. Keep in mind though that you'll need to learn where they're coming from. Choose people you know will be frank and honest.

A mix of people involved, and some not involved, in music production is best. It will take time to develop repartee and trust but the effort is well worth it and can result in better results for everyone involved.

Android music

Dave King asks:

Q I've just bought myself an Android phone and I want make some music with it. However, I've been disappointed to find that there are nowhere near as many Android music making apps as there are iPhone ones. Could you explain to me why this is and let me know whether you think Android will catch up with iOS?

Mark Gyver replies:

A You're not imagining things, Dave: even the most ardent Apple hater would have to admit that, at the moment, iOS beats Android hands-down if you're a music maker. Why? Well, partly because iOS is a more mature platform and many app developers have invested more time in it. There's been a real rush to get software into the App Store, so Android has had to play second fiddle for a while.

There are also some technical reasons why Android hasn't yet caught up with iOS for music-making. These are pretty complex, but Android doesn't have anything like Core Audio, the built-in audio system that iOS has. As a consequence, some developers have had difficulty creating Android music-making apps, with support for devices' mic inputs also being problematic. This being the case, you'll find that some Android apps have to use workarounds to offer certain features: Uloops Labs' Uloops Music Composer, for example – a mini DAW – has its audio engine on a DSP server on the internet, so loops you create have to be rendered online before you can hear them with your chosen sound. Not ideal.

All that said, Android has several things in its favour, not least that its user base is currently growing very quickly, and improvements to the OS are being made all the time. As such, I'd be surprised if the problems we're talking about now are still present in a year or two's time.

What's more, there are some decent Android music-making apps available right now. Chris Wolfe's Jasuto is a particular highlight – provided your phone is powerful enough, it's an excellent mini modular synth building tool.

Cloud Nine

Pro Tools 9 runs without the need for any Avid hardware, but should you consider it in preference to Logic Studio?

Logic vs Pro Tools

Harry Schuster asks:

Q I've just bought an iMac for music-making and I was all set to buy a copy of Logic Studio. However, then I found out that Pro Tools now works without any external hardware, so I thought maybe I'd go for that instead. Could you tell me which is best?

Mark Gyver replies:

A There's no doubt that Pro Tools is now a much more viable option for home studio owners, but as for whether you should buy it in preference to Logic… well, that's a tough one. At £479, Pro Tools 9 is more expensive than Logic Studio (which retails for £408), and it doesn't come with the same vast collection of instruments and effects. What's more, there's currently no Audio Units support (or VST), though given that the Pro Tools philosophy is now to be 'open', this may be added in due course. Of course, you may just prefer the way that Pro Tools works – if this is the case, it's certainly worth considering. However, I'd say that the beneficiaries of Avid's decision to free up their software are producers who work on Pro Tools in the studio, as they now have a way of continuing to work on their full projects on their laptops.

Android Music

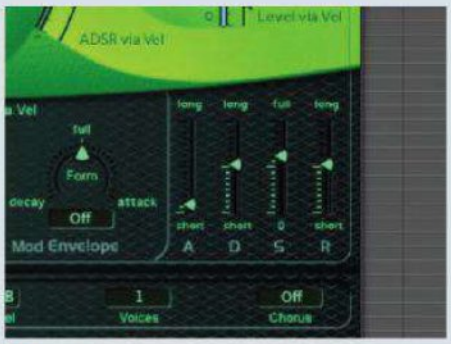
The music-making picture on Android is improving, as apps like Chris Wolfe's Jasuto prove.

Q Steve Smalley asks: I've been scratching my head recently about how to make those high-pitched classic Disco toms you get in old skool tracks and wondered if you could show me how to make them? In all honesty I'm not sure where to start! Should I be looking just to sample the sounds off a record or is it easy to make them? Anyway, I hope you can point me in the right direction.

A Dan Goldman replies: I know the sound you're talking about – high-pitched synthy descending toms. These could be made on pretty much any synth but there were also specific hardware effects boxes such as the Pollard Syndrum and Coron DS7 and DS8 that could make the Disco tom you're after. In fact, they use a similar principle to dub sirens i.e. a basic sine/triangle wave with pitch modulation. Here's how to do it in Logic's ES1 synth.

1 Load up ES1 into and audio instrument channel and make sure the default setting is loaded in the preset menu. First off, put the ES1 into mono synth mode by toggling the voices switch from the default 16 voices to one voice. This way the sounds won't all play together giving a much cleaner sound. The sound of several synth toms all going off at once isn't great!

2 Next up let's set up the correct waveform. We only need one oscillator for this sound so turn off the sub oscillator completely and set the main oscillator to triangle wave. This will give us the nice soft synthy tone that forms the basis of the Disco synth tom sound. At this stage things aren't sounding much like the Disco toms but rest assured you're on the right path.



3 Now let's set up the envelope controls. The Disco tom sound has a long release so let's set that to the half way point on the release slider. Make sure the attack slider is set to give a quick attack too to give the sound a nice defined start. Finally, set the decay slider to half way initially but experiment with this depending how much of a percussive start you want to the sound.

4 We're now getting down to the key part of the sound – the way the pitch drops away to give that classic Disco tom sound. First set both the LFO and mod to 'pitch' in the router section (you can use the LFO to add wobble to the sound if desired). Next, set the 'int to vel' slider to highlight its full range so we get a full range descending sweep going on.

5 We're almost there now. In order to get the pitch drop and finish off the sound, we need to turn the 'Form' dial in the mod envelope section to -660ms. At this point you should now be hearing the Disco tom in its full glory! Play the sound across your keyboard for full effect.

6 Finally, experiment with the different filter types, tweak the filter cutoff/resonance to brighten or darken the sound and add drive to taste. It's also very effective to add tape delay to the sound too. There you have it! Almost instant Disco toms! FM

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Demo Of The Month

SELECTED KIT

Hardware

> Apple iMac
> KRK Rokit 5 monitors
> CME UF6 Keyboard
> Mackie ONYX Satellite
> Apple iPad running Touch OSC

Software

> Logic Pro 8
> Arturia Yamaha CS-80V
> Arturia Minimoog V
> Guru
> Ozone 4

FAVOURITE GEAR

> "Without Logic Pro we would be lost, so that's an easy one."

Suicide Death Squad
Dreams

Contact: soundcloud.com/suicide-death-squad

READER DEMO OF THE MONTH

We think it's that ominous buzzing bass that does it for us. From the very opening moments – with all the bottom end sucked out – you know that this is going to drop big and scare the pants off you.

It's an incredible sound and some heavy compression with the urgent drum track (are those hi-hats too loud? Never mind, we love them) puts this right in your face. It's such a simple set-up (bass, drums, and that's about it) but the care taken with each sound and the way they sit together mean you don't need anything else.

The drop at 2:10 is a smart move, allowing the track to explore new territory and show a little more musicality beyond that thunderous bass riff. Not sure how the crowd would feel getting caught out on the dancefloor here but the drop at 3:09 soon restores the atmosphere. And full marks for not over using that 'tape stop to silence' trick too often. Tracks like this are all about exciting one-off spot effects and this one is loaded for bear.

It's a curious hybrid – part experimental tune, part dancefloor filler – but it pulls off both roles with aplomb. Bravo!

The Artist

Name: Steve Halfpenny & Gary Crayton
Where: Stoke-on-Trent, UK
My track: "It's the first track that Gary and I made under our new project Suicide Death Squad and we are really happy with the outcome. The track is very influenced by the French Electro/Techno sound, but we tried to add our own twist to it. The melody of the bassline is what drives the track and it's all made to go off on the dance floor."

Which bit of this track are you most proud of?
"That would be the bass sound that we made on the Arturia Yamaha CS-80 plug in, put through some overdrive and distortion and sent it to a guitar amp."

If we were to give you £5,000 for gear what would you spend it on?
"We would start to build a studio from scratch, making the acoustics our main priority. Then we'd get our hands on some Genelec 8040 monitors and I've always wanted a hardware Minimoog."

What are you working on right now?
"We are working on our debut EP and building a name for Suicide Death Squad."

The Best of the Rest...

SoNic Smith
Silicon Rain
facebook.com/sonicsmithmusic

"I love the gritty euro sounding lead. At first I had all the beats and bass laid out and I was using a basic reverbed saw sound over the top, arpeggiating it. Inspiration had stopped," explains Nic Smith. "Then I scrapped the lead, loaded up the FL Studio Sytrus synth and strategically tried to make a more edgy dirty sound. As soon as it sounded like Darude, I stopped, I knew I was there."

And yet, despite the Da-rudeness, this is a bone-crushing Dub Step track. "Right now I'm using a Casio CZ-5000 keyboard for MIDI control), an 8 year old Dell Computer, FL Studio 6 and a beta version of the Helix synth from Audjoo." Nice work, with such basic kit. "My favourite kit is FLStudio 6. I'm used to it now and feel out of sorts if I try to use anything else. And I'm learning to play live using a Roland SP-555. Previously I was using my laptop running Ableton and a few controllers, one of which was a virtual reality type gaming glove which I hacked to send out MIDI signals. But after heart-breaking nights of my gear failing for one reason or another I decided to go down the hardware route."

The Outsider
Dimension
myspace.com/iamtheoutsider

"This track is a head-bobbing, rolling, rhythmic, Electro excursion into the Demented Dimension. Or something like that," offers Mr Outsider, AKA Scott White. "I'm really proud of the track as a whole. It all came together so well: the rhythm, the 303 part (I

have a xOxbOx, but on this track I used Audiorealism's Bassline), the sub-bass (I am originally from Florida after all), and especially the backwards parts. It unites the elements that I love about electronic music: 303, vocoder, subwoofer-punishing low end, sci-fi samples."

It's the sheer simplicity and old-skool-meets-Hawtin Acid vibe that got us nodding.

"Working in-the-box definitely has its advantages – power, multiplicity of synths/sound generators etc – but hardware is truly irreplaceable. Also, there are more 'happy accidents' when working with hardware, and anyways it feels good to be able to change whatever parameter you want on the fly by just twisting a knob."

Hugo
Depression – Just A Feeling (2010)

myspace.com/greendolphin32

So let's let its creator Hugo van der Tuin explain that weird title. "I started off with a kinda depressed feeling at the start of the track, then I thought off adding some violins to cover that up. Then I added the guitar to brighten the track up. It's like it's saying "Are you feeling depressed? Not after hearing this track you wont be!" Ah ha. We get it.

There's so much going on here, and just when you think there's too much reverb at play some incredibly dry Glitch effects snap things back into sharp close-up. "The last thing I added was the fat bass. That's just overstating the simple melody-line, yet it still kinda works, I guess. But I'm most proud of the guitar sound with a little arpeggiator and chord MIDI effect added in Ableton. Think it's a really cool sound all in all."

MK3L
Superposition

myspace.com/mkelmusic

"This track is a mix between modern sounds and more vintage sounding synths," says its maker Mikael Karppinen. "It has a lot of melodic interest but still remains a highly

SELECTED KIT

Hardware
> Apple Macbook Pro
> Akai MPK49
> Novation Launchpad
> Digidesign Mbox
> Sure SM57 copy mic

Software
> Ableton Live Suite 8

FAVOURITE GEAR

> "Definitely the Novation Launchpad. It's easy to use both in studio and live and it completely changed our workflow."

GelbGut
Poolnudel

Contact: gelbgut.com

This track was the first proper song we made after a couple of gigs just jamming with Ableton, guitars and vocals," say its makers Paul Matyas and Michael Kaczorowski. "It literally took 15 minutes to record and a couple of hours to polish it up. We are quite proud of the way it came out, because we were going for a smooth pop thing, with some edge lyrics-wise, and also some kind of groove to it. Although our music is usually quite guitar-based usually, this one actually doesn't have any guitar in it at all."

And it's all the better for it. We LOVE the melody here and – sorry guys, we know there's a little typecasting going on here – we're inevitably reminded of Kraftwerk at their most musical and sleek.

"We love the balance between the vocals, and the density in the sounds. Every melody has its sound and space." Yes indeed. It's a perfect, effortless, crystalline sound that we'd happily sit through 10 minutes of exploration and progression. Let's have an extended remix please!

Hot Pick

SELECTED KIT

Hardware
> KRK Rokit V6 monitors
> Tascam US-122L interface
> Korg MS-20 Legacy Edition

Software
> FL Studio 9
> Sylenth1
> Albino3
> CamelPhat
> Kombinat
> Oxford Dynamics Native
> DBAudioware Sidechain Compressor
> Kjaerhus Audio Auto-Filter
> Waves REQ 6 Bands

FAVOURITE GEAR

> "My KRK Rokit monitors. Since I've got those my music just seems to sound so much better on almost every speaker I've heard it on."

D-Jam ft Sam-D
1 out of 8 (original mix)

Contact: Soundcloud.com/djdjam

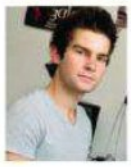
Yes! Love the funky shuffling feel and you can hear the care and attention that's gone into that multi-layered synth lead/bass sound. What is that? Four synths? Five? Whatever you're doing, it sounds great.

There's some really cool EQ tricks at play here. Chopping out the bottom end at the end of a phrase then bringing it back for the next 16 bar chunk is a trick that always keeps the listener on their toes and in tune with the track.

And just when you think you've heard it all the sharp, bristling synth stabs at 2:30 give the track a whole new sonic and musical spectrum. Love it when you hype up the feedback on the delay here too and the harsh drop at 3:30 is a brilliant reward for making the journey.

Hats off for your elevators and hi-frequency exciters here. You're stopping just short of ear-splitting madness! All in all a solid, insistent club track that makes its intentions clear early on and doesn't quit til it's through.

The Artist



Name: Mark van Mameren
Where: Soest, The Netherlands
My track: "It's a combination between House and Trance with a big lead for the club."

Which bit of this track are you most proud of?
"The lead sound took a lot of work. It's combination of multiple Sylenth1 synths put through CamelPhat, Kombinat and a sidechain compressor layered with a low bass line that I also created with Sylenth1."

If we were to give you £5,000 for gear what would you spend it on?
"I'd buy a Virus TI, a UAD plug-ins bundle, a Macbook Pro with Logic and a nice hardware compressor."

What are you working on now?
"There are some House tracks that should be at SoundCloud pretty soon. A couple of tracks are being mastered at the Rocketeers Studio in Hilversum right now and I've got some nice DJ gigs coming up too."

danceable club tune." It's that crazy guitar and laser-war synth that set this off for us. "Personally, I like the drops with the pitch bended lead synth and the vocal sample. Also the breakdown before half-time still puts a smile on my face. Sound-wise I dig the analog sounding lead synth the most. I got it by tweaking the ES2 synth in Apple's Logic Pro."

Ah yes, it's a great choral sound, playing some unusual timing and the drop at 1:06 has pretty much every 'piano roll push and shove' trick going in order to keep the rhythm as unpredictable as possible. But what gear is making this delightful cacophony? "I use an Apple iMac 3.06 GHz, M-Audio FireWire 410 interface, M-Audio Oxygen 61 MIDI controller, NI Kore 2 interface, Yamaha HS50M studio monitors, Apple Logic Pro 8, NI Massive, FM8, and a lot of other plug-ins." Well, it's sure working for us.

Olly Shelton
Life Line

ollyshelton@hotmail.com

"I would describe the track as Alternative?... Maybe?...." says the man with the plan, Olly Shelton. "It's a thick blend of electronic sounds with a defiant drum beat full of effects and a riff on a synth sounding electric guitar which comes in at the intro and in between verses and chorus. I really wanted to achieve a booming bass and drums in this song and I think I made this happen throughout."

It's such a great, deceptively simple tune. The mix is so polite and everything has it's own space and full marks for your vocal performance and treatment. Proof that you don't need to drench it in effects or autotune it out of its skin. "I'm most proud of the percussion and I got this using eight different drums tracks with different filters and modulation effects.

"I use a Yamaha DGX-205 keyboard, an Audio Technica AT2020 condenser mic, a Alesis audio interface, MS40 Behringer monitors and an Apple Macbook running Logic Express," says Olly. "Right now I'm working on more of the same but moving more towards some Electronic House songs, which is the kind of music I'm really into now." We look forward to hearing it.

t46627
Keyflow

http://soundcloud.com/t46627

The enigmatic t46627 provided us with the scantest of details but that hasn't stopped us enjoying this hypnotic neoclassical experiment. In fact it's interesting to note that t46627 (hope you don't mind us calling you that) actually submitted numerous slight variations on his theme, this one – with the piano taking the lead line – being our favourite of the collection.

There's some interesting tonal interplay going on here with some rather off the wall chords and phrases but that never did Philip Glass or Stockhausen any harm. In that respect you're in good company and we look forward to hearing more on your Ambient experimental works. FM

Hot Pick

SELECTED KIT

Hardware
> Access Virus TI

Software
> Logic Pro
> Ableton Live
> Sylenth1
> Nexus
> Vengeance Multiband sidechain compressor
> Spectrasonics Omnisphere

FAVOURITE GEAR

> "I will have to say my Access Virus TI. It was kind of out of my budget but since I got it, it somehow put that warm hardware synth soul into my music and its software integration gets better with every update."

Electrisch Init

Contact: myspace.com/electrisch

I called this track Init – as in 'initialise' – because I've kind of initialized myself after a year long pause since I made my last track," says it's maker Athar Siddiqui. "I have a new found energy and hopes to continue and stay on the music scene now." Well full marks for getting out of that slump and delivering this impressive piece of melodic Techno to our Inbox.

The mix is great here. There's a nice stern kick, lots of special treatments for vocals and spot effects drenched in some suitably apocalyptic reverbs and delays and a shimmering, bristling bank of gated hi-energy synths. We're particularly loving that gently gated main string synth pad part. And when the arpeggio kicks in too? Just gorgeous!

"I used a few layers of Sylenth1 and added some filters from the Virus TI," says Athart. "That did the magic." But how does he plan to top this one? "The next thing I plan to buy is a subscription to FM because it comes a little bit late here in Canada. I want to update my studio with some acoustic panels so I don't wake up my neighbours any more!"

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***Future Music* issue 223**

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€ 95.- £ 81.-
order code 253718

Zoom H2 4GB Bundle
Mobile recorder
24bit/96kHz, USB interface, record 360° sound as 2-channel data or 4-channel data simultaneously, mic/line input, headphone output, perfect for interviews, podcasts, meetings and live recording. Incl. USB cable, stand, power supply, windscreen and 1GB SD card. **Bundle includes additional 4GB SD card.**
€ 169.- £ 143.-
order code 203048

Zoom Q3 HD
Handy video audio recorder
Built-in stereo condenser mics with true X/Y configuration, 2,4" LCD display, video resolution up to full HD 1080p, MPEG-4 AVC / H.264(MOV), Mini-HDMI and NTSC/PAL TV out, 44,1/48kHz 16/24bit Linear PCM or AAC, accepts up to 32GB SDHC cards, auto record level, uses 2 standard AA batteries or NiMH rechargeable batteries, USB 2.0 with built-in cable, headphone out, Windows and Mac OS compatible, incl. 2GB SD card.
€ 238.- £ 202.-
order code 254939

Edirol R-09 HR 4GB SD Card Bundle
24bit/96kHz mp3/WAV recorder
Up to 320kbps mp3 playback and recording, recording on SD or SDHC card (up to 8GB), integrated stereo condenser mic, OLED display, built-in preview speaker, incl. wireless remote control with split function, USB 2.0, stereo mic in, stereo line in, Incl. power supply, 512MB SD card, USB cable, Cakewalk Pyro AudioCreator LE, wireless remote controller and small table mounting plate. Bundle incl. 4GB SD card.
€ 279.- £ 237.-
o. code 207377

Zoom H4 N Wizoo Bundle
24bit/96kHz digital recorder
Perfect for interviews, podcasts, meetings and live recordings. 2 built-in stereo microphones, provides 24V or 48V phantom power, USB port. Includes windscreen, USB cable, cover and Cubase LE4. **Bundle includes 4GB SD card, Superlux HD681 stereo headphone and Wizoo Publishing ‚Mobile Recording' Thomann Special Edition by Kai Schwirzke.**
€ 333.- £ 282.-
o. code 232016

Tascam DR-100
Mobile recorder
44.1/48kHz, records and plays mp3 and WAV files, 4x integrated condenser mics with different patterns, 2x XLR mic inputs with 48V phantom power, automatic level input control with limiter, stereo line input, headphone output, USB 2.0, powered via 2x AA batteries or NiMH rechargeable. **Includes 2GB SD Card, BP-L2 battery, bag and windshield.**
€ 366.- £ 310.-
order code 223927

Boss BR-800 Bundle
24bit/96kHz digital recorder
4-track recording at the same time on SD/SDHC card possible, 8-track playback + stereo drum track, usable as USB audio interface and effect engine, HiFi (MT2) Roland/Boss format and 16bit stereo WAV format, LCD display, headphone out, USB for audio I/O, MIDI I/O, incl. SD card, power supply, USB cable and Cakewalk Sonar 8.5 LE, weight: 872g. **Bundle incl. the t.bone MB85 Beta dynamic microphone and Superlux HD681 headphone.**
€ 433.- £ 367.-
o. code 254835

Sony PCM-D50 CED
Mobile recorder
24bit/96kHz, fitted with 2-position (X-Y or wide) stereo electret condenser mic, 4GB internal flash memory, USB, digital pitch control, dual digital limiter, lo-cut filtre, SuperBit Mapping, A-B repeat and mp3 playback capability, mic and line input, line and headphone out, incl USB cable and Power Supply AC-ES608K. Optional: remote commander, tripod stand, and microphone windscreen available separately.
€ 555.- £ 471.-
order code 256509

Tascam 2488 NEO
24-track hard disk recorder
24bit/44.1kHz, 8x mic/line inputs (4x XLR with phantom power), internal FX processor, 16x CD-RW drive (red book compliant, import/export WAV files and backup hard drive), new effects for mastering, 250 virtual tracks, high speed USB 2.0 connects to PC or Mac® for data backup and SMF/WAV file exchange, 80GB hard drive. Weight: 8kg
€ 722.- £ 612.-
order code 219928

Behringer VMX300 Pro
DJ mixer
3 dual-input stereo channels with gain and 3-band kill EQ, 1x mic in with auto-talkover and depth control, intelligent dual auto BPM counter, crossfader, PFL function. Dim. HWD: 8.8 x 24.1 x 33.2cm. Weight: 3.5kg.
€ 91.- £ 77.-
order code 153735

Behringer VMX100 Pro
2 dual-input stereo channels.
€ 48.- £ 41.-
order code 152139

Behringer B-Control Deejay BDC2000
4-channel USB audio interface
24bit digital converter, incl. behringer B-DJ software, 2 scratch pads, pitchbend and cue function integrated audio mixer with mic preamp, 3-band kill EQ per channel, talkover function, 2x high-end phono preamps, cue section with PFL mix/split function.
€ 95.- £ 81.-
order code 181179

Numark Stealth Control
Complete prof. computer DJ package
Hardware controller with Native Instruments Traktor 3 LE and MixMeister Fusion Live software, extremely clean high quality sound, solid reliable knobs, faders, and buttons, Mac and PC compatible, supports MIDI over USB, plug & play, no power supply required. Colour: Grey.
€ 135.- £ 114.-
order code 222914

Behringer DJX 750
5-channel DJ mixer
24bit digital effects, BPM counter with time and sync display, Ultraglide faders, XPQ stereo surround effects, 3-band kill EQ, 3-way kill switch, monitor function with master/cue balance control and split option, auto talkover.
€ 155.- £ 131.-
order code 223751

Pioneer CDJ-850
Single DJ CD player
MP3, AAC, WAV, AIFF, 24bit/48kHz, HID and MIDI control by USB, new audio output system with Wolfson DAC processor, quantized beat loop, advanced auto beat loop, plays Audio CD, CD-R, CD-RW, USB, frequency response: 4Hz - 20kHz, dimensions: 30,5 x 36,4 x 10,5cm, weight: 3,3kg, incl. Rekordbox music database management software, Mac OSX (10.4.6 and higher), Win 7 & XP.
€ 869.- £ 737.-
order code 251872

Behringer UB1202
12-channel mixer
2/2 bus, 4x stereo line ins, 4x mic ins with low cut, +48V, 1 post fader FX send, peak LEDs on all mono channels, 1x aux (post), 2-track I/O, control room out, external power supply.
€ 62.- £ 53.-
order code 158998

the t.mix Mix 1202
12-channel mixer
4x mic inputs with 3-band EQ and 48V phantom power, 4x stereo inputs, 1x aux, 2-track I/O, ¼" balanced jack output. Dimensions: 27.7 x 27.5 x 2.8-4.5cm. Weight: 1.8kg
€ 62.- £ 53.-
order code 207203

the t.mix Mix 1204 FX
4x mic ins with 3-band EQ, 48V phantom power, 2x stereo ins, 2x aux, 2-track I/O, 24bit internal DSP.
€ 131.- £ 111.-
order code 207206

Alesis Multimix 4 USB
4-channel mixer with digital output
16bit, 44.1kHz signal on USB, 4x line level ins, 2x XLR ins with gain and switchable 48V phantom power, high impedance guitar input, 2-channel EQ on mic ins, multicolour LED metering, main and headphone outs with independent level controls, incl. power supply. Dimensions: 15.2 x 19.6 x 5cm. Weight: 0.6kg.
€ 95.- £ 81.-
order code 235244

Behringer Xenyx 1204 FX
12-channel mixer
4x mic ins with phantom and 75Hz low cut, internal 24bit multi FX, 2x stereo ins with 3-band EQ, 2x aux (pre/post), USB, peak LED and mute per channel, 2-track I/O, XLR main out, internal power supply.
€ 144.- £ 122.-
order code 191262

Soundcraft EFX 8
8-channel mixing desk
8x mono inputs, 2x stereo inputs, inserts on all channels, 1x FX send, 1x aux send (pre/post), 48V phantom power, solo/mute switch, integrated Lexicon FX with 32 presets, peak LEDs on all channels, integrated power supply. Dimensions: 33 x 9.1 x 36.2cm. Weight: 4.6kg. Optional rackmount available.
€ 285.- £ 242.-
order code 118879

Alesis iMultiMix 16 USB
16-ch. USB mixer with iPod recording
8 mic/line ins with 48V phantom power, integrated limiter, 16bit/44.1kHz and 48kHz, aux sends and returns, 100 internal 28bit digital FX, shelving and band pass/reject filtre, incl. Cubase LE and power supply, for Win XP/Mac OSX, dimensions: 33,1 x 48,3 x 8,3cm, weight: 5,6kg.
€ 344.- £ 292.-
order code 256731

Mackie 1642 VLZ3
Compact 16-channel mixer
8x mono mic/line channels, 2x mic/line stereo channels, 2x stereo channels, 4x subgroups, 4x aux (2x pre/post switchable), XDR2 mic preamps, 60mm faders, 3-band parametric EQ (mono channels), 4-band EQ (stereo channels), 48V phantom power. Dimensions: 42.5 x 13.1 x 42.1cm (WxDxH). Weight: 8.3kg
€ 525.- £ 445.-
order code 112362

Mackie Onyx 32.4
Live mixer
28x mono ins, 4x subgroups, 3x outs, 4-band EQ with fully parametric mids and fixed lo/hi, 30dB pad, low cut, 6x aux sends, LED and insert per channel, 6x2 matrix, internal compressor/limiter, D-Sub 25 direct out, talkback, phones out, main insert, internal power supply. Weight: 21.8kg
€ 1125.- £ 954.-
order code 194635

Presonus Studiolive 16.4.2
16-channel digital mixer
Built-in 32x18 FireWire audio interface, ‚Fat-Channel' processing with 4-band EQ, compressors, limiters and gates. 16x inputs, 6x auxiliary mixes, 4x subgroups, 16x Class A XMAX mic preamps, 44.1kHz & 48kHz sample rate, 2x master DSP FX, talkback. Dimensions: 43.7 x 17.5 x 56.8cm (WxHxD).
€ 2169.- £ 1839.-
order code 225534

Mackie DXB200 Refurbished Bundle
Digital open architecture mixing desk
72ch/96kHz (36ch/192kHz), 8 busses, 2 touch screens, 25 motorised faders, 4-band EQ, compressors and gates, VST plug-in compatible, 2 PCI slots, flexible I/O, 9 slots for optional I/O cards (not included in basic config), Mackie Control Universal mode for DAW control. **Bundle incl. Xbus AES card, Xbus digital card and 2x Xbus line card. B-Stock with full warranty!**
€ 3666.- £ 3109.-
order code 251867

www.thomann.de
Telephone Hotline: 0203 5141643 (UK)
Fax: +49 9546 9223-24

The Thomann services

- 30-day money back guarantee
- free shipping to the UK and Ireland on orders above £159

Miditech Midistart Music 25
MIDI master keyboard
25 touch sensitive keys, joystick for pitchbend and modulation, octave up/down, MIDI output, USB connection, includes USB cable and Magix Samplitude SE. Dimensions: 38 x 8 x 24cm. Weight: 2.3kg.

order code 230804 — € 55.- £ 47.-

Miditech Midistart 3 USB
MIDI keyboard
49 full-size touch sensitive keys, pitch bend and modulation wheels, USB port for direct connection to Mac/PC, MIDI out, includes USB cable and Magix Samplitude SE PC software. Finish: Silver

order code 116317 — € 66.- £ 56.-

Behringer BCF 2000 WH
DAW controller
8 motorised faders, 16 + 4 illuminated switches, footswitch connection, 32 user presets, MIDI I/O (useable as Midi interface), LED display, generic USB MIDI supported (Win XP and Mac OS X). Finish: white.

order code 119851 — € 125.- £ 106.-

Yamaha Motif XS 7
88-key workstation
355MB Wave ROM, 128 voices, presets: 1024 normal voices + 64 drum kits, colour display, 4-part arpeggiator, 4 layers or splits in performance mode, sequencer, internal sampler, USB, Ethernet

order code 111124 — € 2088.- £ 1764.-

Moog Little Phatty Stage II Thomann Ed.
Analogue synthesizer with 37 keys
MIDI over USB, direct USB to computer connection allows the use of the Little Phatty editor, arpeggio and tap tempo function, 2 oscillators, 1 low-pass filter (classic Moog Ladder), 4-stage analogue Envelope generators, real analog control, 100 user presets, Thomann Edition (red back, red display, pitch wheel and mod-wheel, black sidecovers).

order code 251804 — € 1089.- £ 923.-

M-Audio Fast Track USB
USB audio interface
24bit/48kHz, 1x analog input, 2x analog output, input jack or XLR, headphone output, direct monitoring, for Win and MAC OS X, incl. ProTools M-Powered Essential Software.

order code 246876 — € 68.- £ 58.-

ESI ESP1010e
24bit/96kHz PCIexpress audio interface
PCIe card with external 19" interface, 8x analog ins (2x with mic preamp and 2 Hi-Z instrument), +48V phantom power, up to 8x analog ins and outs, coaxial S/PDIF I/O, 2x headphone outs, 2x MIDI I/Os, support for DirectWIRE 3.0, EWDM driver: MME, DirectSound, ASIO 2.0 support, Windows 7/Vista/XP compatible, power supply optional, incl. Steinberg Cubase LE 4.

order code 230632 — € 155.- £ 131.-

M-Audio Fast Track Pro
USB audio interface
4x4 24bit/44.1kHz, stereo in up to 24bit/96kHz, USB powered, 2x mic/instrument preamps with switchable phantom power, 2x inserts, 2x balanced line outs, 4x additional RCA outs, S/PDIF coaxial I/O, S/PDIF out (AC-3/DTS surround sound compatible), MIDI I/O, compatible with both Mac and PC.

order code 184360 — € 155.- £ 131.-

Focusrite Saffire 6 USB
USB audio interface
2 preamps with 48V phantom power, Hi-Z instrument input with -10dB pad, 24bit/48kHz, MIDI I/O, headphone output, 105dB, noise (mic in): THD+N = 0.0025%, 2x combo ins for mic/line/instrument, 4x analogue outs. Includes Focusrite plug-in suite, Xcite+ bundle and USB cable, for Mac OS X or Windows. Weight: 1kg.

order code 236371 — € 166.- £ 141.-

Apogee One
USB audio interface
24bit/48kHz, 1-channel A/D, stereo D/A, XLR mic in with phantom power, hi-Z instrument/line in, headphones out, integrated condenser mic, multi-function controller, LED meter, Mac OSX 10.5.7 or later. Dimensions: 11.7 x 5.7 x 2.7cm

order code 233106 — € 211.- £ 179.-

Apogee Duet Bundle
FireWire audio interface
24bit/96kHz, 2 channels, Firewire 400 I/O, breakout cable with 2 XLR mic ins, 2x ¼" jack instrument ins, 2x ¼" jack monitor outs, multi-segment LED display input and output levels, multi-function controller knob, headphone out, Maestro software for advanced control and low latency mixing, compatible with any Core Audio compliant audio application, compatible with Mac OS X Core Audio. **Bundle incl. original Apogee carry case and 2GB USB stick.**

o. code 209773 — € 415.- £ 352.-

Focusrite Saffire PRO 40
24bit/96k FireWire audio interface
20x I/O, 8x mic preamps, 8x analog I/O (2x mic/line/instr. combo XLR, 6 mic/line combo XLR), ADAT I/O, 2x S/PDIF I/O, 2x monitor outs, monitor switch, 2 separate headphone buses, MIDI I/O, zero-latency DSP mixer/router, internal power supply, includes plug-in suite. Dimensions: 19"/1U. Weight: 3kg

order code 219725 — € 458.- £ 388.-

M-Audio ProFire 2626
24bit/192kHz FireWire audio interface
26x analog/digital I/O, ideal for project studios, 8x preamps with Octane™ technology, flexible onboard DSP mixer, user-assignable master volume knob, standalone operation, critically acclaimed jitter elimination, Pro Tools M-Powered compatible, 8x analog mic/line jack ins with phantom power, 2x instrument ins, 8x analog outs, 2x ADAT I/O.

order code 207107 — € 469.- £ 398.-

MOTU Ultralite MKIII Hybrid
FireWire and USB audio interface
24bit/192kHz, 2x mic/instrument inps, 6x bal. ins and 10x outs (1/4" TRS), 48V phantom power, S/PDIF I/O, headphone out, CueMix FX, internal DSP, LCD display, suitable for use as a standalone mixer, compatible with Windows and Mac, supports WDM, ASIO and Core Audio, incl. AudioDesk software for Mac.

order code 239141 — € 479.- £ 406.-

RME Fireface UFX
USB/FireWire interface
Up to 192kHz, 30 I/O channels, 12 analog inputs, 4x mic/instrument preamp (48V phantom power), 12 analog outputs, AES/EBU I/O, 2x ADAT I/O, Wordclock I/O, 2x MIDI I/O, FireWire 400, USB 2.0, TotalMix FX Software, built-in monitor controller, SteadyClock, DIGICheck, stand-alone operation with setup recall, 19"/1U, for Win XP SP2/Vista/Win7 and Mac OSX 10.5.

order code 255180 — € 1899.- £ 1610.-

Behringer UL 2000 M
UHF wireless system with handheld mic
True diversity, 320 adjustable frequencies (798.850-805.800MHz), IRC compander, handheld transmitter with Panasonic condenser capsule, cardioid, works with 2x 9V battery for up to 12 hours (not included), mute switch and low battery indicator on transmitter, scan function, pilot tone, 3 presets with 8 channels, 1 user preset with 8 channels, lock function, internal power supply, dimensions: 9.5", 1U.

order code 107376 — € 105.- £ 89.-

Behringer UL 2000 B
UHF wireless system with headset
True diversity, 320 adjustable frequencies (798.850-805.800MHz), IRC compander, headset with Panasonic condenser capsule, cardioid, works with 1x 9V battery for up to 6 hours (not included), mute switch and low battery indicator on transmitter, scan function, pilot tone, 3 presets with 8 channels, 1 user preset with 8 channels, lock function, internal power supply, dimensions: 9.5", 1U.

order code 139250 — € 105.- £ 89.-

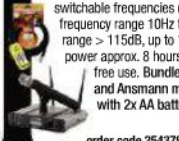
Sennheiser Freeport Vocal
Diversity UHF wireless system
4 switchable frequencies between 863 - 865MHz, 10mW HF power, diversity receiver with LED for HF, diversity, peak, XLR & jack out, dynamic handheld transmitter, cardioid, 80Hz-16kHz, 1x 9V battery (up to 10hr). Includes 12V DC power supply.

order code 183508 — € 155.- £ 131.-

Line 6 Relay XD-V30 Bundle
2,4GHz vocal wireless system
True diversity receiver, handheld transmitter with dynamic capsule L6-DC7, 6 switchable frequencies (all 6 parallel), audio frequency range 10Hz to 20kHz, dynamic range > 115dB, up to 30m, DCL, world wide licence free use. **Bundle incl. 6m Klotz cable and Ansmann maxE 2100 power set with 2x AA batteries + charger!**

order code 254377 — € 299.- £ 254.-

Line 6 Relay XD-V70 Bundle
2,4GHz vocal wireless system
True diversity receiver, handheld transmitter with simulation of 6 different capsules, 12 switchable frequencies (all 12 parallel), audio frequency range 10Hz to 20kHz, dynamic range > 115dB, up to 100m, DCL, battery power approx. 8 hours, world wide licence free use. **Bundle incl. 6m Klotz cable and Ansmann maxE 2100 power set with 2x AA batteries + charger!**



order code 254378 — € 468.- £ 397.-

the t.bone SC440 USB Podcast Bundle
USB condenser studio microphone
USB connection for direct access to Mac and PC (not compatible with Windows Vista!), cardioid polar pattern, 20Hz-18kHz, includes plastic case, **Bundle incl. Wizoo Publishing „Das Recording-Studio", Millenium MS-2003 stativ, the t.bone MS180 popkiller, Magix Samplitude 11 Silver sequencer software and cable.**

order code 248400 — € 75.- £ 64.-

Rode NT1-A Complete Vocal Recording Solution
Large diaphragm microphone
20Hz-20kHz, 100Ω impedance, 132dB dynamic range, 137dB max SPL. Includes SM6 deluxe shockmount, 6m cable and Peter Freeman ‚Studio Secrets' tutorial DVD.

order code 235937 — € 179.- £ 152.-

Rode NT2-A Studio Solution Set
Prof. 1" large diaphragm microphone
Switchable between omni, figure of eight and cardioid patterns, variable high-pass filter - flat, 40Hz or 80Hz, PAD 0dB, -5dB or -10dB HPF and PAD, frequency response: 20Hz - 20kHz, max SPL: 147dB, 48V phantom power required, weight: 860g. Bundle incl. deluxe shockmount SM6, 6m cable and tutorial DVD.

order code 256707 — € 285.- £ 242.-

Shure SM 7 B
Studio microphone
Dynamic studio microphone with cardioid polar pattern, 50Hz-20kHz, bass rolloff switch, mid-boost switch, 150?, shielded against broadband interference, fixed stand adapter, XLR connector, includes windscreen.

order code 129929 — € 379.- £ 321.-

EV RE20
Dynamic large diaphragm microphone
RE series, cardioid, switchable HP filter, variable D design, 150Ω, 45Hz-18kHz, includes clip and box, ideal for vocals, brass and bass drum. Length: 217mm. Diameter: 54mm. Weight: 737g

order code 128926 — € 449.- £ 381.-

Boss VE-20
Vocal Performer
Vocal FX, dynamic compressor/de-esser, enhancer, delay, reverb, 2x harmoniser and pitch correction, LCD display, mono looper (38 sec), 30 preset + 50 user sounds, requires Boss PSA-230 optional power supply (order code 102842, not included).

order code 235812 — € 189.- £ 160.-

tc Helicon VoiceLive Touch
Vocal harmony effect processor & looper
Effects by VoiceLive 2 incl. HardTune and more, 8 voices of NaturalPlay harmonies, MIDI or USB/aux input, 200 presets, 25 favorites, voicing buttons offer instant harmony arranging, VLOOP performance vocal looper, talk button bypasses all effects, XLR Mic In, Guitar in and thru, aux input, MIDI in, USB, headphone out, TRS and XLR output, incl. external power supply unit.

order code 250437 — € 469.- £ 398.-

tc electronic Voice Live 2
Vocal multi FX pedal
Up to 8 voices or 4 doubled harmonies, reverb, tap delay, megaphone and distortion, compressor, de-esser and EQ, MIDI or mp3, LCD display, XLR, line in, aux in, headphone output, coax S/PDIF I/O, backup and audio streaming, incl. power supply. Dimensions: 35 x 7.6 x 21.6cm. Weight: 2.3kg.

order code 225557 — € 699.- £ 593.-

SPL GoldMike 9844
2-channel valve preamp
Discrete Class A solid state, 48V phantom power, phase reverse, pad function, flair presence enhancement, very clear and warm sound. Dimensions: 19"/2U

order code 123370 — € 425.- £ 360.-

Universal Audio LA-610 MKII UAD-2 Duo Bundle
Classic tube recording channel
Based on the legendary Bill Putnam 610 tube mic pre and EQ, Authentic Teletronix LA-2A style T4 opto-compressor, complete vintage channel strip, mic pre with gain and level controls, true bypass, large metering and improved signal output. **Bundle inkl. Universal Audio UAD-2 Duo PCIe DSP Card.**

o. code 252465 — € 1490.- £ 1264.-

KRK RP5 Rokit G2
Active studio monitor
45W, 5"+1" speakers, 53Hz-20kHz, magnetically shielded. Dimensions: 27.6 x 18.5 x 25cm. Weight: 8kg. **Unit price!**

order code 213024 — € 139.- £ 118.-

KRK RP8 Rokit G2
8"+1", 140W.
order code 213090 — € 229.- £ 194.-

Yamaha HS50M Stativ-Set
Active 2-way studio monitor
70W bi-amped bass reflex system, 5" woofer, 3/4" tweeter, 55Hz-20kHz, XLR & TRS ins, adjustable input level, mid EQ, room control, high trim, switchable low cut, fully magnetically shielded. **Bundle with 2x HS50M and 1 pair Millenium BS-500 adjustable nearfield monitor stands.**

order code 244787 — € 309.- £ 262.-

Adam A7 Special Edition
Active nearfield studio monitor
6,5" Rohacell / kevlar sandwich woofer, A.R.T. tweeter, frequency range 46Hz to 35kHz, 100W (sin), 150W (rms), XLR and RCA input, dimensions: 18 x 33 x 28cm, weight: 8kg. **Unit price.**

black piano lacquer
order code 241073 — € 377.- £ 320.-
white piano lacquer
order code 244797 — € 377.- £ 320.-

Adam A7X
2-way active bassreflex nearfield monitor
7" carbon/rohacell/glass woofer with 100W, X-A.R.T. tweeter with 35W, shelving filter tweeter: >5kHz ~ ±6dB, shelving filter woofer: <300Hz ~ ±6dB, frequency range: 42Hz - 50kHz, crossover frequency: 2,5kHz, SPL max. / pair 1m: 114dB, gain: +14dB / - 8dB, gain tweeter: ±4dB, THD 90dB/1m > 100Hz: <0,5%, inputs XLR and RCA, input impedance: 30kΩ, dimensions: 20,1 x 33,7 x 28cm, weight: 9,3kg. Unit price.

o. code 245513 — € 429.- £ 364.-

Yamaha HS80M stand bundle
Active 2-way studio monitor package
120W bi-amped bass reflex speaker, 8" woofer, 1" tweeter, 42Hz-20kHz, XLR & jack input, mid EQ, room control, high trim, switchable low cut, magnetically shielded. **Bundle includes 2x HS80M and 1 pair of Millenium BS-500 nearfield stands.**

o. code 227555 — € 468.- £ 397.-

Gear Chart

Are you giving your music a fresh kick? In the market for new kit? Finally putting together that dream set up? Then you'll need *FM*'s exclusive guide to all our favourite gear

1 2 3 4 5

Hardware Synths

Dave Smith Instruments Tetra | £552
Review FM219 Super Mopho meets cut-down Prophet '08 in this fantastic analogue polyphonic synth.

Dave Smith Instruments Prophet 08 | £1,499
Review FM194 A beast of analogue power. Warm, fat and wooden-ended – what more do you want?

Moog Slim Phatty | £699
Review FM235 Get that huge Moog sound at a fraction of the price and space of a fully-fledged Phatty. Chain them together for poly mode.

Clavia Nord Wave | £1,395
Review FM196 If you liked the Nord Lead you'll love the Wave. It's more versatile and sounds fantastic.

Moog Taurus 3 | £2042
Review FM226 With more lows than an Eastenders omnibus, this beast will blow your socks off. Modern features make this a dream to use.

Soft Synths

FXpansion D.CAM Synth Squad | £179
Review FM217 A powerful synth collection from FXpansion, favoured by Electro House heroes.

Rob Papen SubBoomBass | £89
Review FM215 Another superb synth from Rob Papen that caters for all your bass-in-your-face needs.

Spectrasonics Trilian | £215
Review FM224 A long-awaited update to the monster of all bass software. An instant classic.

XILS Labs Poly KB | €149
Review FM228 A lush sounding recreation of the classic and rare. Poly Kobol. Great tones with the benefits of MIDI and automation.

u-he Zebra 2.1 | $199
Review FM183 Subtractive and analogue synthesis with an ultra-phat sound. Ideal for shaking ground and wrecking speakers. In a good way.

MIDI Controllers

Novation LaunchPad | £149
Review FM220 Great features at an amazing price make this Ableton controller a performance dream.

Akai APC20 | £170
Review FM227 A more compact, better-value version of Akai's Ableton front end. Robust build and great features make this very gig-worthy.

Livid Instruments Block | £349
Review FM223 Built out of wood and metal, the Block is a great alternative to the more mainstream controllers.

Native Instruments Kontrol X1 | €199
Review FM223 An intuitive, well-built controller at a great price. If you're a Traktor user, try this.

Vestax VCM-600 | £649
Review FM216 A fantastic way to control Ableton Live. Vestax deliver a well built, fun and feature packed DJ style performance controller.

How Our Chart Works

We've fought, bitched, whinged and racked-up all our favourite gear that's available today into our Gear Chart. If it makes an appearance on these pages, then it's well worth a look. We've appraised the hardware in terms of its price point, performance and usability, along with the fond memories and sheer joy factor of cranking it up for the first time. We're not saying that keyboard number six is 'better' than keyboard number seven, for example. We're saying that you should have a think about the music you want to make, read our recommendations below, and check out the gear that sounds cool. Each month we'll be updating our charts with new finds and introducing new lists to keep things fresh. Special mention to the Digital Audio Workstation bit at the back, which should help you nail your ideal recording solution. We out.

The FM Awards

Editor's choice. If you see this little flag tagged on to one of our reviews it's impressed us above and beyond the usual excellence.

Platinum. Buy these. Unless you've got a perfectly good alternative or produce your music on comb and paper.

Value. A special chapeau to bits of gear that deliver the goods without breaking the bank. Value awards mean great gear at even better prices.

The Charts This Month...

120	**Hardware Synths**	From two-octave upstarts to two-grand monsters
120	**Soft Synths**	Our pick of sound-producing software
120	**MIDI Controllers**	The best performance and studio controllers in town
122	**Monitors**	Record, mix and master with confidence
122	**Keyboard Controllers**	Everything you need from portables to studio staples
122	**Audio Interfaces**	Get audio into your computer with quality and style
122	**Effects and Manglers**	Warp your sound and break new ground
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125	**Digital Audio Workstations**	Which DAW is best for the music you want to make?

6

Roland Gaia SH-01 | £579
Review FM227 No menus with hands-on controls all over. Despite the ropey presets, Roland are back to what they do best.

Spectrsonics Omnisphere | £299
Review FM207 Great sounding, flexible and unique, this is truly a powerhouse of sound design.

Novation Nocturn | £69
Review FM199 Your cheapest entry into the world of Automap, the Nocturn is a mini bargain.

7

tomoberheim SEM | €950
Review FM232 A classic returns. Creamy filters and powerful oscillators with modular capabilities

u-he Ace Synth | €69
Review FM227 At such a low price, you can't go wrong with this software modular synth. Patches are clear and crisp and it's all very fun to use.

Akai APC40 | £400
Review FM215 Although there's still a few things that could be addressed, this is still the best option for performing with Ableton Live.

8

Korg microKorg XL | £439
Review FM210 This fresh update of everyone's favourite mini-synth gives a new engine and a great vocoder.

Waldorf Largo | £175
Review FM217 Waldorf take their Blofeld sound and technology and create a powerful and unique soft synth. Check it out.

Akai LPD8 & LPK25 | £45 each
Review FM224 A better keyboard design and build than its rivals. Shame about the short throw rotaries.

9

Arturia Origin Keyboard | £2,499
Review FM231 An enormous, well-built and massively in-depth synthesizer powerhouse.

Arturia Jupiter-8V | £150
Review FM189 One of the definitive, all-time great poly synths is now a plug that delivers thunderous bass as powerful as its searing leads.

Korg nanos | from £36
Review FM209 The keyboard lets the series down, but these portable controllers are still a bargain. They're bundled with great software, too.

10

Dave Smith Mopho Keys | £550
Review FM229 Hands-on controls and wooden-ended good looks make this another winner from DSI.

Lennar Digital Sylenth1 | €139
Review FM208 This simple-to-use, Virus-like synth comes packed with a great set of presets.

Behringer BCF-2000 | £140
Review FM153 Eight 100mm motorised faders for such a low price, this is still a great controller.

Gear Chart

1 2 3 4 5

Monitors

Event Opal | £2,498
Review FM215 Easily the best active monitors you can get for this price. Our reviewer bought a pair and the rest of the *FM* team want a pair too!

Focal JM Labs Twin 6 BE | £829 each
Review FM206 These are some of the best sounding speakers we've ever heard. Worth every penny.

Genelec 8040 | £1,000
Review FM181 Genelecs are always a favourite with *FM* and most of our experts use them so it's no surprise that we love these.

Samson Rubicon R5A | £235
Review FM181 Trustworthy for reference monitoring but priced at an unbelievable level. Get some in.

Acoustic Energy AE22 | £899
Review FM201 For accurate mixing, these are one of the best sets we've used. Very highly recommended.

Keyboard Controllers

M-Audio Axiom Pro 49 | £318
Review FM216 Our reviewer found this to be the most tightly integrated DAW controller ever.

Novation Nocturn 25 | £190
Review FM221 A well-rounded well-priced controller that does plenty of great work with Automap 3.3.

Roland A-800 Pro | £319
Review FM235 A solid controller from a renowned brand. Plus, the MIDI and USB connections on the side give it a handy edge.

Akai MPK49 | £299
Review FM197 A well made deck that's the control section from the legendary MPC with 49 keys strapped to the front. Sleek.

CME VX5 | £499
Review FM192 It's built like a tank and adds some awesome motorised faders into the mix. An excellent professional choice.

Audio Interfaces

Roland Octa-Capture | £479
Review FM235 An impressive interface with flexible routing, effects and plenty of I/O. Bravo Roland!

M-Audio ProFire | £359
Review FM202 A brilliant interface that includes the great Octane Mic Pres, making it a superb recording solution at an amazing price.

MOTU UltraLite-mk3 | £425
Review FM234 Compact, yet fully featured. Fantastic onboard effects and routing options.

Apogee Duet | £329
Review FM200 Getting the quality Apogee sound on the move is now easier than ever thanks to this tiny silver wonder.

RME Fireface UC | £746
Review FM219 Robust reliability, rock-solid build quality and the trusted RME sound. Plus it's now on a lovely USB connection.

Effects Plug-ins and Sound Manglers

Korg Monotron | £59
Review FM229 A genuine MS20 filter with audio input, a fat analogue oscillator and LFO make this a must-have studio toy for everyone.

Rodec / Sherman Restyler | €649
Review FM219 A live filter that sounds good enough for the studio. Missing MIDI, but worth a look.

NEW ENTRY

Moog Filtatron | £6
Review FM235 If you're an iOS user this app is unmissable. From live use to chaining alongside your synths in the studio, it sounds fantastic.

Peavey ReValver MkIII | £179
Review FM208 This amp-modelling software lets you delve deep into the amps circuits for true soft-modding.

Evol Fucifier | £1,996
Review FM228 The oddest outboard we've reviewed produces the most inspiring sound at a price that will keep the faint-of-heart away.

6	7	8	9	10
PMC DB1S-AII | £2,056 **Review FM225** You get what you pay for with these monitors. Adding a PMC sub will help you feel the real bottom end though.	**KRK Rokit RP5 G2** | £270 **Review FM205** These are so nice to work with our reviewer bought a set for his own studio. Great value monitors with a great punch.	**Adam A5 Studio Monitors** | £499 **Review FM209** Though they're at the budget end of the Adam range, these compact near-fields still deliver.	**Unity Audio The Rock** | £1,750 **Review FM232** One of the most brutally honest studio speakers – The Rock's can handle anything.	**APS I0 Active Monitors** | £919 **Review FM216** These provide an honest listening experience that could threaten the big boys.
M-Audio Axiom 49 | £270 **Review FM232** Much of the power of its older Pro brother but that handy bit cheaper.	**Novation 49SL Compact** | £269 **Review FM193** The stripped-down alternative to a full-size SL. Cheaper, but still packed with unique features.	**Akai MPK88** | £600 **Review FM226** A few minor issues considering the high price, but a great weighted hammer action keybed redeems this controller.	**M-Audio Mid Air 25** | £199 **Review FM181** Not only can you sling it in a bag, but you can also stride to the front of the stage thanks to its wireless power too.	**Korg microKontrol** | £275 **Review FM143** Great build quality and looks and while its reduced-sized keys are an acquired taste, it's certainly more portable as a result.
Metric Halo ULN-2 DSP | £1,279 **Review FM206** Great sound, onboard DSP and some of the best pres we've ever heard inside an interface.	**Echo Audiofire Pre8** | £579 **Review FM228** A very high-quality interface from Echo Audio – heavy on I/O and mic pre quality.	**Apogee One** | £161 **Review FM230** The same high quality Apogee sound you'd expect but with a simple design and limited I/O to keep costs down.	**Presonus FireStudio Mobile** | £269 **Review FM224** Not the cheapest mobile interface, but great I/O make it worth a look.	**Mackie Blackjack** | £149 **Review FM233** A fantastic option for the portable recorder or producers on a budget. Great pres, latency-free monitoring and a solid build quality.
Electro-Harmonix Voice Box | £160 **Review FM213** Give this a decent input and it will output robot voices or perfect harmonies with ease.	**OTO Biscuit** | €529 **Review FM225** Gorgeous design details and fantastic for anyone who fancies a bit of lo-fi 8-bit computer game crunch in their music.	**TC Helicon VoiceTone Synth** | £225 **Review FM221** A few teething problems, but this is still a fantastic hardware vocoding and tuning tool.	**Audioease Speakerphone 2** | €400 **Review FM217** This creative and comprehensive speaker emulator adds air to your sounds and mixes.	**Avid Digidesign Eleven Rack** | £789 **Review FM222** It's a guitar processor that makes re-amping a breeze. Plus it's a Pro Tools interface to boot!

Gear Chart

1	2	3	4	5

Performance Samplers

Korg microSampler | £436
Review FM219 Easy to use sampling with some clever extras. Another micro-dominator from Korg.

Akai MPC 5000 | £1,549
Review FM203 The 5000 isn't perfect, but it's without a doubt the best pad-ridden studio-in-a-box on the market. Check it out.

Roland SP-555 | £410
Review FM195 The latest in Roland's line is packed with features. A durable and flexible partner for the loop experimentalist.

Roland SP-404SX | £289
Review FM220 This new update tweaks the original SP-404 but lacks anything really special, so it doesn't climb any places in our chart.

Korg Electribe ESX-1 SD | £516
Review FM231 This classic has been given a new lease of life with an SD card slot and new sounds.

High-end Audio Plug-ins

Celemony Melodyne Editor | £319
Review FM222 A plug-in that has the potential to change music production forever. A killer tool for every genre.

Slate Digital FG-X | from £149
Review FM233 A revolutionary new mastering plug-in from Slate. Hear it and believe it!.

Pro Audio DSP DSM | £200
Review FM226 An incredible multi-dimensional EQ and dynamics processor that works magic!

Brainworx bx_XL | €298
Review FM234 Another must-have mastering tool from Brainworx with Mid/Side and dual-band limiting to get the most from your final mix.

Brainworx bx_digital | €398
Review FM200 There's no other plug-in quite like BX's top of the line mastering tool - incredible software.

Field Recorders

Tascam HD-P2 | £729
Review FM186 Built to last and definitely the pro's choice. A multitude of formats and mic settings and superlative sound too.

Roland R-09HR | £259
Review FM204 This flagship recorder will produce crystal clear, 24-bit 96kHz recordings, all from the palm of your hand.

M-Audio MicroTrack II | £229
Review FM202 Not only does this new version look better, but it's also cheaper. A superb update.

Yamaha PocketTrak | £260
Review FM202 This ultra-compact 2GB recorder is a really useful weapon in your recording arsenal.

Edirol R-44 | £499
Review FM205 Record four tracks simultaneously via it's quality pre-amps. If you need the flexibility it does the lot and more besides.

Microphones

Newmann Retro NR47 | £999
Review FM225 Despite the choice of name, this mic definitely delivers the classic sound. Bargain.

sE X1 and Project Reflexion Filter Bundle | £169
Review FM223 Unbelievable value for a robust recording solution.

Blue Bottle Rocket Stage One | £600
Review FM222 Interchangeable capsules make this great sounding mic even more of a must-buy.

Sontronics Saturn | £699
Review FM227 It looks drop-dead gorgeous and has a flexible airy sound that suits many different recording situations.

AKG C214 | £450
Review FM205 As part of the classic AKG family, this mic sets itself up nicely to be a recording bargain that holds its own around the studio.

1 2 3 4 5

eBay Classic Retro Finds

Roland HS-60 | £250
Released 1984 Same guts as the Juno-106 but the ugly built-in speakers mean it's often overlooked.

Boss Micro Rack series | £40-£100
Released 1986 These gritty little half-rack digital FX boxes are great value for adding some character.

Yamaha MK-100 | £30
Released 1983 Bargain analogue style workstation that has limited synthesis options but a great programmable drum computer.

Oberheim Matrix 1000 | £200
Released 1987 1000 presets from the Matrix 6 make this 1U a fantastic analogue sound source.

Korg EX800 | £100
Released 1984 This rack-mount version of the Poly800 has a similar sound to the Roland Juno but with the added bonus of a sequencer.

Ways To Stand Out

Apple iPad | from £429
Review FM228 The first mainstream tablet offers an unparalleled hands-on user experience that's great for making music.

Snyderphonics Manta | £398
Review FM218 Space-age-style control with incredible good looks and amazing control possibilities.

Yamaha Tenori-on | £599
Review FM193 The amazing lights-in-a-frame synth 'n' sequencer that'll test the way you think about music. Grab one while stocks last.

Reactable | €9,700
Review TBA Very expensive but visually impressive and usable interactive synth and performance table. The future has arrived!

Jazz Mutant Lemur | £1,799
Review FM166 Techni-coloured touchscreen controller. Why not put a camera on it feeding a projector?

Digital Audio Workstations

Best all-in-one solution

Logic Studio | £399
Review FM218
The home studio regular and all-in-one studio package turns 9.1, adding 64-bit support – if your Mac can handle it.
Best features include:
> Incredible time-stretching with Flex Audio technology.
> New amp designer and pedal board options for guitarists.
> The best and biggest range of 'built-in' plugs and synths of our favourite DAWs.
Good and bad:
Fantastic Flex Audio raises Logic's appeal even further and despite that stealthy price increase to £399, it remains a bit of a bargain all told.

Best combo of ease and power

Cubase 5 | £499
Review FM212
Cubase 5 sees Steinberg lower the price and raise the plug-in and feature list. VariAudio, Batch Export and new effects plug-ins all come bundled with 5.
Best features include:
> The new VariAudio Melodyne-style pitch editor.
> Plenty of built-in plugs to get you creating professional tracks from the moment you install the software.
Good and bad:
Although Cubase is playing catchup in terms of both bundled content and price, it's can't be argued that it's only getting better. Loyal users rejoice – Cubase 5 is a winner.

Best for recording audio

Pro Tools 9 | £499
Review FM235
The industry standard DAW gets a much needed overhaul, ditches the hardware requirements and adds vital features such as automatic delay compensation and a higher track count.
Best features include:
> For mixing, recording, processing and editing audio it's still the industry standard DAW.
> Now that it's hardware independent, you can edit on a laptop on the go.
Good and bad:
Small steps for a DAW, but a great leap for Pro Tools users. More much needed updates should come soon.

Best for jamming and creating

Ableton Live 8 | £315
Review FM214
Bigger and better than ever. If you like chucking loops together and experimenting then this is for you. Flexible and creative, it'll spark ideas you wouldn't otherwise have.
Best features include:
> Instantly beat-match any audio and trigger samples in time. DJs can use this instead of decks.
> Flexible routing and modulation options let you mess and mangle.
Good and bad:
It's a dream for mixing and messing. It's getting a little costly (thanks to that bulging library content) but the cheaper versions remain a bargain and a real studio essential.

Best bangs for your bucks

SONAR X1 | £379
Review FM235
A complete overhaul in the workflow and interface design of SONAR make the new X1 version the simplest, most accessible version yet. The addition of the new Pro Channel in the mixer steps up SONAR's game even further.
Best features include:
> Instruments bundle – so many sounds and possibilities included.
> The ProChannel delivers high-quality compression, EQ and more from within the the mixer.
Good and bad:
New workflow makes SONAR more accessible, but you'll want multiple screens to get the most out of it.

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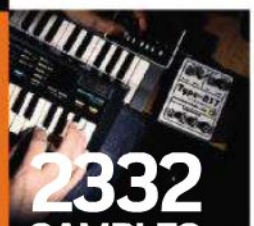

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