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Guitar Soundtracks **AND MORE**

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Issue 239

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SSL Duende Natives / GarageBand for iPad
Tone2 Electrax / RME Fireface UFX / **MORE**

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Welcome

Sounds Good To Us



We've all been there. You listen to a new track and pride of place is a sound that blows your brains out. And yet it seems that no matter how much you tweak or which envelopes you push (literally) you can never whistle up a tenth of the same impact and originality.

We're not talking about outright cloning tracks here, or passing off work as your own, but a little insight into how amazing and distinctive sounds are made can be a great jumping off point. We're here to help you construct your own hit sounds, make good on your investment in hardware and software and finally ditch the safety net of the preset.

Our *Get That Synth Sound* feature on page 32 takes you through the creation of five distinctive, modern sounds and – more than ever – we implore you to load up our DVD and watch their creation (with voiceovers) on video too.

In fact, there's a triumvirate of synthery this issue with Chromeo's stunning collection laid bare from page 40 and the incredible return of Roland's Jupiter series on page 10.

Add in some superb tips from Tomy DeClerque and the awesome studio of Aeroplane and you've... Wow... Only got about half of what this issue has to offer!

Flip the page and gawp at those contents then take advantage of our most sample 'n' video-laded DVD ever. Thanks for being here. Let's do it all again next month.

Daniel

Daniel Griffiths, Editor
daniel.griffiths@futurenet.com

EXPERT CONTRIBUTORS THIS MONTH...

Robbie Stamp
engineer, producer



It's important to never underestimate your audio interface. And the arrival of the latest RME Fireface UFX produced no shortage of expert ears volunteering their skills for money. Thanks for the review, Robbie. That'll be £20.

Jared Ellison
engineer



As DFA Record's in-house tech, it's Jared's job to make sure that whatever crazy kit their artists haul through their offices is in perfect working order and ready for use on another session. Check out his fix-it tips on page 68.

Greg Scarth
music scientist



Some of us are old enough to remember when MIDI cruelly usurped CV/gate. Likewise the arrival of the skateboard and the REAL royal wedding. Fortunately Greg is daisy-fresh and can't get enough of Expert Sleepers CV gear on page 104.

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THE TECHNIQUES



Delays Delaying Delays...

Robbie of Cyclick Samples says:

"To create a more spacious and less rhythmic delay sound I often run a chain of delays (especially if they are different types) in series with non-complimentary time settings, be it in hardware or software. Though multi-tap delays do this to a small extent a more pseudo-random effect can be gained from running one delay into another, and another, and another... As well as differing time setting the modulation, filter and pan settings (if available) should be used to prevent any obvious repeat patterns. Keeping the mix settings so that each delay gets some of the original signal as well as the preceding delays helps create a diffuse sound rather like a reverb, but with bigger gaps."

EXCLUSIVE *FM* Sample Packs

EACH MONTH WE DELIVER THREE FULL, CUSTOM-MADE, EXCLUSIVE SAMPLE PACKS – YOU CAN'T GET THESE SAMPLES ANYWHERE ELSE!

PACK ONE: BY CYCLICK SAMPLES

Guitar Soundtracks

1 This guitar-heavy collection offers loops, lines, noises and chords in a filmic vein. There are a whole load of distorted lead guitar lines soaked in delays and mercilessly over-processed and even a few Arabic scales in there for those East-meets-West moments! There are a good few heavy chugging chords for mashing up and spitting back out into tense action scenes plus a bit of old

school tremolo guitar with a set of chords (Trema Chords) and some baritone lines (in the 90bpm folder) that have a wee nod to Twin Peaks. There's a set of slide guitar loops in the 120bpm folder and to wrap things up a set of more abstract sounds that have a more sci-fi feel.

Don't miss the two multi-sampled Kontakt instruments that make getting at these tones even easier!

PACK TWO: BY GROOVE CRIMINALS

Kick Drums

2 Get ready for 561 original kick drums! Including a selection warmed up with a Teac A-3340s reel-to-reel tape machine

PACK THREE: FROM THE FM ARCHIVES...

Analogue Drums 'n' Bass

3 We dip into the *FM* sample bank and pluck out this collection of superb analogue bass and synth drum sounds

In The Studio With...

SEE THEM IN THE MAG – AND ON VIDEO TOO

Chromeo

We've over an hour of video with the futuristic Funksters as they make a track just for *FM*, then give us a tour of their incredible retro gear-laden studio



Tomy DeClerque

Get behind the scenes on *Unknown* and grab some Pro Tools tips as he goes in-depth with its Transfuser

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- > ART TubeOpto 8
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TAKE YOUR PRODUCTION SKILLS TO THE NEXT LEVEL

Get That Synth Sound



Watch five modern synth sounds get recreated live before your very eyes

Logic, Live & Cubase



We've ten tips on video for Logic. Plus project files for Cubase and Live

Knowledge Base:

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10 BRAND NEW TRACKS FOR YOU TO ENJOY EVERY ISSUE



**BONUS
SAMPLES
THIS WAY**

Bonus Samples

loopmasters

We've 300+ sounds lifted from the latest incredible line up of Loopmasters products. Load up and enjoy our samples then bag the full packs, all instantly downloadable from loopmasters.com

ZENHISER: THE '80S DRUM COLLECTION

"The full pack contains over 885 80's drum samples and drum loops. This multipack is an absolute must for all house producers and anyone into the '80s electronic sound. Check out this preview!"

MEAT KATIE: TECH FUNK PRODUCER VOL. 2

"Loopmasters' Artist Series continues with the talents of Meat Katie aka Mark Pember. This is a brand new collection of sounds and samples that pushes his standard to a whole new level."

CLUSTER SOUND: TRIBAL PERCUSSION

"715MB of punchy and fat construction loops, congas, djembe, hand percussions, metals, bongos, shakers, exotic low percussions and much more. Includes Drum Racks and instruments."

MONSTER SOUNDS: BLACK NOISE WAREHOUSE

"A superb collection of fresh beats and sounds for producers of Warehouse styles of Club music. 965MB in size, including 1209 24bit samples, 378 Loops and 830 single sounds."

JON CUTLER: DEEP & SOULFUL US HOUSE

"Contains 24 bass loops, 204 club drum loops and builds, 43 inspirational House loops, 11 percussive loops, 88 drum FX, 410 single club drum samples, 29 FX, 225 Percussive One Shots, and more!"

PART TIME HEROES: NU-JAZZ

"Broken beats, dusty double bass loops, live trumpets, flutes, saxophones, smooth Rhodes chords and Jazz guitar. A truly unique set of royalty-free Nu Jazz, Downtempo and Electronica."

EARTH MOMENTS: WORLD STRINGS SERIES DESERT OUD BUNDLE

"384 warm and organic loops played expertly on an ancient Iraqi Oud, bringing to life the rich, exotic sound of Arabia and the magic of the deserts."

LOOPMASTERS: TECH HOUSE STYLES

"14 full construction kits covering Tech House, Tribal Tech, Progressive Tech, Detroit and Minimal Tech, you get the full loops and all component parts. Plus tech chord hits, stabs and more."

Sounds/To/Sample

Another awesome collection of demo sounds for you to use and enjoy. If you like what's here then you'll love the full collections from soundstosample.com. They're all instantly downloadable online!

SAMPLE MAGIC PRESENTS: FLORIAN MEINDL

"A stunning 350MB collection from the Berlin Tech-House innovator. Beats, synths, bass, drum hits and uniquely sculpted FX, all reminiscent of his Rökysopp and Format B remixes."

SAMPLE MAGIC: TECH HOUSE

"Merging the best House, Techno, Progressive and Minimal, this delivers 560+MB of peak-time jams, pared-back beats and pounding mainroom workouts. Driving drums, bouncy off-step bass, glitched vocal rhythmatcs and more."

SAMPLESTAR: DEEP TECH SESSIONS 2

"Blissful synths, rich melodic basslines, deep rhythm workouts, delayed vox, super-spacy FX, sculpted drum one-shots and synthetic stabs in this highly-anticipated second volume."

HY2ROGEN: BIG ROOM SONGSTARTERS 2

"The mainroom hellraiser presents 20 devilish dancefloor bombs in construction kit format, bursting with inspirational elements for Progressive and Tech-House producers."

SOUNDS TO SAMPLE: MASH-UP VOCALS

"190+ trashed melodic toplines, glitched vox rhythm-rockers and FX'd mash-ups tailor-made for the mainroom: from upfront Electro to pumping progressive and wonky bassline."

CRATE DIGGERS: CYLINDER INSTRUMENTS VOL 1

"Scratchy, dusty and crackling with character, the tireless Crate Diggers deliver 175 instrumental phrases, solos and intros suited to Hip Hop, Downtempo, Soundtrack and House productions."

DIGINOIZ: VINTAGE VINYL SENSATION

"Vinyl sampling without the drawbacks: 110 vinyl-esque instrumental music loops craftily created to sound like they're cut straight from wax, all 100% royalty-free guaranteed."

INDUSTRIAL STRENGTH: BHK ROUGH CONNECTIONS 4

"BHK and Industrial Strength are back with their toughest collection of Drum 'n' Bass elements to date: 700Mb of face-melting basslines, slammin' synths, groove-bustin' breaks and more."

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Jupiter Returns!

Fresh for 2011. Make way for Roland's mighty new Jupiter-80

Take a fleeting glance you'd be forgiven for thinking you were looking at a mint condition Roland Jupiter-8.

But gawp again and you'll quickly realise that this is a sleeker, slab-sided, all-new synth for 2011. The Jupiter is back and Roland have pulled out all the stops to make the Jupiter-80 worth the wait.

What's inescapable is the sheer imposing mass of the thing. Fronting the new '80 is a luxurious 76-note synth action keyboard – an extra octave more than the legendary '80s Jupiter-8 original – designed to stay faithful to the original's reputation as the ultimate live synthesiser but to go one better than its famous forebear.

While the styling is similar to the '8 the new '80 is a much more solid, monolithic affair. The top and sides form a hard wedge and the multitude of knobs and sliders that defined the Jupiter-8's analogue programmability have been replaced with a large 2011-style touchscreen and a new set of rotary encoders and faders.

Inside the machine is a new take on the synth engines that already

drive their famous Fantom series. Yes, it's all digital this time around, but the new analogue modelling is specifically designed to accurately recreate the sound of the Jupiter-8.

Indeed, while we're yet to get our hands on the machine and try out the on-screen synthesis for ourselves, the sounds we heard in our private demo certainly possessed at least the character of the original JP-8, with some stunning soundalikes in the preset bank. Throw in recreations of the arpeggiation, portamento and glissando modes and it's clear that the team at Roland have done their best to keep some of the Jupiter heritage alive.

Future additions

But the new '80 isn't just about reliving the past. Also on board is the latest iteration of Roland's Super Natural sounds. These digitally re-created tones aim to put real instruments under keyboard control.

The breakthrough here is 'behaviour modelling' that adapts the sound in real time depending on what you play. Each tone changes

depending on how you play it. For example hit a chord on a nylon guitar patch and the sound is strummed.

The sound will even strum up or down depending on how quickly you play – the Jupiter-80 always producing a sound that most accurately recreates what would happen if you were to demand those notes of the real instrument.

It might not be what you expect from a Jupiter but it's very state of the art and does sound amazing – real 'close your eyes and tell yourself it's not real' stuff – and goes beyond any velocity-layered sample-based systems we've heard.

Add in multi-track sequencing, audio-recording and other studio-ready features from the Fantom and you've an intriguing hybrid synth. Half of it is fast-access, easy to use live performance legend – note the quick performance select buttons below the keyboard and coloured preset soundbank keys above. And half instrument-emulating, powerful studio workhorse.

We can't wait to go in deep and have a look. Don't miss the full review coming soon in *FM*.

WANT TO KNOW MORE?

Check out the full Jupiter-80 specs at roland.co.uk

£250 is an amazingly low price for an ADAT-ready, mic-pre'd interface.



Scarlett Fever

Focusrite see red and deliver two brand new audio interfaces, including an ADAT-ready bargain beauty

These blushing beauties are two compact interfaces, built from a similar blueprint but offering slightly different

twists depending on your requirements and budget. Both are based around a USB 2.0 connections, 24-bit/96kHz quality, MIDI I/O, S/PDIF, Scarlett VST/AU/

RTAS plug-in suite, Mix Control software, Focusrite mic pres and Xcite+ bundle which includes Ableton Live Lite, Novation's Bass Station and over a Giga Byte of royalty-free samples from Loopmasters. Phew!

The little brother of the Scarlett range is the 8i6 model, serving up a total of eight inputs, six outputs but

sized the same as its bigger brother and comes complete with two mic pres, selectable Hi-Z inputs, a dedicated headphone buss and switchable phantom power.

The 'larger' Scarlett, the 18i6, features a massive 18 inputs and six outputs with eight of those inputs over ADAT and a nifty front LED to give show you where they're heading.

With the 8i6 coming in at £200 and the 18i6 at £250 this look like two great value interfaces, with a great bundle of features and software, Reviews soon. focusrite.com



WANT TO KNOW MORE?

Keep your eye on *FM* for the full reviews soon and check out focusrite.com for the full list of specs.



Razor Sharp

Razor is a new Reaktor-powered synth from Native Instruments and is collaboration with electronic musician ERRORSMITH. It uses additive synthesis to create modern new synth sounds via either the full version of Reaktor or the free Reaktor Player.

The dual oscillators provide a variety of waveforms and the 3D graphical display shows off the unique engine which uses up to 320 partials to create the sound.

There are a massive 350 presets to get you started and on first play we reckon it lives up to its 'hypermodern sound' with ultra clean, ultra modern tones and some awesome wobbly, dirty basslines too. Full review next issue! native-instruments.com



In-Ear We Go!

Developed to compliment the success of their over-ear DJ headphones, Allen & Heath's new XD-20s are a nifty little in-ear set. Designed for electronic music these tiny buds have deep, extended bass and crisp clear highs. They certainly look fantastic and given the quality of their over-ear range we can't wait to try them. Priced at £59 and reviewed soon. allen-heath.com

MUSIC TO OUR EARS

The FM Playlist

What we're listening to this month...



The Human League Credo

Back with their classic sound, it's still Phil talking.
Chris, Deputy Editor



André Cymone Livin' In The New Wave

Prince's original bassist and collaborator, Cymone's debut is textbook Minneapolis Funk.
Declan, Production Editor



Late Night Tales Trentemøller

The classic series of 'dinner music' gets a dark new twist that briskly frappés the genres.
Daniel, Editor



Gold Panda Marriage (Forest Swords Mix)

A slice of glitchy Electronica like a long hazy summer afternoon.
Will, DVD Editor

Go Rebeat!



If you're yet to experience this magical service that puts your music where it should be then wait no more. Get three free uploads with our REBEAT offer!

REBEAT Digital is a digital distribution software that puts your track on over 300 online music stores including iTunes, Beatport, Napster, AOL, Nokia and more. Once again, *Future Music* is giving away a FREE trial code that'll let you put three tracks up for sale globally via the REBEAT system. Woop!

Here's the official word on how it works. "With this basic version of REBEAT Digital you can upload one product (ie. an album, EP or single) with three songs completely free of

charge, with the EAN and ISRC codes for free too. The product will be exported to all online stores that we are cooperating with. For example: iTunes, Amazon, Beatport, Rhapsody, Napster, etc. You can find the complete list of stores at our website."

And fear not, here at *FM* we would never recommend handing your music over to somebody without investigating all the legalities. REBEAT explain: "You can remove your uploaded product from the stores at any time without any costs. But, registration and signing of a contract

is necessary and for the registration, a credit card is also required for verification. If you want to upload more than three songs you can upgrade to the full version anytime, then 99 Euros will be automatically charged on your credit card. All settings that you have made so far in the REBEAT Digital software remain the same. We've also got a brand new feature coming soon which builds in a unique statistic dashboard. This new tool will be implemented within the software to provide the transparency for labels and their sub-labels of all

financial statements. Plus, The statistic dashboard will also disburden labels accounting their royalties. Easy to handle – and high performance!"

Here at *FM*, we've recommend REBEAT from the start, so if you're looking for a free way to get your music fast to market. Then warm up your clicking finger and bump in the code below. rebeatdigital.com

WANT TO KNOW MORE?

To activate your Basic Version simply visit rebeatdigital.com and enter the following code as your CD-Key: **[8B87369297]**



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Sontronics Drum Up Business

Smashing new mics from this brilliant British brand

Researched and built specifically for nailing those drum recordings the new DM-1T, DM-1S and DM-1B are three condenser mics each with their own specific task in mind. The DM-1T and DM-1S are

both small, pencil-style condensers but with the 'T' model designed for those toms and the 'S' for snares. Both have a cardioid polar patterns and a switchable -15dB pad, but both have been tweaked to pick up the nuances specific to either toms or snares.

The bigger DM-1B is a large-diaphragm mic, tough enough to cope with 150dB when it's -15dB Pad is switched in. Obviously this makes the mic ideal for kick drum, but Sontronics say it will also give great results on bass instruments and bass cabs too. There's two years of research gone into them an keen prices too. DM-1T and DM-1S cost £120 with the DM-1B at £300.

Buy One, Get One FREE!

And if you're in the market for some new mics, until 31st May 2011, Sontronics are offering anyone buying their STC-2X in silver or black will receive an STC-10 pencil condenser worth £95, for free. Nice. Head to the URL to the right for more details.



WANT TO KNOW MORE?

We'll have the full review next. For more head to <http://www.timespace.com/productlist/3/9999987/sontronics.html>

Waves OneKnob

Waves latest suite of plugs is a revolutionary range of simple one knob solutions, with the aim of ending the endless tweaking that's possible in other plugs. With one word descriptions explaining each of the individual plugs functions, the suite offers Brighter, Driver, Phatter, Filter, Louder, Pressure, Wetter. It's a nice idea and anything that lets us work faster is alright by us. The bundle is \$400. Review soon. sonic-distribution.com



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Speed your way around your software with these shortcut spattered keyboards.

Often overlooked in the studio are the things you use the most, and probably take for granted. But, speed up your workflow and you'll make music faster. This is where this colourful range of keyboards come in from Editors Keys. Available for Pro Tools, Cubase, Logic, Ableton and more. There's a choice between various models of keyboard design, plus sticker packs, if you're happy with your current keyboard. Prices start with the sticker packs at £13 right up to £100 for the full pro keyboards. Check out editorskeys.com



MFB Urzwerg Pro

Those Berlin synth boffins have done it again

This advanced version of the Urzwerg Step Sequencer includes tasty extras such as MIDI note output, 32 LED's

to show you your steps, plus the ability to split those 32 steps into either two 16-step sequences or four, eight bar sequences. There's the ability to control up to four synthesizers or CV parameters and that MIDI out can even sequence multi-timbrally, or separate the four sequences into a duophonic

sequence, while the other two sequences control modulation and velocity data. There's two shuffle modes to add that special groove, a 'random' function and an auto-glide that will slide the pitch of overlapping notes. If you're looking to break out from all that screen staring and approach your sequencing in a new interactive way then this looks like a great place to look. Review coming soon, but available to buy now priced at 440 Euros at mfberlin.de



Modus Operandi

New from German synth scientists, Mode Machines

Here's a wooden-ended desktop delight – the Synthlab-SL1 designed by Mode Machines.

It's based on analogue subtractive synthesis and features a low-pass filter based on a transistor cascade. That makes the filter section sound like the early Moogs.

The little mono-synth comes complete with a useful built in MIDI

to CV/GATE interface, plus an audio input that is routable through the VCF and VCA with various modulation options using the LFO. There are two VCOs each with saw and pulse waveforms, a noise generator, ring modulator, sub oscillator, two LFOs with a variety of wave shapes and two envelopes with ADSR for the VCO and AD for VCF. Yours for £600. Review next issue. modemachines.com



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THE
CLASSIC
ALBUM



1 Giant Leap

Palm Pictures, 2001

Two men reinvent World Music, earn multiple Grammy nominations and become the most bootlegged album in Thailand. It was no small step, finds **Roy Spencer**



At the dawn of the DVD age, two men set off around the world, armed with a portable recording studio that you could lug round the jungle without breaking a sweat.

Their aim was to shake up the tepid World Music genre, and head to the four corners of the globe to record the finest, and scarcest, musicians and free thinkers our tiny planet had to offer. Those men were founding

member of Faithless, Jamie Catto and studio boffin, Duncan Bridgeman.

The resulting album would push the boundaries of what could be achieved in field recording, and mix up the old and new worlds of music unlike any album that had gone before. It would be filmed and released as a multi-media project. Music and moving images together in perfect harmony. Artists would include Michael Stipe and Robbie

Williams. Nameless Nepalese singers who vanished after laying down heart-breaking vocals. Entire villages playing a 20 foot xylophone. And thoughtful monologues from Dennis Hopper and Kurt Vonnegut.

"I think people were taking my calls because Faithless were selling a lot at the time," says Catto. "Above all I was just really passionate about the whole project. Also we made it so painless for people. We said 'Look. We've got a mobile studio setup. We'll come to wherever you are in the world and plug in and collaborate with you. And at the end, don't sign the release form if you don't like what we did. And we'll leave as soon as you're bored'. We literally couldn't have made it easier for people.

"They didn't have to go anywhere, didn't have to sign it off if they didn't like it. You'd have to really not be into it to say 'no' [laughs].

"We recorded about 600 hours of material on the project, but it was so easy and so blessed. You want Michael Stipe? Bang! I'm in his garden recording him for *The Way You Dream*, probably the best thing we ever did. The whole thing took a few hours. Asha Bhosle – we had no intention to record her. I'd never even heard of her.

We were just waiting for a train connection in Rajasthan in India and she just walks out this hotel and our fixer goes 'Look! It's Asha Bhosle. She's the biggest singer in Bollywood'. So we ran up to her and asked her to sing for us and she said she'd be delighted, and it turned into this incredible vocal.

"It was all just laid on for us. You couldn't turn a corner without turning into another piece of genius."

The finished album got nominated for two Grammys, won Best Film at numerous international film awards and festivals and sold half a million records, which for world music was unprecedented. At one point the *1 Giant Leap* project was the most pirated record three years running in Thailand. Hell of an album. Two men. One planet.

Track by track with **1 Giant Leap's** Jamie Catto

Dunya Salam

"We were basically trying to copy a Peter Gabriel track, *Call To Prayer*, with Babba Maal doing a call to prayer from on top of a mosque kind of thing. We just wanted to do something as good as that [laughs] and Babba agreed to do it for us here.

"We also included 'Mandolin' U Srinivas on here. He's the youngest musician ever to be named a master in India. We recorded him in a temple in Bangalore and the two things came together rather tremendously. The Indian and the African just worked so well together. It evokes a sunrise, so we thought it was a fitting opener. And also as a call to prayer, it symbolises a gathering."

My Culture

"We already had Maxi Jazz from Faithless' vocals in the bag before we set out on the trip. Maxi was one of the first people we recorded as a guest. And we'd done it even before Faithless were big, back when we were only selling a thousand or so records. So it was funny, because this track also features Robbie Williams, and he was the last person to get involved with the album.

"We'd basically finished the whole thing and were getting ready to go to mastering and we get this phone call through our management saying that Robbie had been in touch going 'why has no one asked me to be on this record?' Which I love about him. So we ran round to his flat, which was in Notting Hill Gate at the time and did him over the pool table [laughs]."

The Way You Dream

"Yeah, Michael Stipe and Asha Bhosle are on this one. I remember recording Asha in her hotel in India. She was sitting in the garden and we had to get it together really quickly. So we drenched this old chair in flowers and materials to try and make it nice for her. She was just there to have her lunch so sang it and finished in one take.

"She was there under ten minutes and recorded, arguably, the most lovely, spine-shilling thing we did. Michael Stipe picked it up and immediately loved it. He wrote all his parts in his back garden in Athens, Georgia. In the movie another vocal comes in when the track turns into this D'n'B thing – that's Tim Booth from James. On the album, it's Whirimako Black from New Zealand."

LIKE IT? TRY THESE...



1 Giant Leap What About Me?

2009's follow up. Features, as you can imagine, another stellar cast providing more World Music and mosaic film footage.

ADD THESE TO YOUR PLAYLIST:

Come to the Edge, 1 Small Step



Godfrey Reggio Koyaanisqatsi

Timeless, time-lapsed, movie from Godfrey Reggio with superb music from Philip Glass.

ADD THESE TO YOUR PLAYLIST:

The Grid, Vessels



Malcolm McLaren Duck Rock

An ex-Punk impresario turns World Music colonialist on this 1983 *Art of Noise* produced slice of exotica. *Soweto* features a, naturally, unaccredited Mahotella Queens.

ADD THESE TO YOUR PLAYLIST:

Buffalo Girls, Soweto



Buena Vista Social Club

Buena Vista Social Club

Cuban bandleader Juan de Marcos González hooks up with American guitarist Ry Cooder. A big inspiration for Catto and Bridgeman.

ADD THESE TO YOUR PLAYLIST:

Chan Chan, Buena Vista Social Club



Peter Gabriel The Passion

The soundtrack to *The Last Temptation of Christ*. Gabriel snagged a Grammy for Best New Age Performance for this contribution to World Music.

ADD THESE TO YOUR PLAYLIST:

Feeling Begins, A Different Drum

In The Studio With... Jamie Catto

"It was quite a novel thing back then to be travelling with a mobile studio. This was, like 1999. No one was doing it. The co-founder of 1 Giant Leap, Duncan Bridgeman, was such a genius. He wired up this little Roland VM3100 digital mixing desk, plugged into a Digigram VXPocket PCMCIA soundcard, to run off twelve volts.

"That meant we could plug it into these journalist camera belts that had batteries in. So we were really mobile. We could go into the jungle and record for eight hours with a full on digital recording studio. We were probably the first ones to do that, without a truck. We could fit our whole rig in a rucksack.

"We had a PowerBook G3 400 laptop running Logic Audio, and Duncan had a half-rack Roland JV-1010 as his synth on the move. It was all thanks to Duncan, and his vision. He was already such an incredibly experienced producer and engineer but he learned so much on this trip as well. There was this xylophone that we recorded in



Uganda, which is basically like this huge thing, and the whole village sit around and play it.

"It's about 20-feet long and they lay these strips of bamboo of various thicknesses over this huge pit in the ground. Duncan dropped a couple of

clip mics into the pit, we were using two AKG C1000 condenser mics, and Shure SM57 and 58 dynamics, and we got the richest bass probably anyone had ever recorded. So many coincidences made us look like geniuses, but they were happy accidents."

Ma' Africa

"This track was just incredible to record. It was the first time we'd met the Mahotella Queens out in Soweto. They were these three old ladies who'd been through everything. We recorded them in this incredible church called the Regina Mundi Church in Soweto. It had this real apartheid vibe in the building as it had been the scene for beatings and horrible abuse.

"The same day we recorded in Soweto's famous Five Roses Bowl

Braided Hair

"I was hanging out with Eagle Eye Cherry, as he'd invited us to come and watch him on Jools Holland, and that's where I met his sister, Neneh. She'd heard about the record, and we said we had this perfect track for her with Speech from Arrested Development, and she came down the next day and nailed it.

"It needed one more lift, one more big chorus on the end. And I was in the back of a cab and it just came to me. I quickly called Duncan

consider it to be magical. It took about eight hours. But while he was working on me, as I was drifting in and out of my body, he was playing this amazing music. It was like this Mother Earth Maori woman singing these beautiful songs, and it was really connecting me to what I was doing. It was like anaesthetic, helping me through the experience. Afterwards I was like 'what was that? It's amazing...'

"It turned out to be this local singer called Whirimako Black, and Inya said he'd introduce us. So he did and we loved her. She ended up singing this Maori prayer that eventually became *Ta Moko*."

I called Duncan and said 'put me on speaker phone and set a mic up', and I sang the chorus

with these poets and one of them did this great poem going 'Ma' African, what wrong with your brain'. Just this great Zulu poet. And it all just really came together. It was the first upbeat, really pumping track we did, too.

"The laughter at the end of the track is a recording of the three old ladies just cracking up at us. They love to take the piss out of you in South Africa, and they just thought that me and Duncan were wonderful and ridiculous."

while Neneh was still in the studio and said 'put me on speaker phone and set a microphone up', and I sang this chorus. When I got back to the studio she'd already sung it perfectly. It was a lovely, rushed, inspired way to end the song."

Ta Moko

"In New Zealand, Inya Taylor, who had his own tattoo studio called Moko Ink, offered to do me some body art, which is a big deal as the Maori

Bushes

"Babba Maal again here. This was going to be a homage to the Brian Eno and David Byrne album *My Life in the Bush of Ghosts*. Quite dark. In their album they have these radio exorcisms going on, and screaming preachers from Alabama. We wanted to do something a bit crazy like that.

"When we were in Ghana we'd recorded these crazy church services. We wanted to get across all the passion they had, screaming out to

the people. Duncan did this amazing thing where he made a loop out of five different loops in five different time signatures that all fit together. So it's hard to tell what time signature *Bushes* is in... Babba Maal liked that as well. So it became this beautiful, hectic homage to that."

Passion

"Michael Franti from Spearhead does the poem on here. We had to chase him down for the longest time. He was the hardest man to get. But we were relentless in our pursuit."

"Then we finally got him, and then he didn't want to sing, but he had this poem. It ended up being quite difficult and quite fraught. It was the only one in the whole 1 Giant Leap project that was difficult."

"But it turned out to be really quite good in the end. It was really an effort and we couldn't see how it would come together. Then suddenly we finally realised in the final mixing of the tune that we hadn't actually used this amazing recording we had from Uganda of this entire village playing this gigantic xylophone. So we made the tune out of that and Michael slotted in perfectly onto the beginning of that."

We thought we'd put more lyrics over it later, but nothing could ever match the emotion of that demo

Daphne

"This track is called 'Daphne' because we couldn't think of a name and we said 'oh, just call it 'Daphne' for now' which was stupid as it stuck."

"It's another beautiful song that we did with the Mahotella Queens and also Eddi Reader... Eddi Reader is just such a spectacular artist. She's a national treasure in my opinion. Amazing lyrics. Amazing Folk. She

does Burn's Night with an orchestra – she's just a beautiful performer. And the album she did after leaving Fairground Attraction called *Mirmama* is just a masterpiece. I love her. She was well up for it too."

"It was really nice working with her. In the studio she was quite vulnerable. It was a case of just letting her ease into the song."

All Alone (On Eilean Shona)

"Duncan was on the remote Scottish

island of Eilean Shona with his girlfriend, and when she left he immediately wrote this track."

"It was like a demo vocal and we thought we'd put more lyrics over it later, but nothing could ever match the power and emotion of that demo."

"We tried a few times to write better lyrics and record a better vocal. But eventually I said to Duncan 'you nailed it that day and that was

1 Giant Leap: Jamie Catto on the Movie

"Chris Blackwell had sold Island and started up Palm Pictures. This is 98/99, and he said that this new DVD thing was the future. I was the Art Director for Faithless and Cheeky Records and Chris said that he loved my music videos but I just had to make him a film."

"So we decided to turn this new project we're working on into a movie. Firstly we wanted to get rid of the samples and find the actual people to do sessions with."

"We thought it wasn't going to be that great a film, just Jamie and Duncan going round the world plugging in instruments. But what we suddenly got



really excited about was this opportunity to make a really powerful statement about things we believed in."

"I bet if I interviewed a monk, a priest, a rabbi and an imam, and asked them the same questions they'd all give me the same answers. Like all religion

beautiful'. It was all about death, and loneliness and letting go..."

"And it included the Mahotella Queens, recorded at the Regina Mundi Church, and they'd just lost their lead singer who they'd worked with for 50 years. And when it drops into them on this track... Fuck! It's one of my favourite bits on the album. It's so moving."

Racing Away

"Michael Stipe said that we just had to work with Grant-Lee Phillips, so we went round to see him and again, a really quick bit of writing. A quick bit of recording. We filmed him in his front room."

"Then we had an Asian guy who we met in Nepal, walking round and we just thought 'let's record him!' So we did. He ended up singing then vanished."

"We couldn't name him on the track and we couldn't pay him. It was really funny 'cos about a year later when our 'making of' was on telly and we were cutting that scene, we added this plea, saying that this guy vanished and if anybody knows who he is get in touch so we can pay him."

is basically saying the same thing. The idea then became about talking about all life themes, talking to everyone, and to see if we could get all our favourite people, not just musicians, but also authors like Kurt Vonnegut and Tom Robbins, and great characters like Dennis Hopper... What if we could get those? And anyone else we ended up meeting, like a petrol pump attendant in Delhi, or a prostitute in Thailand."

"We just wanted to get everybody to start talking about universal themes. Chris Blackwell loved this idea, and off he sent us. And that's how the first 1 Giant Leap project was born."

Then we started getting these letters saying 'yeah, he's whatshisname from Nepal'. So we found him and paid him. It was very cool."

Ghosts

"I remember Tim Booth from James was there. We were just sat on the sofa, chatting about life. Duncan had made this track that didn't have any time signature or anything. It went left then right and up and down."

"It was a total mish-mash of styles and space. We played it to Eddi Reader and she said 'this is amazing, but I haven't got any lyrics'. And Tim Booth said 'well, I just wrote this now, while you were listening. I was so inspired...' so he hands it over, and Duncan sets up a mic."

"She starts singing Tim's lyrics and Duncan just bursts into tears and has to leave the room 'cause he's so moved. So she carries on singing, and Duncan comes back, and he takes one look and bursts into tears again. It totally just cracked him open."

"That was the only bit of writing we did for it. The only take. That was done. It was never mixed again." **FM**

WANT TO KNOW MORE?

For all the latest information on 1 Giant Leap and their current projects, visit their website at: whataboutme.tv

NEED TO KNOW

Five essential facts about...

1 Giant Leap

1 Bollywood legend Asha Bhosle features on the album. Yes, the one mentioned on *Brimful of Asha* by Cornershop.

2 Jamie says: "A day doesn't go by where I don't get a letter about this album and the sequel movie, *What About Me?*"

3 While recording, Stewart Copeland whipped out a snap of what he needed to record in Africa... Two trucks to their one rucksack.

4 Speech was like Prince. "He was in control, like 'start that bit, now add that'. He then bangs out a perfect harmony. It was like 'wow'."

5 Inya Taylor, whose parlour Moko Ink inspired a track on the album did all the tattoos for the film *Once Were Warriors*.



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ALL YOU NEED TO KNOW

A few essential bits of information about...

SoundFactory, Helsinki, Finland



ADDRESS

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Finland

WHO RUNS IT?

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Jani Inkeroinen

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+358503656433

WEBSITE

SoundFactory.fi

We're jetting over to Finland this month to a new studio that offers the space and

kit for practically any recording situation. Owned by friends Jani Inkeroinen and Jonas Karlsson, SoundFactory is a large 150m squared building with two control rooms, three recording rooms, a small editing room aimed at Electronic music production and a room for video editing. But this is Finland don't forget, so there's also a sauna for good measure.

Up start

The studio started after the guys met while studying at SAE in Sweden, but as they explain, it wasn't easy to set up. "We decided to build our own studio when we moved back to Finland after our studies," explains Jonas. "We had plans to open a little production company and maybe rent a small space to produce music and radio commercials occasionally. We knew that the competition was hard

and we have to do something special to get it to work. There are so many high-end studios in Finland, so the only thing we can do is match that and become one of them. We compared about 100 high-end studios around the world – we studied the good and the bad things about them. This made our plans get bigger and bigger and we bought a space near downtown Helsinki in the end. When we started to build and plan the studio we thought, maybe it will take about three to four months. The planning took us around one year and we spent 14 months actually building the studio."

As you can see, the hard work paid off and the guys at SoundFactory now have their dream studio with everything considered during the build. "The studio is built with floating rooms, except the big recording room which is mainly used for drum, piano and string section recordings," explains Jonas. "We built it so you can change the acoustics in the room with acoustic

DigiPre

"On the left side rack is the DigiPre 8 channels. I love to use this on drums. Then there's the LaChapell Tube Pre and the patchbay."

Digidesign D-Command ES

"It's like a big mouse for Pro Tools. I like the dedicated centre section for editing EQ and dynamics plug-in settings, you never have to leave the monitoring sweet spot, and I get to control the knobs like on an old analogue console."

INTRODUCING...



L-R

Jonas Karlsson

Producer

Jani Inkeroinen

Engineer



Genelec 8040

"We've always worked with Genelecs. We looked for a neutral sound and so many people use them that we knew we had to try them out. And – of course – they're Finnish!"

Rack Units

"On the right side is a Stagebuddy which we use for cue and our Empirical Labs which we always use on the drums as it's great for smashing the shit out of them!"

Lunchbox

"In our API 500 series Lunchbox we have two LaChapell modules, two Shadow Hills and four different APIs."

Roland JP-8080

"We love our Roland JP-8080 synthesizer. It's just legendary."



Outstanding Outboard

"The LaChapell Audio Model 992 is a two channel fully balanced all-tube preamplifier and I use it always for recording vocals," explains Jonas. "It's an amazing mic pre, you get a beautiful big sound and it just gives warmth to the vocals. I'm constantly amazed how good it sounds. Before we bought this piece we did not have a clue about it, LaChapell didn't ring any bells for me as a brand. But today it's a pre I'm always talking about! We also have two LaChapell Model 583s in our Lunchbox – its the world's first vacuum tube preamplifier designed for the API 500 series Lunchbox. They are just amazing. The Shadow Hill Industries Mono Gamma is also a great preamp because it has a weird thing where you can choose between Nickel, Discrete, or Steel settings. Each transformer position is stellar, but the capability of switching between them is like having three great preamps in one."



Acoustics

"This is the big recording room, the absorbents in the roof are self made."



Converters

"On the right side is the Apogee Rosetta 800, then the Neve 8801 Channel Strip and the UA LA-610 and the patchbay."



Logic Room

"This is the Logic room. On the left you can see the SM Pro Stage Buddy for cueing and then a Line 6 Pod X3 Pro, and under that, the Access Virus T12."

Extra Curricular Activities

There's also a host of other activities you can indulge yourself in while spending time at SoundFactory. "We have an infrared sauna with colour therapy," Jonas explains, "And of course, the sauna has speakers inside so it's possible to listen to the music you just recorded in the studio! The shower is not a normal shower, it has different lightening possibilities, a massage function and a radio. Even our vending machine is special – the artists don't always have money on them so with this vending machine you can buy your drink on your phone."



curtains and screens, moveable absorbers and carpets. The second recording room is built with RT60 of 0.5 seconds and used for drum recordings. Personally, I like to record my drums in a dry room and then add the reverb later in the mix."

So, why the two control rooms, you might ask? "Well, the two control rooms are totally different from each other," explains Jani, "We have the Logic Pro room which is designed for production and editing. The acoustic treatment in our Logic Room is a bit more wet, because it was mainly designed for producing and mixing club music. The room is designed around the Genelec 1037C monitors. In this room we have the Euphonix MC Pro which is the first one in Finland – we find it's the best controller for Logic. The other control room is based on Pro Tools and mainly for recording, mixing and

them" explains Jonas, "We both wanted digital desks because we are both young and have been producing and mixing with computers since we started. Of course, we both like the analogue kit and it certainly has its own character. But, give us a mouse and a keyboard and we'll do things twice as fast. The D-Command for Pro Tools puts my compressors and EQs right on the desk so I can physically tweak and control the knobs like an analogue desk, but using the software. For me, it's almost an analogue desk because of the possibility to control your hardware pres using Digi Pre."

Mic check

Although the studio is still in its relative infancy, only opening its doors one and a half years ago, the guys at SoundFactory have already seen a stack of Finnish artists

through the door, including the winner of the Best Finnish Vocalist, Paleface. And, when it comes to vocals, and recording duties, there's no shortage of quality mics and outboard. "We've got the JZ V47

Vintage which is a nod to the Neumann U47 and brings the legendary U47 sound" explains Jani, "Of course it depends on what vocal sound you're looking for but we use this a lot. We also use the AKG C414 / AT 4047 and we have to say, these two models are the best all around mics you can get. Also a fairly new Telefunken M80 works magic on snare drums!"

So, it seems that things can only get better for this brand new facility, with the SoundFactory soldiers already making their move into video and TV audio. "We actually planned to have this side of the company right from the start but it actually only happened a few years ago" explains Jani. "There's also been an opportunity to build a studio in Turku, in western Finland. But, we'll have to wait and see what happens with that." **FM**

YOUR STUDIO IN HERE?

Want to show us around your studio? Drop us a line at futurenet.co.uk, and we'll pop round for a Nolet's Dry.

The D-Command puts my EQs and compressors right on the desk

mastering purposes. The Pro Tools room is built with the classical 'Live end-Dead end' technique."

Amazingly, all this design work and build of the studio was done by the guys themselves. "I did the design," explains Jani. "I made few different variations and then Jonas told me what he liked the most. We also got help from Acucan, who has designed almost every high-end studio in Finland. Plus, I took a course in Sweden about acoustics and read two books about how to build a recording studio and treat it acoustically while travelling to Russia to play a gig."

Tools of the trade

All this hard work has certainly paid off and when it comes to gear, the studio is a shining example of using the latest technology with cutting edge controllers in both studios in the form of the Avid Icon ES D-Command for Pro Tools and the Euphonix MC Control for Logic. "We went to Frankfurt Musik Messe to find the best consoles and we found



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ON
THE
RADAR

Felix Da Housecat

With his new album sensationally being given away for free, the veteran cat follows in the footsteps of his Purple hero

Felix is probably best known as one of the firestarters of the revamp in glam Electro that happened in the early 2000s, his trashy Disco and Techno fusion offered something Indie to what much of the other side of Electronic music was lacking. His last album *He Was King*, was a twisted Techno and Synth Pop fusion that delighted us here at *FM*, so it was only

right we followed him onboard a boat in Bristol to share a few Tequilas and find out about his new album *Son of Analogue* that's about to drop.

FM: Tell us about how you work in the studio.

Felix Da Housecat: "I record a lot of the stuff live as I really like that feel. I'll go straight to Pro Tools and do eight bars or something like that. I mean if the

idea is something that's really difficult to play, then I'll quantise it, but usually I like that live feel."

What does the new album sound like?

"The new album is called *Son Of Analogue* and it's not really Breaks, or Drum 'n' Bass but it's definitely not all four-to-the-floor. It's going to be a full, constant flow of music though – I really loved it when Prince did that with *Love Sexy*."

And you're giving the CD away?

"Yes, on the cover of Mixmag hopefully. We're not sure what's going to happen after that, whether there'll be a retail CD. I know managers always want to make their 'manager money' so I'm sure there'll be something online. I don't want download sites to break up the album. One price for the whole thing."

Are you enjoying the digital revolution?

"There are some things I hate about it and some things I like. The thing I like about digital is the fact



that I don't have to carry around three cases of vinyl anymore. I can just show up at the show with my Serato and go."

Serato is the main choice then?

"Yeah, I don't understand why these DJs use Traktor or Ableton. Anyone can do that and just press play. When I DJ I want people to be able to feel my Tequila and hear that I'm actually blending the records myself."

Where do you make your gear purchases?

"When I first started I used to go to guitar centre in Chicago, but I really got tired of waiting around, so when I got to Atlanta I met this guy who really knew my sound and what I might be interested in and he'd hook me up with gear."

So what was the last thing you bought?

"My TL Audio [M1-F Tubetracker] desk was my latest purchase, which of course, I ordered from

England. It took ages to arrive, but I have that now. It's the eight channel version for stemming. Before the desk was actually the Moog Little Phatty, so that was a few years ago. My favourite synth is my Juno-106 but it's been in the repair shop for ages. Y'know I got so caught up in being a gear rat and just buying all this stuff that I really lost focus on the music, so I was really trying to get back to that."

Do you make music on the road on a laptop?

"Not on a laptop – this is forbidden. A studio is not a laptop in your kitchen. I travel and I have friends and I'll use other studios on the road. It's cool that you don't have to carry any DAT tapes around any more though."

Do you know if Prince heard your track *We All Wanna Be Prince*?

"I think he probably did, just because if anything ever appears with his name on it, he's ready to pounce and shut it down." [Laughs]

So did you have to clear it?

"No, I just put that shit out there. The song went so viral though, it was on Perez Hilton and Justin Timberlake's sites. Plus the guy Dallas Austin who plays Prince in the video, is good friends with Prince. You'd have to be a bit of an asshole to get annoyed by a song saying that everyone wants to be like you."

We heard the song was made in three hours?

"Nah man, not even that. The guy I was working with was still working late and I was asleep and I woke up to hear this beat and that synth stab. I was like, 'yo man that's Prince and we all wanna be Prince'. That was it, I told him to turn the mic on and I'd sing every cool Prince lyric I know and that's what happened." [laughs] **FM**

WANT TO KNOW MORE?

Felix Da Housecat's new album *Son of Analogue* is out now, visit his official MySpace for tour dates and more info: myspace.com/felixdahousecat

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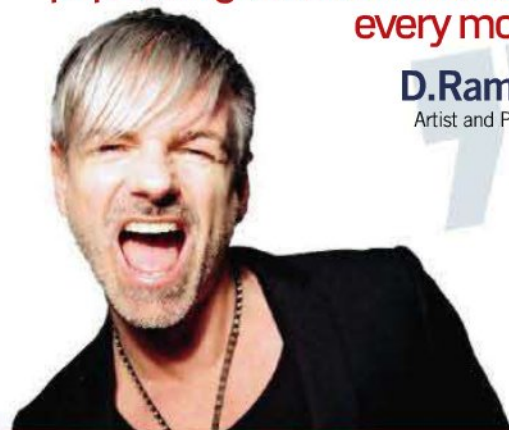


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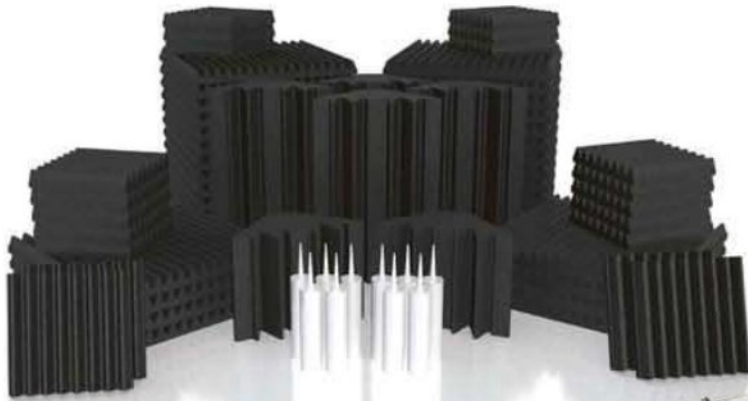
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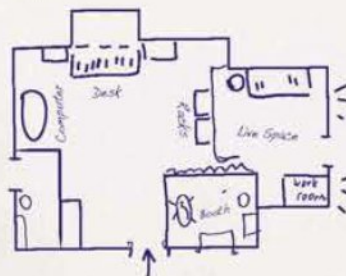
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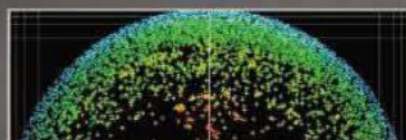


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Albums



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



Holy Ghost! Holy Ghost!

DFA Records



From their first 12" *Hold On* in 2007 right up to their collaboration with Friendly Fires and their excellent EP *Static On The Wire* last year, Holy Ghost! have manifested as one of the most respected and revelled new acts

with fans from Mark Knight to David Mancuso. For established followers, their self-titled debut is almost a Best Of – the majority of tracks having already been released as singles or in EP form.

For newcomers, it's a collection of exciting, engrossing and beautifully produced tracks. One thing that's always been at the forefront of DFA's album releases is the focus on songwriting at the heart of the music. While this record is stylised with synths, retro in instrumentation and Disco in delivery, it has a timeless appeal.

It's Not Over is as close as you can get to New Order without actually listening to New Order,

while *Jam For Jerry* is perhaps the best track of the year so far – a heartbreaking tribute to the late drummer Jerry Fuchs and the events following his death over one of the catchiest, foot-tapping backing tracks you'll hear this summer.

With LCD Soundsystem hanging up their boots this month, there are big shoes to fill at DFA, but with this debut, Holy Ghost! have proven they are worthy of carrying the torch. **Declan McGlynn**

ADD THESE TO YOUR PLAYLIST:
Jam for Jerry, Do It Again, Slow Motion

9/10

Felix Da Housecat Son Of Analogue

Zeka Music



We got our hands on the album Felix gave away on the cover of *Mixmag* last month and it's quite a journey. Living up to the name, this album is an analogue synth fest kicking off with deep Tech House vibes before moving onto a sheer onslaught of synths and drum machines.

It's pretty experimental as early as track three, which sounds like a steroid injecting Gameboy having a bar fight – interesting, but won't be for everyone. Compared to *He Was King*, this album is a little less

polished, but benefits from returning a little to Felix's Punkier roots where he happily mixes everything from Pop, Techno, Electro and even Rock, stirring well until this thick analogue stew of music is created.

It's 14 tracks long, so don't be afraid that this is a fury of analogue synth vomit, there's classic Felix funk here too with his signature galactic Prince influences coming through, complete with dove references.

Just don't expect the kind of album Felix delivered on *He Was King*, this is much more personal and eccentric. **Chris Barker**

ADD THESE TO YOUR PLAYLIST:

HerMuse, Electric LOVE, I Just Want To Be The One, Theorie Domino

7/10

Radiohead The King Of Limbs

XL Recordings



The King of Limbs does not stretch too far from Radiohead's previous long player *In Rainbows*, despite perhaps being a little more abstract. The opening track *Bloom* signifies Radiohead's comfort in toying with gentle, yet restless ambiances. *Little by Little* provides the most persuasive backing, its shuffling drums bellowing beneath highly strung guitars – the mood meditative but fractured by Yorke's polar, dread-fuelled lyrics. That you can't always make them out is immaterial – his eerie candour reeks of

inebriated disenchantment, and the vibe is tangible.

The King of Limbs eventually enters the heart on *Lotus Flower*, where Yorke's soothing falsetto vocal acts as a wonderful melodic outlet. Yet this is trumped by *Codex*, for me, one of the best tracks Radiohead have recorded. I found these tracks highly reminiscent of warmly remembered eighties post-rockers Talk Talk, which is no bad thing.

Although a bit short with only eight compositions, this is sad and elusive, yet optimistic and curiously inviting. **Danny Turner**

ADD THESE TO YOUR PLAYLIST:

Lotus Flower, Codex, Separator

8/10

It's On Our iPods



Kraak & Smaak Electric Hustle

Jalapeno Records

Kraak & Smaak have built up an excellent reputation for their live work, assisted by festival appearances at Glastonbury, Lovebox and the Big Chill.

With a growing fan base, the Electro-Funk protagonists have made it as far as their third album and seem to be improving all the time. Whereas their debut album *Boogie Angst* was more inclined towards the Acid Jazz side of things, and *Plastic People* solid downtempo, *Electric Hustle* has a more varied palette, moving effortlessly between Nu-Disco, deep Electronic Funk and Soul Pop. The songwriting remains the key to Kraak & Smaak's success – rarely are they afraid to provide the sort of Poppy, upbeat anthems that their contemporaries might deem

beneath them, and while it might not be deliberate, tracks such as *Hold Back Love* and *Wasted With A Smile* retreat to the eighties, sending a marvellously nostalgic R&B breeze through the bones.

There's certainly no shortage of confidence either, as *Electric Hustle*'s platter of thick electronic pads and tasteful melodic keys drive the vivacious arrangements, supplemented by a raft of guest vocal contributors.

With its fistful of catchy tracks and mature production, *Electric Hustle* proves Kraak & Smaak have a lot to offer – this is merely the start. **Danny Turner**

ADD THESE TO YOUR PLAYLIST:

Hold Back Love, Wasted With A Smile, Never Too Late

8/10

Amon Tobin ISAM

Ninja Tune



Brazilian DJ and producer Amon Tobin follows up last year's *Monthly Joint Series*

album with *ISAM*. Best known for his interest in sampling / field recordings, Tobin has built up a steady reputation for working at the front line of electronic sound manipulation.

Everything about *ISAM* is intricate, from Tobin's acoustic modelling and multi-sampling techniques to the cover art, depicting desiccated skeletal insects protecting the carcass of a dead lion's head.

Ultimately, however, despite Kitbuilders delivering a mixed bag, they can still summon up numerous goodies. **Danny Turner**
ADD THESE TO YOUR PLAYLIST:
Disco Obsession, Follow Me, Bodies

yet intelligently-carved union of heavy programming and wide-ranging adrenalin-fuelled moods.

The opening *Disco Obsession* is a fine anthem, with wonky keys bouncing off thudding dance beats and heaps of churning, arpeggiated analogue synth chords – vocalist 'Ripley' appears intermittently to add her special brand of seedy lyrical Pop waxings. It would be remiss of me to ignore the fact that *You Trashed My Mind* doesn't always pan-out, towards its end the album slightly outstays its welcome and becomes a little self-absorbed.

Unfortunately, however, *ISAM* could be described more as a personal quest than something that can be shared with any great satisfaction by the listener. So much of *ISAM*'s content is based on technique that the end result is impassive and dislocated. Bar a couple of tracks, I've rarely played an album so frequently, wanting to like it, yet struggled to.

Ultimately, for all of Tobin's spellbinding production, *ISAM* seems a little lost in itself and lacks memorability. The project's modus operandi was undoubtedly more fascinating and fun than what the listener is left with – alas, we couldn't be invited to the whole party.

Danny Turner
ADD THESE TO YOUR PLAYLIST:
Journeyman, Wooden Toy, Kitty Cat

Matthew David Outmind

Ninja Tune



A relative novice to the Electronic scene, Matthew David's

Outmind showcases a messy patchwork of deconstructed samples, strung together to produce a muddy patchwork of elevating sounds and crisp digitised rhythms.

Complex and mysterious, *Outmind* requires countless visits and stern concentration before it begins to reap dividends. At first, its rough collage of leaping fragmented sounds fades from the memory like arc-welded sparks, but eventually David's crackling lo-fi ambiances

begin to escape their radiant, dreamy architectures to produce something that is much more cohesive. To describe *Outmind* as Dubstep or Hip Hop would be too simplistic.

Despite elements of both present in the disjointed beats and tremulous basslines that fluctuate at the entry level, the way David toys with electronic sounds is more akin to free Jazz – breaking down the conventions of multiple Electronic genres and filling the void with improvised elements from the past.

Sometimes a success and sometimes a failure, *Outmind* works best when the music is allowed to settle into a dreamlike state and linger, whereas the album struggles when its condensed platter of white noise suffocates the compositions beyond redemption.

Although a fairly brave and intelligently constructed debut, *Outmind* promises much but unfortunately doesn't quite reward the listener enough for their patience.

Danny Turner
ADD THESE TO YOUR PLAYLIST:
Los Angeles Is Beautiful, Noche y Dia, San Raphael, Floor Music

5/10

Lykke Li Wounded Rhymes

Atlantic Records



Swedish singer-songwriter Lykke Li (pronounced 'Loo-kuh Lee') merged her

myriad of influences in 2008 with her critically-acclaimed and widely celebrated debut album *Youth Novels*.

Along with producer Björn, of Peter and John fame, Li crafted a gem – lo-fi by nature with a focus on simple and elegant songwriting, with the icing provided by her distinctive vocal tone and lyrical content.

Wounded Rhymes continues the trend, with a healthy balance between catchy upbeat finger-snappers and lamenting lo-fi love songs to sadness, among many other things.

Lykke Li's unique vocals emit a lifetime of emotion, despite her 25 years of age and it's hard not to get caught up in her story, especially on *I Know Places* and *Unrequited Love*. Tom and timpani beats make up the heartbeat of the more upbeat tracks with *Get Some* sounding almost tribal in parts, enhanced by her rather intense lyrics.

Having worked with Kanye West and Santigold on the track *Gifted*, had the Kings of Leon approach her to cover one of their tracks – *Knocked Up* – and been remixed by Fred Falke, Drake, 3OH!3, Beck, ex-Aero The Magician and more, Li had nothing to prove, and still, with *Wounded Rhymes* she continues to attest the flurry around her debut was no fluke.

This is the soundtrack to the end of a lazy summer's day, with hints of the epicness of M83 contrasted by beautiful solo vocal performances. While it might be nothing entirely new in terms of direction, it's another ten reasons to love Lykke Li.

Declan McGlynn
ADD THESE TO YOUR PLAYLIST:
Sadness is a Blessing, I Follow Rivers, Unrequited Love

8/10

Compilations

PICK OF THE MONTH

Trentemøller Late Night Tales

Late Night Tales



Make sure you're not feeling too sinister before you listen to this mix of dark, crunchy atmospheric music. With tracks from The Velvet Underground, Nick Cave, The Black Angels, Low and Mr Trentemøller himself it's a twisted journey of twangy guitars, toms and synths pads, packed with tension and filmic like qualities. This mix is beautiful yet terrifying, don't miss it. **Chris Barker**

M.A.N.D.Y. Body Language Vol.10

Get Physical



Get Physical return to Philip Jung and Patrick Bodmer aka M.A.N.D.Y. to deliver the deep Techno, House and minimalist Electro moods. Melodic, moody and masterful – a great mix. **Chris Barker**

Nick Warren Balance 018

Balance Music



Another upmarket package in the *Balance* series, this time seeing Way Out West star Nick Warren take to the mix. It's a classy Techno and Tech House affair, washed in white noise and groovy, hypnotic beats. **Daniel Griffiths**

Various Drum & Bass Arena Evolution

AEI Music



This double-CD comp kicks out the trouser flapping jams from Chase & Status, Breakage, Nero, Nu:Tone, Danny Byrd, Noisia and more. **Chris Barker**

Various Zang Tuum Tumb: The Art Of The 12"

ZTT



Reset your brain back to the '80s and witness the dawn of the remix. There's lashings of Linn, Fairlight and Synclavier and you can hear producers and willing artists push the machines in ever more creative directions. **Daniel Griffiths**

Retro Respect



Jacob's Optical Stairway

R&S Records

Released in 1995 this album contained a hidden all-star cast and combined the powers of two strong genres of the time with Marc Mac and Dego of 4Hero representing Drum 'n' Bass and none other than Juan Atkins and Josh Wink covering the Detroit Techno angle. A fantastic blend of tight-knit programming, deep bass and analogue oddness. **Will Seelig**



Kitbuilders You Trashed My Mind

Day Glo Records/Vertical Repair



Cologne duo

Kitbuilders have a decade of releases under their belt, yet seem to have hit a belated peak with *You Trashed My Mind* – an energetic album of, in their own words, "Electro Sci-fi Punk Rock energy and a grebo edge".

Influences are many, ranging from the grinding industrialism of Chris & Cosey to the deadpan humour of Devo and even '80s New Wavers Japan, yet there's still sufficient room to slot Kitbuilders into the dying embers of the Electroclash movement. Although Kitbuilders rarely seem to take themselves seriously, this lengthy 15-track album deserves recognition for its throbbing,

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Katy B Lights On

Katy B dropped a corker a few months ago with *Lights On*, proving her rep with this Geeneus-produced UK Funky party tune. Classic ravey sounding stabs draw you into the track so here is your chance to emulate the sound for your own future dancefloor fillers.

From those early 1990's piano stabs to the more current and synth-based ones, these are the rhythmic mid-range track components that can really dominate a track.

Lights On is vocal lead so those parts need to be mixed just right so they don't clash. I'm using a graintable synth. Graitable is pretty unique when it comes to sound design, can produce some extremely varied sounds and is ideal for the 'pluck' that makes this sound so distinctive.

1 When using a Combinator you will need to insert a line mixer to work with a few synths, and while you are at it, might as well throw in a few effects. We've chosen a reverb, delay with a tape setting on the Scream4 distortion to warm things up a bit. To get this nearer to the Katy B track, we spent a lot of time using the level and aux sends on the line mixer, and it made a lot of difference.

After the Malström we've a Scream4 to warm things up and then a filter – this will help with making sonic space for the vocals and other aspects on the high mids.

2 The detail on the graintable synth is of prime importance. Load up an nice ambient chord in the oscillator A and B and alter the modulation patterns at the top of the window. It's these

elements that are the starting place for this sound. Some dramatic adjustments can be experimented with the modulation and oscillator section parameters here. Tweak until perfect.

3 The Subtractor is using a square wave, two oscillators, and set to a +7 semitone which is set to pinpoint a specific note in that stab.

Follow the filter and envelope settings, and that's that.

4 On its own the Malström doesn't really emphasise that high note, so the Subtractor has been drafted in for that job in polyphonic mode.

These are the filter settings. Last of all is the bassline producing synth using a basic triangle wave sound. At the beginning of *Lights On* you won't hear the bass, but I have thrown it in anyway as it works really well filling out the sound when used in the Combinator.

After the Combinator, we have used that Scream4, filter and compression. The combination of all of these really mellows the tone of the stab as a whole, brings the sound elements together as a whole, adds warmth again, and sonic consistency from the compression.

5 Here is some detailed note information for you. Note the velocity amount which is fairly hot as this will affect the sound. Make sure the quantise is set just right to achieve the rhythmic bounce of the track.

6 Now it's time for the beats! Here is the drum pattern – we used Redrum in Reason with sounds from the factory sound bank to make things easier for you Reason heads out there. Check out the DVD for the full description on how this sound was made.



Calvin Harris I'm Not Alone

This euphoric Dance bonanza wouldn't have sounded out of place at Creamfields ten years ago. Anthemic and uplifting in equal doses, drawing comparisons with later 1990's Dance music. It's a great riff that sits in the memory and gets reworked time and time again.

Perhaps its most winning element is that it's also very uplifting in musical structure but for the sound we're talking big and fat here for what is essentially late '90s hands-in-the-air cheese. We're going to need a multi-layered fat sawtooth synth approach to fill the airwaves and maybe something else to add a little punch and depth.



1 Straightaway we need to switch all of those oscillators onto sawtooth mode on the ES2, and give that filter plenty of drive and resonance.

Drop Osc1 by -12, turn up the Analogue setting for a bit of detune, and turn up the glide for a tiny bit of portamento sweep. That drive in the Filter section fills out the high mid frequencies nicely. On the far right brighten up the tone, chorus intensity and sine level.

Now pay attention to the middle section of this unit, on the far left we have the cut 1+2 that's a filter control, turn this one up high. Next we get to the three envelopes at the bottom half of the unit where you will see that ENV1 isn't doing a great deal, but two and three have a very similar curve.

2 We've gone for the Steinway Piano and pad on the ESX24. It's the attack we're looking for plus a bit of decay from the strings. The piano setting on this one has just the right brightness and all we have done here is turn on the Fat button giving the whole sound lift and presence.

3 Just to give you an idea of fader levels, inserts, and pan settings, here is the mixer view.

4 Use the Silver Verb and Compressor plugs to lift the synths in the mix and to also control them. The compressor boosts the reverb release tail which makes the ES2 linger between the stabs.



5 Here are the Silver Compressor settings that we used for the piano and the pad sounds.

6 An image of the reverb return track for you to mull over. It's being used quite subtly here as there is already a lot of 'wash' going on.

7 The warp FX level return insets. Again, these are being used just a tiny amount to add stereo space and depth to the synth and piano.

8 The highlighted notes are missing in the piano and pad part to emphasise that descending piano, as you will see in the next screenshot.

9 And here is the similar but different part for the piano. Listen to the DVD to hear how it sounds.

10 The basic beat pattern. Again, check the DVD to hear it in all its glory.

11 Try dropping that piano and replace it with another string synth for even more rave.





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Nero Me & You

The harsh, digital EFM1 FM synth in Logic has a really raspy edge that, on a big sound system, works well when combined with a low sub. We went for this one right away as we know how harsh this unit can be!

To get the sound to sit right it needs another, warmer synth to fill in the frequency gaps which the FM synth doesn't manage. Enter the simple little ESP. This versatile plug-in really starts to sing on the track when we start to work on the wave shaping element on the left of the synth. Combining these two really hits the mark, and from there on it's a matter of adjusting and tweaking to get the two synths to sit right in the mix. There are a lot of ideas to use here – the plug-ins for this sound work really well, are powerful and flexible.

1 Important things to note here are, setting up the modulator, working on the LFO and rate settings, stereo detune at 10 O' Clock, modulator wave at One O' Clock, and to crank up the sub level to the max. Bring up the Decay and sustain on the volume envelope, and drop the release, and be careful with that FM

depth! There's a lot of scope here to get things right and also wrong so take your time with this element of the track.

2 The ESP, another versatile tool which is perfect for the job in hand, from left to right, lots of scope with wave shaping, set that resolution to eight,

mix and blend those sound sculpting faders. In the middle of the unit, there is a lot of options with vibrato and speed which didn't get a look in on the tutorial but use the automation guidelines as for the EFM1 to get the plug-in to grow! And it really will, trust me! Whack those ADSR, filter, and volume parameters up, pay attention

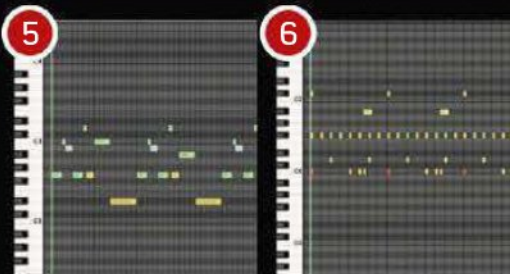
to the volume envelope and finally set the overdrive to high.

3 Here are some details of setting note specific LFO, when those low notes hit the floor you will be able to get that rumble as it should be. This is a rough guide and is an area where you can spend a lot of editing time. Note that there are different values for different notes, so use your ears for accuracy.

4 Here is another element that will need your undivided attention to work well. Combine these LFO changes while listening, plus making adjustments on the ESP plug-in itself to get the most from this. Again, follow these guidelines for both synths on this track.

5 Here is some detail on the notation of this track from the piano roll window. The velocity of these notes will affect the plug-ins sound depending on how the velocity is set up on the unit. Time for more experimenting and editing.

6 Beats! Here is the piano roll of the basic beat pattern, this is the basic / main structure and you will need to add fills, break things down and build things up depending on where you are in the track. The best tools for this are your ears with a keen eye on the programming window.





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Far East Movement Like a G6

We all know how a sine wave bassline can fill a soundsystem with frequencies. Try an old FM synth through a guitar distortion pedal. It always sounds amazing on those monophonic sine wave bass and lead sounds. So with this in mind finding a quick and simple solution to recreating the bassline of *Like a G6* was a breeze.

We went for Reason and the Malström synth. This comes alive with the Scream4 distortion unit and pretty soon the magic starts to happen. But this sound is all about the portamento. As with many distinctive sounds you need to get the bends right to get even close. The sound's sub is achieved in a similar way with a more subtle approach to using the distortion. Again, it's that simple sine wave carrying the low rumble with smooth tube saturation from the Scream4 that does the trick.



1 Set that portamento as shown. This will vary a lot from synth to synth so you will have to judge what works best for your track. Right here a bit of release on the ADSR volume envelope gives the notes a tail, which emphasises the glide as the notes sweep up and down the scale. This is a pure and simple sound so there isn't much else to adjust. After the synth is the Scream4 with the distortion setting on with Damage set to high. This is then compressed to keep it smooth and consistent through its frequency sweeps, the ratio is set low as this gives the sound a biting attack.

The filter tucked in under the compressor is set to emphasise the mid frequencies, and last of all there's a plate reverb, giving the sound a sense of placement in the mix.

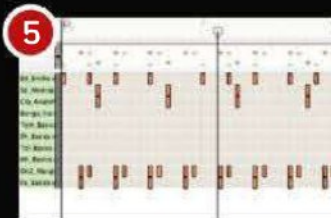
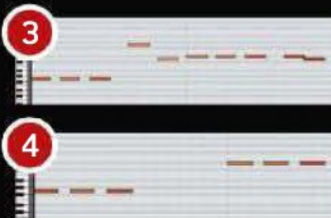
2 The sub element has even less going on, and there are less notes but as with many things, less is more! Turn up that release on the volume envelope a notch, this gives the bass note a tail, emphasising the boom effect and drop the oscillator by an octave. Inserted after the Malström is the distortion unit. We're using a tube setting for this one. Set the Amount to just over half.

After this we have the Compressor, with the release set high so it sounds a bit more 'natural' and finally a little tweak of low-end fatness from the EQ.

3 Just a quick glance at the piano roll to see where the notes are placed for the bassline, many elements of this track are stripped back and uncomplicated, as the bass sound and the notes in the sequencer too.

4 Emphasising that 'boom-boom-boom' effect, here are the sub notes we're using.

5 This is the position of the beats in the drum track sequencer window to get you rolling. The tempo is set at 123bpm. Feel free to elaborate!



Tim Berg Seek Bromance

This track has a huge Trance anthem sound and has been massive across Europe. The Ibiza-friendly floor slamming lift in the middle of the track brings it all together. So how does he do it?

It's all about the intro and main drop in the middle, fooling us into thinking that the track is going in one rhythmic direction and then fooling us again when the four-four drops. Try it yourself, it's a clever and satisfying trick.

1 Enter the simple and smooth ES1 synth. From left to right, the oscillator is set to an 8' square wave which for this sound is perfect. The mix is bright so we'll only use the wave sounds, eliminating any sub. Set the LFO rate somewhere in the middle. Moving to the middle, drive and cutoff are set high and the filter on the fat setting at 24dB, resonance is low, velocity envelope is centralised and the amplifier high. Attack is short, sustain and decay high with the release turned up enough so the notes have a tail. Mod envelope and router are set to FM (frequency modulation).

2 Go for a classic sharp piano sound. We're using sampled sound from the EXS24 here. We've dramatically brightened up the sound in the filter section, turned up the drive, cutoff, a bit of resonance and finally we've changed the tuning up an octave, which has given the sound a sense of urgency.

3 The inserts on channel two (ES1) are: Stereo Spread to widen the sound, Space Designer Reverb to create space and a Compressor to even them all out. On channel three (EXS24) the Silver Compressor gives the piano more punch and the Apple Aumatrix reverb, is a simple favourite for many tasks and again provides space for the piano.



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IN THE STUDIO WITH...

Chromeo

Their current album places them at the forefront of forward-thinking throwback Funk. **Chris Barker** took a trip to a freezing Montreal to get some Chromafied lovin'...

meo

The duo of Dave '1' Macklovitch and Patrick 'P-Thugg' Gemayel have been best friends since childhood and have made music together for practically their entire lives. Their first album *She's In Control* was released back in 2004 with their catchy tongue-in-cheek single *Needy Girl* becoming the catalyst for their career.

The track also cemented Chromeo's unmistakable style with P-Thugg's talkbox vocals and Dave 1's cheeky lyrics becoming their musical signature. Since then the band have become internet sensations, had their music featured in videogames, TV adverts and seem to be on an endless world tour. Before stepping into Chromeo's

studio in Montreal we'd already glimpsed at pictures, but seeing the mass of synths, drum machines and more in the flesh was something very special indeed. With Sequential Circuits, Korg, Moog, Dave Smith, Akai, Yamaha, Roland and more all gathered in this collector's cave, it was a salivating sight.

There was even a gigantic and mega-rare Yamaha DX5 propped up beside the sofa beyond the live room. Incredibly, all these synths are still sequenced via the MIDI output of an old version of Cakewalk Studio, running on a Pentium II.

As Pee smiled, proud of his studio and synth collection, Dave arrived fresh from New York and we soon settled in for a Chromeo history lesson, synth chat and to find out what's next for the dynamic duo.

FM: What were the first steps for Chromeo?

Dave 1: "Tiga giving us the record deal with Turbo was the first incentive for us to start making demos as Chromeo. Before that we were making music together in different outfits and capacities, but this started with us deciding to do non-Hip Hop stuff for an Electronic music label. Then it took on a dimension of its own with us singing, building up our personas and a musical aesthetic that we didn't really have when we first started."

So how did Tiga sign you if Chromeo didn't exist?

Dave 1: "Well I had a record shop with Tiga here in Montreal and he knew my Hip Hop productions and said, I should do a non-Hip Hop production for Turbo. So I said, can I involve my best friend Pee, as I'd wanted to do music with him again since we had our band at high school. Then Pee brought this whole analogue synth dimension and against my will I began singing and writing lyrics. It became this '80s Pop reference but with a slightly more modern image and sound – a modern envelope I would say."

Was this because this was the middle ground for your influences?

P-Thugg: "No we grew up discovering music at the same pace – we would collect records at the same time and always be playing each other stuff, like 'yo! man check this record out!'"

D: "Yeah, I'd always been into '80s Pop and Pee really got in to the '80s stuff through the synths."

P: "Yeah and so we discovered Funk at roughly the same time."

D: “There were a couple of records like *Discovery* by Daft Punk and the *Darkdancer* album by Stuart Price [Les Rhythmes Digitales] that hinted at a re-appropriation of ’80s Funk and we really felt that we could take it further, because it hadn’t been fully explored.

P: “The machine Funk sound.”

When you started to get those first tracks together, did people’s reaction surprise you? Because you were making Hip Hop up until then.

D: “Well we didn’t play them to our Hip Hop friends at first, and when we eventually did, they didn’t understand it. We played it to Tiga and he played it to his friends in the Electronic music world, which was really open at that time to anything eclectic, anything non-Techno with vocals. Everybody was really positive and cool saying ‘bring it on, there’s nothing else like this’. So we just continued and when we did *Needy Girl*...”

P: “Yeah we just hit a void with that song and everyone was like, ‘woah, thank you.’”

***Needy Girl* really presented the whole Chromeo package with the video and aesthetic all working. When you stepped back, did you realise it had all slotted together so well?**

D: “No not at all, because the *Needy Girl* video took forever for us to choose a treatment that we liked. We wrote the video with the director and decided not to have any girls in the video. We were really struggling still to find our aesthetic. I think everything in terms of our aesthetic really came together between *Fancy Footwork* and the new album, *Business Casual*.

“The girl element, the quirky videos, the love-torn lyrics, y’know. It’s all been crystallising and confirming and reaffirming itself over time. It didn’t just take shape immediately.”

It sort of sounds like you’ve removed yourself personally from Chromeo though. Are all the lyrics



Dave 1 plays a Fender Strat in P-Thugg’s studio



The T-BOX 1 was Pee’s first homemade talkbox



We’re not writing under a guise. In fact that has been one constant since the first album, to keep things completely sincere

actually personal or are they from Dave 1 and P-Thugg, the characters?

D: “We’re not writing under a guise. In fact that has been one constant since the first album, to keep things completely sincere. We’ve always made sure of that, to the point where things are so candid that people actually thought it was meant to be ironic.

“But then after us continuing to do the same music, showing this relentless consistency and touring so much I think we’re proving to people that this is real.”

You even began to get acknowledged by the ’80s crowd. I remember the last time we spoke, Daryl

Hall had been in touch, which later led to your appearance on Live At Daryl’s House.

D: “Yeah, hopefully we’re taking that sound further or at least exposing it to a new generation that hasn’t heard this sound before.”

Tell us how that all happened.

P: “We got an email I remember while we were doing a video shoot. Our manager just got in touch and said that Daryl Hall had been in touch.”

D: “No, it was John Oates.”

P: [Laughs] “Right, my memory is horrible.”

D: “John Oates got in touch first and said he wanted to work with us and he was a fan. Then

nothing came of that until around a year later when Daryl Hall’s manager got in touch and invited us to do the session at livefromdarylshouse.com.”

You seem to have it nailed really because you can’t be accused of

selling out even though you have tracks on hair gel adverts and have featured on Yo Gabba Gabba...

D: “We’ve been fortunate enough to achieve that, but we really don’t care if it became something else. We haven’t yet made an overt effort to get on the radio, or done some sort of marketing move, or collaboration to expose us to a larger audience. We always wanted to build up this cult, solid fanbase and we’re grateful that we have these fans.”

P: “We have fans that will defend us personally on Twitter and such. We’re super grateful of that.”

Not many bands get the chance to build their career like you. You’ve sort of done it in the



Minimoog D

D: "This is probably one of the least used synths. I can't think of one record where we used this synth for the bass. It's much too distinct."



ON THE DVD: Studio Tour

1



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This large collection of drum machines and samplers provide the rhythmic backbone for the Chromeo sound.

2



Synths

The selection of synths on offer is quite staggering – Chromeo take you through each one.

3



Bass

The bass is a critical element in a Chromeo track and is not always the synth you would expect it to be.

4



Even More Synths

The second half of the Chromeo studio reveals even more synths along with some other more classic instruments.

5



Guitars and Talkbox

Yet another room contains guitar pedals, amps, the famous talkbox and a percussion drawer that Brazil would be envious of.

traditional way, with each album getting slicker in production, shows and budgets getting bigger with each tour...

D: "I mean, the budgets don't really follow. But that's alright..."

P: "Well, for the tour, the budgets do get bigger."

D: "Yeah, that's true. But I think a lot of us having more know-how and reinvesting our own money. Our thing has always been to give back and to reinvest in everything we are doing. I mean, we're not at the level of Radiohead where we can give away an album for free. But we can invest our own money in a video just because we know our fans will pass it around for a week and hopefully laugh and like it."

"And the live show is as human and as generous as we can make it. We tried working with a full band and it just really didn't sound as good."

P: "I don't think people really care to see us with a band either, they like looking at two bozos jumping around on stage. I think that's a big part of the charm of it."

What were those early days of touring like?

D: "It was hard and then leaving the full band was the step. But, like we said before, it all just sort of came in to itself progressively. Our old-school fans have witnessed it all, but there are a ton of people who only just discovered us with *Night By Night* or the *Fancy Footwork* album and they haven't seen us coming of age."

The UK re-release of *Business Casual* has the *Hot Mess* collaboration with Elly Jackson from La Roux. Tell us about that because – to be blunt – it feels like the collaboration was tagged on afterwards...

D: "Yeah it does and, well, it was done afterwards! We did the record and then the label said would you do this with somebody else singing the hook. At first we were like, 'no way, the record is done'. So the label then asked if we'd do it if it was somebody that we really wanted to collaborate with."

"So we said 'yeah' and suggested Elly, because we really like her and have known her from way back – she used to write me on MySpace. So we all got together at Rack Studios in London and we wrote together, she sang, we picked takes together and it was like an old-school collaboration. It worked out."

Can we expect more of that collaborative stance on the new album?

D: "Maybe, I don't know. Maybe we'll do it more with instrumentation too. Get some other players on the album. As long as myself and Pee are orchestrating everything and it fits in with our vision of how the record should be. I think we're more open now."

P: "We're more secure in our songwriting now. On the first album I think we still didn't fully know what we were doing."

D: "We argue about a million things but music has never really been one of those. If Pee doesn't like a demo I play him, I might try to sell it to him, he'll either take my word for it or we'll scrap it and come up with another idea."



Roland Compu Rhythm CR-78

P: "We used this on our Eagle's cover and on the track *J'ai Claqué La Porte*. For *J'ai Claqué La Porte* though, we sampled the hits and reprogrammed the rhythms in the MPC."

Roland R-70

D: "We haven't really used this much recently but we used it for crash cymbals and some other bits on the first album. It's very '90s – New Jack Swing. Almost."

Korg Micro-Preset

P: "This was my first ever synth but it never got any use on any finished Chromeo tracks. It's only here because my Pro-One is in the repair shop and there was a hole in the rack when we filmed the *Barbara Streisand* video!"

Nord Modular

P: "This contrasts all the warm analogue sounds and we use it all the time."

Sequential Circuits Drumtraks

P: "This is probably one of the most important pieces in the studio. We start all our demos with a beat from this. It's really fast to use as it has MIDI and it sounds great."

Sequential Circuits Six-Trak

P: "This is one of my first synths and we still use it heavily. The pad sound on *Needy Girl* and on *Night By Night* were from this synth."

SYNTH HEAVEN

The List Goes On...



> Yamaha RX5

P: "We used this on the first album and it's very '80s sounding, it has this integrated reverb which isn't actually a reverb it's more of a delay."



> Akai MPC5000

D: "When Pee's not working on demos he's sampling up old records and getting drum sounds, much like how we used to produce Hip Hop."



> Akai S950

D: "We haven't used this recently but the drums for *Needy Girl* were done on this."

DSI Prophet 08

P: "This is serial number number 9, which is important." [laughs]

Sequential Circuits Prophet-5

P: "To back this up you have to use tape, but I've managed to record the WAV file into the computer and use [BIAS] Peak to back it up, but it's complex because if the level isn't quite right it won't work."

Is there a time where you know one person won't like a demo so you don't even bother playing it?

P: "No, with my demos, even the ones I know he won't like I'll still send. He [Dave] always finds something in there that we can use in another track. It's the same thing vice versa where I didn't like the lyrics Dave wrote so we scrapped them. There's no time for baby arguments for the sake of egos."

D: "For instance, even the track we made today [see DVD] we might end up keeping the hi-hat pattern or something. *Fancy Footwork* was one of Pee's demos and Pee had actually recorded a scratch vocal melody. I already had the *Fancy Footwork* hook in my head and was just looking for something to put it on."

P: "He actually tried to re-record my scratch vocals first but it didn't work. We never usually get that far, but with this record we actually recorded the demo vocal before we realised it wasn't working on the track."

Where do the lyrical ideas come from?

D: "The lyrics are mainly cheeky. For us, it's all about doing something that's eminently catchy and fun to repeat."

Why did you decide to sing in English?

P: "Funk has always been English to us. Every attempt of French Funk was a failure and I don't think I'm the guy that can transcend that language barrier. I mean, the talkbox in French? Nah."

D: "We might do songs in French that are more singer songwriter or include that influence, but really it's always Funk in English."

Dave, you have a PhD in French Literature, does that help with lyric writing?

D: [Laughs] "On the contrary, when I write lyrics I try to be very un-academic about it because it wouldn't sound sincere. It's meant to be effortless. A mix of stuff we know is nice to repeat and just rolls off the tongue. I know for a fact that my PhD has



Mixing with Zdar

We spoke to Chromeo's regular man behind the busses

FM: How did the Business Casual mix differ to *Fancy Footwork*?

Philippe Zdar: "I guess the fact that this one is mixed in my own place now, with all the gear finally plugged in and also with a lot of new stuff like more EMT reverbs. Also, I've been mixing a lot lately so perhaps it did keep me on form... Or it has destroyed my ears so much that I have to put in more highs."

Chromeo seem to be aware of not wanting to 'sound' like a retro group. Are you aware of this when mixing?

Do you have to be careful not to use signature '80s reverbs and effects?

"I think they love retro and modern at the same time, so we try to be post-modern more than retro. I'm not really careful, I do use a lot of '80s reverb and I can't change it. For me, from 1960 to 1985 the reverbs were the best... After that it's really rare to find something relevant in terms of life, air and flaws."

What about compression, how was this used for the album? It doesn't sound heavily compressed.

"The master compressor I use can be pushed far without sounding pushed that's what I love about it. I guess I also compressed less on individual tracks, to let it live its life out from behind the fences. Like a Mustang."

Any techniques or equipment that you really thought gave the album its overall sound?

"Always having Dave 1 standing behind you, making you push things forward and referring to Michael Jackson is probably the secret weapon on this album."

I know for a fact that my PhD has nothing to do with it. You don't need a PhD to know that 'bonafide lovin' is a cool thing to say

nothing to do with it. You don't need a PhD to know that 'bonafide lovin' is a cool thing to say."

P: "Yeah I mean because I can also come up with that stuff." [laughs]

But Dave, you must have a passion for language?

D: "Yeah, but Pee speaks five languages and he doesn't have a PhD. I think you can be aware of linguistic issues and write good lyrics without a PhD, for sure."

Has work started on the next album?

D: "I do ideas on my phone and I have about 20 ideas right now. But we want to change the

approach a bit on the next album and work more together, with me coming to spend more time here in Montreal. But we'll still have to work on our own and Pee will definitely need to be in his Funk lair making demos."

P: "There's stuff that we can push even further I think on the next record. Like on the end of *You Make It Rough* on *Business Casual* with the long breakdown. I think we could use more of that in Chromeo land."

What about working with Philippe Zdar?

P: "Well, he's always a wildcard for every album."

D: "But we'd love to work with him again for

sure, he's just crazy busy and working on so many different things in his studio."

Did you both attend the mixing stage in Paris?

D: "No, I attend the mixing and mastering but Pee has this studio

to attend to. I send Pee the tracks back and fourth though. Generally with Zdar he'll either turn one element all the way up or all the way down. It's usually either a mistake or absolute genius."

P: "Then we'll both end up having a little two-day panic about the mix."

D: "Yeah I remember with Zdar's mix of *Fancy Footwork*, Tiga said that the mix made him feel seasick. It was so drowned in reverb compared to our punchy tight demo. But now we hear back the mix and we realise that that's the song."

P: "He [Zdar] has a fresh approach and you always get a little worried because you've had these tracks looping around in your head for so long. But,

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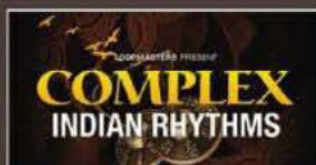
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it's a fresh opinion that's always good and has a positive influence. He knows what he's doing – as far as mix engineers go, he's easily one of the best there is."

What's next for the studio? Even more synths for the collection?

P: "Just getting into the bigger synths really, trying to get the top of the line synths from each manufacturer. But also dabbling in FM and more digital stuff. I just got the Roland D50 actually which is mega digital, clean and a little cheap sounding at times."

"It's the synth that they used for Michael Jackson's *Bad* album and it's all over the Paula Abdul stuff too. I also want more later style synths like ABC where they used a mix of analogue, FM and digital. I just got a Yamaha DX5 which is a DX7 and a DX1 in one. The DX1 is a great instrument that not many people know about. It's based on a technology that sits right in between FM and analogue. Loads of records that people think was the DX7, was actually the DX1."

D: "I think the next step for us is to get even more orchestral and soundtrack style. I don't know, but like how with the last LCD Soundsystem album, [*This is Happening*] by the sixth minute of a song you really began to lose yourself in the groove of the track and I like that. But we haven't started yet, so it's hard to tell what we'll do."

"I think the *Business Casual* album really solidified things for us and it really doesn't feel like we're in the shadow of the *Fancy Footwork* album any more."

Has it ever seemed like Chromeo couldn't continue? You are huge on the Internet and seem to have an ever-growing fanbase, but does that translate into record sales?

D: "Our records have never really sold big and we're more popular now than we ever were before. Record labels come and go and we'll always find a label. The idea is for us to have interesting deals in place but we really concentrate on making good music and our live show."

P: "Everything in the studio is ours, y'know. I win a dollar and I reinvest it in those synths. I save \$5,000 a month from not living in New York and that gets reinvested in the studio too. We just need to keep some money aside to get somebody like Philippe [Zdar] to mix it."

D: "We spend a lot of our own money on Chromeo for sure. I mean if nobody can give us the budget to do a video, then we'll do it ourselves. I think we're still quite big on the Internet and that's still a vitally important echo-chamber for our music so we see the value in investing in it."

Are you returning to the UK this summer?

D: "We've got a couple of different festivals lined up and I'm sure there'll be UK tour in 2011." **FM**

WANT TO KNOW MORE?

Chromeo's latest album *Business Casual* is on sale now. Visit chromeo.net for the latest news and tour dates.



Moog Prodigy

P: "Probably the third synth I bought, it's been with us since the first album. *Woman Friend* is one track that this is used on."

LinnDrum

D: "The snare in *Night By Night* is from this but like the Minimoog, it's so recognisable that we don't use it too much. As soon as you use it you hear all of those classic Prince records."

Yamaha CP70B

P: "This has a particular sound because it has pickups on every string. It's our Michael McDonald and Hall And Oates special! It was used on *Don't Walk Away* and *The Right Type*."

Pee On The Future Of The Funk Lair...

So what happens when you run out of room?

P: "Yeah, that's gonna happen soon but I have the other side of my basement too, so I'll have to open that up. My dream is to get a Yamaha CS80, a Fairlight and all those big ones."

At some point you're going to have to leave the old Cakewalk software, right?

"No, why? Every other program I've tried has latency and too many other things. I have one soundcard, one MIDI card and it works. I don't need all the other options that the other sequencers have. We have hardware synths, drum machines and the MPC for any sampling..."

Long-term, do you think you'll be mixing and producing the entire Chromeo album?

"I'm not really good at it. It's not the focus because I don't have outboard gear and I don't really enjoy that process. It sort of sucks the fun out of making the music. My thing is the synths, the old wood and those imperfections..."



What about recent synths?

"I tried the new Novation Ultranova and it's not bad. I mean I really admire the whole movement of plug-ins and keeping synths alive though. The Arturia stuff for instance, it's nothing like the real deal but it's a good replacement."

What about the synths that go beyond recreation and use technology to do new things?

"I have a hard time with these synths because they all end up being very experimental. Most of the sounds that come out of them are weird, trippy and off the wall. You can't get a new simple sound out of them! But, when it's new analogue sounds like the Dave Smith Prophet 08, it's cool. It tries to emulate the Prophet-5 but it doesn't quite get there, but because of that it's a cool new clean analogue sound. It's all on the micro level, like how do the oscillators react to each other, the filter type, how the sync works. You can play me a simple saw wave from the Minimoog, Korg MonoPoly and from the Sequential Circuits Prophet-5 and I'll be able to identify the synths."

"What I'd really like to see in the future is a new technology that actually has a particular sound and way to process digital audio. That Melodyne DNA stuff is pretty insane, and it has a sound of its own because when you process the sound and split it up you're left with this sound that isn't the original instrument, but it's cool in its own way."

Sequential Circuits Pro-One

D: "This is something Pee bought before we started *Business Casual*. This is the bass sound on *Don't Turn The Lights On* and on *Hot Mess* as well. It has MIDI so Pee programmed the line in MIDI then tweaked the portamento afterwards live."

Sequential Circuits T8

P: "This is the big brother of all the Sequential Circuits in the studio, but as you can see from the keys, it has a design flaw which makes the keybed mess up, so I need to get it fixed."

Oberheim OB-X

P: "This is 'the Prince synth' with such a massive sound. This particular one was one of a few OB-X's that used to belong to D-Train too."

SYNTH HEAVEN

The List Goes On...



> Roland Juno-106

P: "This is great for bass as it's stereo – you can try and recreate Moog basses but you get a different sound. It's one of the most-used because it's so flexible."



> Roland VP-330

D: "This is another synth Pee got just before *Business Casual* and we used the vocoder on *Hot Mess*, but the 'Human Voice' patch is awesome. That patch is on the chorus of *Hot Mess* and the intro to *I'm Not Contagious*."



> Korg MonoPoly

P: "This is a bit of a secret weapon for us. I really love how you can emulate a Minimoog with this and it sounds awesome. It's great for those Funk flourishes."



ON THE DVD: Making A Track From Scratch

1



Writing Process

Chromeo discuss exactly how their writing process takes shape from individual early demos to creating the final track.

2



Programming

Using their antique version of Cakewalk running on a vintage PC, Dave 1 starts constructing the rhythm track.

3



Synths

P-Thugg breaks out some classic synth lines using the Minimoog and squeezes in a little classic vocoder into the mix.

4



Guitars

For the final touch of this off the cuff creation, Dave 1 lays down guitar with another dose of sensual synths from P-Thugg.

CUBASE ESSENTIALS



Mix and Beat Production

in Cubase 5

This month, **Bruce Aisher** takes a look at making the most of rhythm and drum tracks in Cubase, and delves into some unusual processing treatments along the way. Get ready to layer, distort, modulate and sidechain...

Layering kicks Pt 1

1 When it comes to making the most of your rhythm track, for many modern genres, the kick drum is king. While each style may have its own particular necessities and quirks when it comes the sonics of low-end rhythm, there are certain techniques that have equal relevance whatever your bag.

The first rule, whatever the sound, should be to get it right at source (live,

synthesised or sampled). If you don't hit the jackpot this way, then one useful technique that's particularly effective with drums is to try some sound layering.

It is perhaps best to address layering from the perspective of what is missing, and in the case of kick drums, this tends to be either what we shall colloquially call 'boom' or 'crunch'. If your kick drum has lots of low-end, but gets lost in the mix, then try adding a crunchier (more mid-frequency)

THE EXPERT

Bruce Aisher,
producer,
engineer



Bruce has been using Cubase since its arrival on the Atari ST in 1989. He's grown up alongside his favourite piece of software, sharing the ups (and downs) of the professional music world. The two are now inseparable.

oriented layer, and vice versa. When exploring low-end drum layering be aware that timing is important, as variable layer timing can result in all kinds of (unpredictable) disappearing frequency problems (see *Kick Layering Part 2* for more on this).



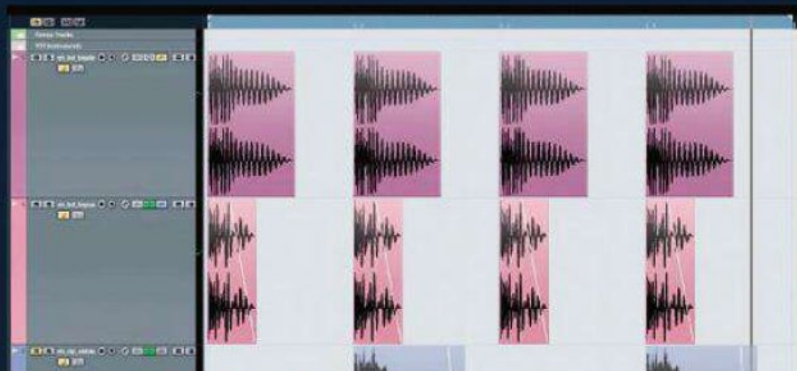
ON THE DVD

> Basic layering kick layering tips.

Layering kicks Pt 2

2 Even if you ensure that your layered kicks play at exactly the same time (every time), you may find that adjusting their relative timing, results in a better sound (and possibly with more low-end – if that's what's required). This can be achieved quite easily by subtly tweaking the 'Track Delay' parameter in the Track Inspector.

Moving in small increments allows you to alter the relative phase of different elements in each sound. This can result in some quite dramatic changes in tonality so use your ears to determine if the changes actually



Adjusting the delay time can dramatically alter the phase relationship of layered kicks

Plug Processing

Some of the Cubase plug-ins that can be work wonders when maximising snares



Layering and Processing Snares

3 If your snare lacks width, then using the MonoToStereo or StereoEnhancer plug-ins might help, but good results can also be achieved by routing the sound to StereoDelay using short (but different) delay times for the right and left channels. Feedback should be low –

increasing it is only really useful for 'special' and obviously treated effects – with some Lo and Hi filtering, and mix slowly increased from about 10% to give the appropriate ambience. The Cloner plug-in, although not at its best on rhythmic elements, can also be pressed into service here.

The flip side to the 'smearing' techniques above, is the occasional

necessity to 'tighten' the attack and release portions of a sound. This is the turn of the very useful EnvelopeShaper.

Try pushing up the Attack setting, bringing down the Release, and then adjusting for a short to medium Length. Remember though that pushing the Attack too high usually results in heavy clipping further down the mix chain, so be careful.

Another great use of the factory plug-ins is to use MultibandCompressor as a dynamic EQ. Try applying heavy compression to only the lower bands, and you should find that far less top-end detail is lost.



ON THE DVD

> Stereo enhancement, envelope shaping and dynamic EQ.



sound better. Particular attention should be paid to the very low-end, as phase cancellation can, in extreme circumstances, remove much of this altogether. To see the effect in action try engaging the channel

Engaging the phase reversal button on one kick channel can be tried if the low-end drops out when layering

'phase' button on one channel of a layered kick combo. This can sometimes result in more pleasing sound, and potential kicks for layering should always be tried and tested with the polarity as normal and as inverted (with the switch in).

Don't forget that tuning also plays a big role here, as if you detune your kick, the sonic balance can change quite dramatically. Try it.



ON THE DVD

> Adjusting the polarity and timing of layered kick drums.

More layering and processing snares

4 Like kick drums, snares can benefit from various layering techniques. Generally, it is worth exploring EQ to shape the frequency balance of your chosen snare first, but if this doesn't yield any positive results then layering can help.

On the subject of EQ, when attempting to brighten a sound, try removing some of the lower mid frequencies as an alternative to boosting the high end, but also be aware that completely removing the lower



Group Processing Pt 1

5 While routing all your drum parts to a Group Channel is a great way of adding some overall tonal shaping, there is plenty of creative fun to be had.

Start by ensuring that all your drums are routed through their own Group Channel, and then try inserting the Distortion plug-in. Something interesting happens

when you distort a full drum mix. The inevitable creation of unusual harmonics takes on an entirely different character when so many frequencies are involved.

One plug-in that works particularly well is Bitcrusher. By slowly decreasing the Depth control and increasing the Sample Divider amount, it is possible to achieve an effect that could be best described as 'gated distortion'. By only

incorporating a small amount of the distortion it's possible to add some grit, and without destroying it completely. If you want to tame the top-end elements of your distorted drums, try the WahWah plug-in with the sidechain enabled to create a dynamic auto-filter effect.



> **Using Bitcrusher to add dirt to your drums.**

frequency elements can reduce 'punch'. It is important to consider the attack and release portions separately when looking at layering sounds such as this, and tailoring each to suit the track. Be careful not to destroy the attack portion of sound by combing it with something similar.

It is perhaps with this in mind that placing a clap sound underneath a snare works so well – claps are characterised by their slightly smeared initial transient. Don't

be afraid to increase the attack time of a layered element, and remember also that shortening the release time of longer snares and claps can help create space in the mix. This also allows you to make more use of shorter reverb programmes (see *Reverb and Rhythm* for more on this).



> **Using EQ and attack/release tweaks to improve snare layering.**

RingModulator is poised and ready to destroy our drum loops

Group Processing Pt 2

6 Having looked at how we can use a Group Channel to mash and destroy drums to create something new, it is worth looking at how bussing your drums can also be used to add authority to your rhythm track in a more transparent way.

Create a group channel, and ensure that all drums apart from the kick and snare are routed through it. Add a Compressor to the Insert rack of the channel, and enable sidechain processing. Now, point the kick and snare to the sidechain of the Compressor using FX Send 8 on each channel. Pushing up the send level on each will increase its influence on the amount of gain reduction on the other drum elements.

By tailoring the settings, it is possible to make your drum track much more authoritative, allowing you to increase the level of general percussive elements, but without smothering the main driving force of both kick and snare. Pushed too far they may lead into cliché territory, and you will need to rebalance some elements when trying this, but the effect remains almost transparent (and with an absence of overt 'pumping') if used with care.



> **Selective sidechain compression to boost your rhythm track.**

Unusual Treatments Pt 1

7 Just because you use ready-rolled sample loops, doesn't mean that you can't make them your own.

We've looked at beat slicing in this column before, but there's plenty you can do to tweak them in purely sonic terms. Distortion, Bitcrushing, Compression and EQ have already had a look-in this month, but despite appearing a bit long in the tooth (in relation to the graphical redesigns of the factory VST3 plug-ins), both the Ringmodulator and Metalizer plug-ins are useful tools. Ring modulation generates new sonic material by adding or subtracting frequencies to every existing frequency in the audio stream being processed.

This tends to result in rather clangorous tones that can, if using simple source material, be a good way of generating





metallic and bell-like tones. However, a drum loop lacks predictability and simplicity in the harmonic stakes, and will often yield harsher results – but this can be a good thing! The Ringmodulator plug-in in Cubase features a simple multi-waveform oscillator with an LFO of which the audio is used, alongside the input stream, for deriving the ‘sum and difference’ (Ring Modulation) signals. The Mix slider is your friend here if you need to tone down the effect.



ON THE DVD

- > Using Ring Modulation to process loops.

Unusual Treatments Pt 2

8 There is further processing fun in store when it comes to treating loops. We've looked elsewhere at the use of the WahWah plug-in under sidechain control as an 'auto-filter'. This can be taken further by Tonic, the so-called 'Analogue Modelling Filter' – another plug-in due a VST3 update and make-over. Built around a resonant multi-mode filter, Tonic has a number of interesting ways in which the filter cutoff can be modulated, the first of which is under control of the input signal level.

In Follow mode the 'Env Mod' section allows you to modulate the cutoff based on the amplitude of the audio, with the Attack and Release controls smoothing the transitions if required. Trigger mode starts the filter envelope cycle each time the audio reaches a particular level, while MIDI mode puts the filter under MIDI note control. Further modulation possibilities are thrown-up with the clock-syncable LFO section that even manages to squeeze in a Step Matrix (sequencer) section.

If the possibilities of modulating your filter under classic sequencer control appeal, then you should also take a look at the **StepFilter** plug-in.



ON THE DVD

- > Using filtering to customise drum loops.

Sidechain processing – again!

9 Sidechain processing is most often referred to when discussing dynamic control, but as we've seen with the WahWah plug-in it can be used in other ways. Another

StepFilter allows step sequencing of cutoff and resonance

technique – and one that predates DAWs – is the use of a Gate plug-in (in sidechain mode) to add additional body to drum sounds. Take the example of a kick drum that lacks bottom-end power, instead of doubling it with another sound you could try adding just the frequencies that are missing.

For this you should create an instrument track (Prologue will do), and start by drawing in a long note played low down on the keyboard. Now add a Gate plug-in in the first Insert slot of the Instrument and enable sidechain mode.

Next, use a free FX send on the Kick track to route audio to the newly created

sidechain input. Adjust the Threshold so that the Gate is triggered on each hit of the kick, and then tweak the envelope so that the tone from Prologue sits well with the kick drum. Experiment with different waveforms and pitches to see which works best in your track.



ON THE DVD

- > Using a sidechain gate and synthesizer to add body to a kick drum.

NEXT ISSUE

Make sure you pick up *FM* next month for more unmissable Cubase tips. **On sale 14th May**

Reverb and Rhythm

10

Reverb processing has been covered many times before in this column, but it does bear some further comment in relation to drums.

As always, avoid longer reverbs unless used as special effect on individual sounds, and if you do this ensure that there is not too much low frequency content to muddy the

mix. A general rule-of-thumb when mixing drums is to avoid reverb on any elements that sit predominantly in the extreme low or high end of the audio spectrum. Look to short Room, Plate or Ambient/Early-Reflection programmes to create space.

Percussive elements such as congas, bongos, cowbells and toms can generally make more use of this (i.e. 'wetter' settings) than snares – this will also help create depth in the mix. It is also worth remembering that better-designed reverbs tend to be more capable of

creating shorter reverbs than some of their cut-price cousins – although convolution plug-ins such as REVerence have helped make this less of an issue.

Non-linear or gated reverb programmes are also worth exploring as they can allow you to maintain the density of larger reverb spaces but without the potentially problematic and muddying tail.



ON THE DVD

- > Using short reverbs to add depth to a rhythmic elements.

Verb Variations

Cubase offers two distinct flavours of reverb in REVerence and RoomWorks



The Science of Vinyl Mastering

What happens when you're done with the mix and ready to cut a record? **Jared Ellison** explains the art and science of mastering for vinyl

It seems that some records just play a little bit brighter or a little clearer than the rest and behind each one of these is a highly skilled mastering engineer.

When it comes time to make a record, an understanding of vinyl mastering can be useful for musicians, mix engineers and truly anyone at a record label since the physical medium of vinyl effects a recording's length, sound, packaging and price. With luck, a well-mastered record will embody that glowing sound of vinyl and be played by DJs, coveted by collectors and enjoyed for years to come.

Mastering engineers have a profound and intuitive understanding of the physics of sound and media and use their tools to bring out the best in a recording, turning raw audio into a finished product. The goal is to match audio fidelity with the limits of a plastic disc. In this article we'll walk through the process of creating a vinyl record, from a microscopic look at the disc itself to the

tools and techniques of a mastering engineer and finally, how records are actually pressed.

Aiming for vinyl

To understand what gives vinyl that special sound we first need to know how a record works – though it may seem obvious, this is where the details count the most. At a basic level, records are etched with a groove spiralling in towards the centre label.

Sound is produced by dragging a diamond tipped needle or stylus through the groove, which translates a vibration into an electronic signal as it wiggles back and forth creating a magnetic field on its gradual path towards the centre. At first, records were cut in mono so that only movement to the left or right of the groove was registered as sound, but since the 1950s, stereo records have been made to include vertical information on either side of the groove as well. It should be no surprise that under a microscope record grooves look very much like the

waveforms on computer music software – in other words, the groove is graph of a soundwave's amplitude over time.

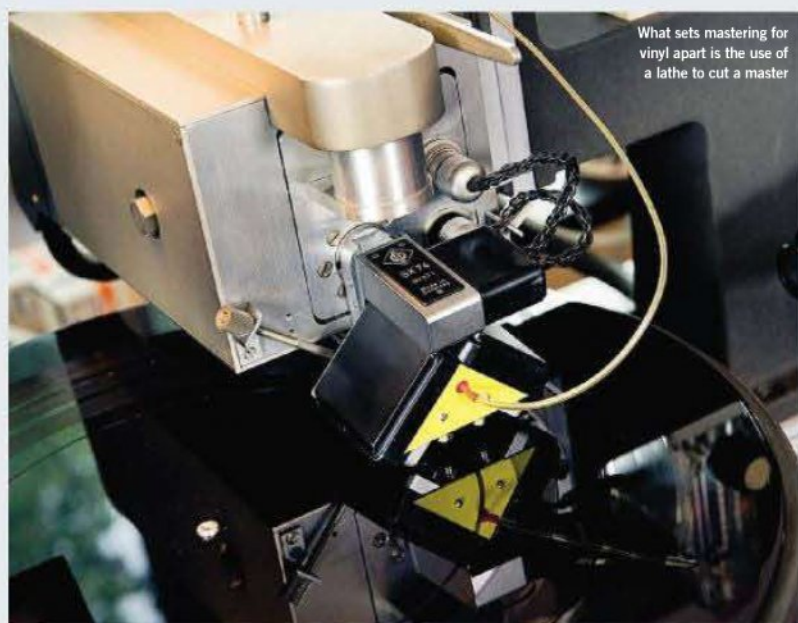
The concept of a groove as the graph of sound over time is essential to the fidelity of a record and the widest, deepest and most detailed grooves sound the best. A mastering engineer must do anything in their power to create a deep and detailed groove and while the size of the groove determines how loud a record plays, the speed is a factor in fidelity as well. When the same recording is etched at both 33rpm and 45rpm, the recording made at 45rpm will have greater detail because it uses more space on the disc for the same amount of music. For ideal sound quality, records could be much larger to accommodate wider and longer grooves but standard 7-, 10- and 12-inch size discs can be made with excellent sound quality and can be already a bit difficult to store if you have enough of them.

If you're dedicated to vinyl, it's good to have some idea what size record you would like to put out as early as the songwriting process because the length of your recordings will determine both format and sound quality. As a relic of the time when 45 singles ruled the radio, Pop songs around three minutes long are the perfect length for a 7-inch single at 45rpms. Full-length albums on 12-inch 33rpm records accommodate closer to 15 minutes per side and Dance music is often released on 12-inch records at 45rpm, a format that sounds huge and is easy for DJs to handle. In each case, the recording must not be too long or the sound quality will suffer and each format costs a different amount to manufacture so it is key to plan ahead when vinyl is the medium of choice. Before bringing a finished mix down to the mastering house, there is one last thing to consider, the order of songs.

As the groove of a record approaches the centre label, the angle of rotation increases with each turn and this has a slight effect in fidelity and high-frequency response. Most listeners may never notice, but the edge of each side has a bit more punch and high end so it's a good idea to put your best songs there for maximum effect.

Audio mastering

Regardless of how a recording will be released, the job of a mastering engineer is ultimately the same: fine tuning the detail of a finished mix so that it sounds its best through different listening environments, stereo equipment and when played among other recordings. Although some engineers approach mastering for vinyl differently than mastering for CDs and digital media, the tools are similar – acoustically precise studios and monitors, high end digital-to-



What sets mastering for vinyl apart is the use of a lathe to cut a master

analogue converters, equalisers, compressors and limiting amplifiers.

Using this equipment, a mastering engineer aims to balance the recordings in terms of frequency response, dynamics, stereo imaging and in less scientific terms, to get the record sounding nice and loud. The mastering process is a mix of craft and science and with the popularity of home recording, it can be invaluable to get a professional set of ears involved with the last stage of the record.

Plus, when the music is going on vinyl, the audio must be transferred to master acetate at some point and hiring a mastering engineer who cuts vinyl often yields better results than having the record plant transfer the music for you.

Cutting the master

At the end of the day, what sets mastering for vinyl apart is the use of a lathe to cut a master record. For most mastering houses the lathe is both a significant investment and point of pride. At one point a handful of companies made these large and exactly precise machines but Neumann, the German audio and microphone company, was among the last to produce new lathes in the early 1990s. The learning curve to use a lathe can be steep and at this level of detail, no two mastering engineers have exactly the same sound.

The basic premise is that a record lathe works like a turntable backwards, instead of playing sounds it inscribes them and while turntables plays records actually made of vinyl, record lathes record into special lacquer-coated aluminium discs known as acetates, dubplates or simply master records. When the audio has been processed to perfection and it's time to cut the master

The biggest culprits are stereo bass and bursts of high end like cymbal sounds

lacquer, the engineer feeds audio to the lathe and inspects the grooves through a looking glass as a sapphire tipped stylus etches the sound.

As mentioned before, the most headroom results from a wide groove but if the grooves are too close the record will skip or get stuck in a loop so the engineer looks for a consistent spiral with no jumps and a bit of space between each cycle so the record plays back consistently. From time to

The RIAA Curve

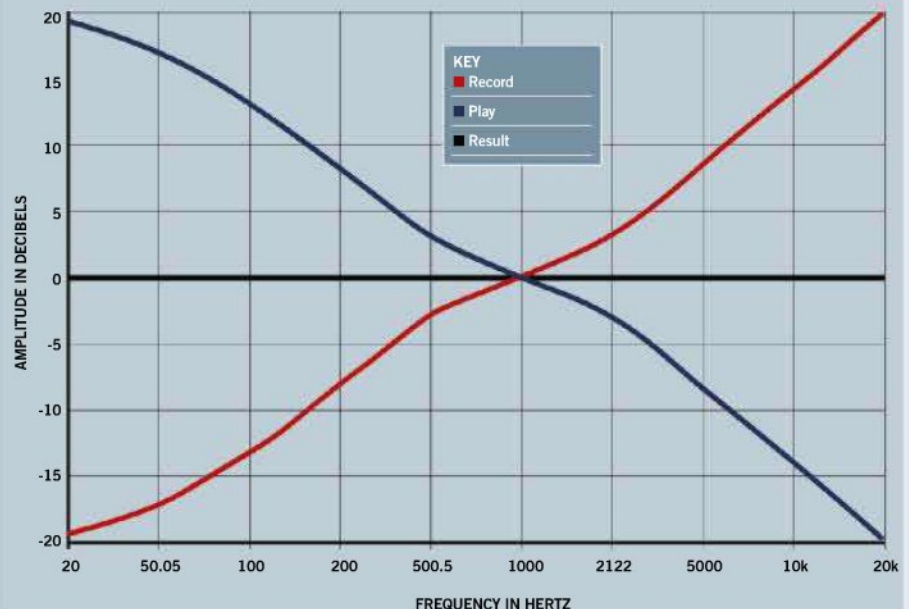
These days, the Recording Industry Association of America is best known for enforcing record copyrights, but back in the early 1950s the RIAA introduced an audio standard that vastly improved the sound of records and opened up a booming music business. The RIAA curve is a standard equalisation applied to

nearly all records allowing them to play longer and with greater headroom and signal to noise ratio. The trick is to roll off bass frequencies and boost highs when cutting a master record and do the reverse during playback.

The payoff comes because low frequencies require a wide groove and more space on the record while

surface debris looks like high frequency information to a turntable stylus. Reducing the low end on the record itself makes space for more revolutions and extra high frequencies cut through the dust. With a proper phono preamp the equalisation evens out leaving the desperate crackle of 78rpm records deep in history.

THE RIAA EQ CURVE



time, the actual audio recording can be enough to cause problems with record playback and in this case a mastering engineer may bring out special tools not used as often for digital mastering. The two biggest culprits are stereo bass and bursts of high end like cymbal sounds towards the centre of a disk. Here the frequencies can be enough to catapult a needle out of the groove either skipping or jumping over some audio information.

For stereo bass, engineers use something called an elliptical equaliser, which sums a stereo mix down to mono below a cutoff frequency, sometimes applying compression as well. For sharp high end they may use a de-esser to reduce the volume or compress just high end "ess" like sounds.

At the record plant

When the mastering engineer is satisfied with the acetate they've cut, it's time to



ON THE DVD

Although it's impossible to reproduce the effects of vinyl mastering without piles of high-end equipment and an actual master acetate record, this set of sound samples will illustrate some of the processing necessary to put an unruly mix down onto a record. Read the description on the DVD for the full lowdown on the audio files.

inscribe a cryptic matrix code onto the inside of the disc and send it off to be pressed. At the record plant technicians use the process of electroplating to create a mold of the master disc.

First, the record is sprayed with silver and submerged in a chemical bath. The disc is then charged with electricity that causes nickel to precipitate on the record's surface. When the process is complete there is a thick and sturdy nickel stamper for pressing the actual vinyl product.

Through and through, vinyl mastering is an incredibly delicate process, and while the actual transfer of audio onto plastic is the most crucial step, every effort must be made along the way from a finished mix to manufacturing to ensure the best sound quality. Go out and experience vinyl mastering for yourself, consider putting out your next record on vinyl or look into what it takes to become a mastering engineer. **FM**

KNOWLEDGE BASE NEXT ISSUE

Stay tuned to *Knowledge Base* for more unmissable studio wisdom and industry insight. **FM240 on sale 12th May**

IN THE STUDIO WITH...

Tomy DeClerque

As part of the phenomenal force of Techno rising from Eastern Europe, DeClerque has become one of the go-to mix engineers, remixers and producers. **Chris Barker** asks the questions, and won't Techno for an answer...

DeClerque experienced his first taste of success as part of the duo Tomy Or Zox, with the single *My Desire*, but it was the follow up *Music Makes Me Happy* that teetered DeClerque even further towards greatness.

Recently he's been mixing down the stems for fellow Slovenian Umek among collaborative and remix work for his 1605 label. If you've heard Umek's Beatport number-one smash *OMGWTF* or the collaboration, *Original Challenge*, then you've heard Tomy's signature production touch. When it comes to knowing how to make the thundering, rolling low-end of Techno really smash it in the club, DeClerque is the man with the knowledge. *FM* caught up with him at his studio to find out more.

FM: How did producing start for you?

Tomy DeClerque: "*My Desire* was a starting point really, I didn't really know about making music. I didn't know about harmony or structure then. But my partner in the duo, Zox, he was more musical at that time. As we moved on I went the more technical route, getting interested in the gear and the studio side."

Were you working at this point?

"I was working at the local radio station with Zox and when he left, we stopped working together on music too."

Did *My Desire* make you much money?

"Not much really, but it gave us enough encouragement to keep going. It was a big success in Russia and we toured Russia, which was crazy. It was a glimpse of what it could be like to do this all the time, y'know? To tour, meet new people, get fresh ideas and come back to the studio to work on them. But we had no management so it was confusing to whose responsibility it was to help us tour."

"We were just waiting in the studio for someone to get in touch with the label or with us. Of course, it was much more difficult back then to communicate directly. Now, you have Facebook, MySpace, Twitter and all the other ways to quickly get in touch."

You went solo?

"I started to build up my studio and focussed on becoming more of a sound engineer."

But there was a bigger track after *My Desire*, right?

"Yes, after *My Desire* we had the track *Music Makes Me Happy*. This was actually quite amazing as it was the first time I used Pro Tools."

What gear was *My Desire* made with?

"With a sampler and a cut-down eight track version of Cubase. A friend of mine told me try Pro Tools because at that time they had a free eight-track version available. I remember I was using my Soundblaster soundcard in my computer and I just fell in love with the Pro Tools sound."

"The same loops in the other software just didn't sound the same. So from then on, I've just always used Pro Tools."

So *Music Makes Me Happy* was made quite fast?

"What happened with *Music Makes Me Happy* was one day Zox came in to the radio station, to read the news. I was working with the this track and Zox just began singing the hook over it straight away. So later that evening we recorded the vocals, vocoded them, edited the track and at four in the morning drove to the record label in Bologna, Italy with the track and told them that we think we have another hit."

"It did pretty well around the world and went in the top 80 in the UK Dance charts, so we were very happy. It felt like the track was a bit like a track of now, but done back then. It was commercial, but still quite clubby."

Have you thought about re-releasing it and bringing it up to date?

"I thought about it, but I think I prefer to focus on making new music. I don't know if people even remember me from that time. Most DJs and producers I meet, rarely realise it was a track I was involved in."

But you don't hide it?

"No, and I feel really sorry for the DJs who try to hide the stuff that they've done in the past. Yes, I

underground Italian radio stations playing Electronic music, so we would be there at two in the morning, moving the antenna around trying to pick these radio stations up. Most of the radio stations in Slovenia are really bad, I think I heard Tina Turner's *Simply The Best* about three times the other day." [laughs]

Was it difficult to get the equipment?

"A lot of stuff I bought from eBay, back when eBay had sort of just started. But then, Slovenia wasn't

few bits of equipment now though that give you that analogue feel though in a digital environment. Native Instruments Maschine is one for me that I think does this very well."

So you like both analogue and digital?

"Of course, I love the one-click save with digital but it all depends on what your end goal is."

When you use the UAD plug-ins, it must tempt you to get the original hardware.

"It does, but, the main thing for me is that if I have all the settings for one song on the hardware then it's a real pain to change the hardware dials to work on another song."

Why are you running Pro Tools on Windows XP?

"The funny thing is that people keep telling me that you need a Mac to be able to make professional music. Maybe back in the '90s this was true because Pro Tools was a unique product that only worked on Mac. But it's not the computer that makes the music – it's the soundcard and the software. I crashed my MacBook using Ableton, I crashed the Windows machine with Pro Tools. It's software compatibility, not what is powering it."

Are you focussed on sticking to producing Techno?

"Well I don't really consider the style I am making – I just go with the flow. Whatever gives me a good feeling when I am producing it."

We would be there at two in the morning, moving the antenna around trying to pick these radio stations up

made a commercial track and I learned something from that and it was part of my evolution in the music business."

What was the scene in Slovenia like at the time?

"It was OK, but you really had to make it outside of Slovenia before anyone here takes you seriously."

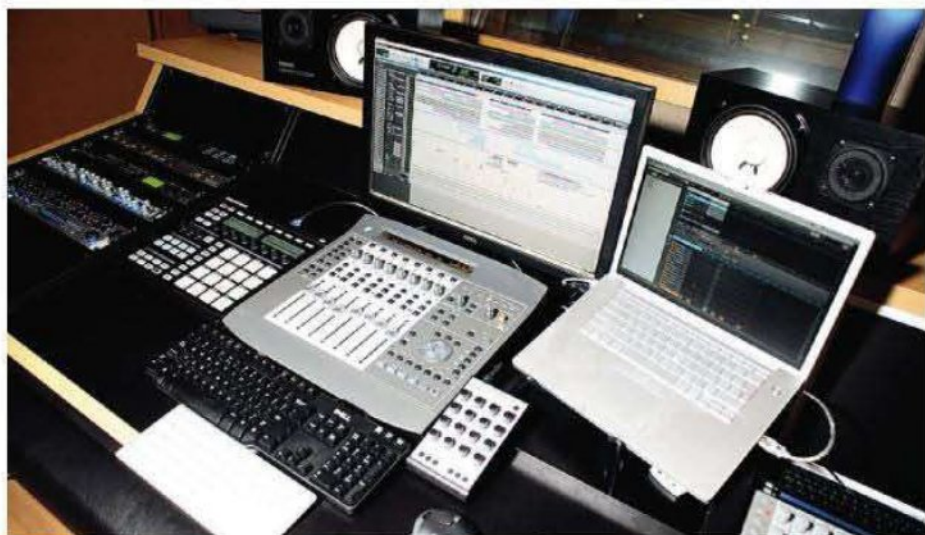
Do you think being from Slovenia gives you a different sound?

"Of course, every country has a different sound because of their culture. I mean, if I wasn't here on the coast I wouldn't have had the influence from Italian radio. There were of course many

even on the map for shipping, so you would have to email the guy and ask him to send it specially. You were always wondering if anything was actually going to show up. Other than that you could go across the border to Germany or Italy."

Your studio is packed full of hardware but little of it was used when we shot the video today.

"I know but it's hard to sell it when it cost so many thousands of Euros for the equipment. I'm thinking of making a small place with all the analogue gear in and no computers at all. Then I can use this studio for a different approach and even if I go there for a couple of hours a week, it could be good. There are



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Creativity First

How did your musical relationship with Umek?

"I was focusing on my own productions and some of the tracks went to Umek. He played them out and liked the tracks. Then when he was doing his album he wanted to try something different so he asked me to be more of a sound engineer. He completely produced all the tracks, and then sent me the stems and I mixed and mastered those in my studio. Umek has now reached a point in his career where he doesn't have as much time to spend in the studio, and it's natural to get someone to help with the process of engineering so he has more time to create the actual music."

What's the plan going forward?

"We are getting a lot of remix requests, but we need to make sure that it's for a good label or a good artist. The real labels show respect for your production by treating you properly. When Tocadisco asked me to do a remix for his label, he paid and he's a big DJ, so being on his label is a privilege. It's important now that I choose the right labels to work with."

And what's your advice to other producers?

"First thing is make sure you get informed about everything. Somebody asked for me to do a remix recently and they said, 'if I did the remix they would spend a lot of money on promotion and even buy a banner on Beatport'. Well, it's impossible to buy a banner on Beatport, so immediately I knew they were amateurs. Do your homework and research this stuff. I think all the young producers now are rushing. They want the level of success that say someone like Umek has in one year, when it's taken Umek 15 years to get there."

But their impatience is because there are many successful young guys already, no?

"Yeah, but you have to grow with the music, even if you have the success you have to adapt. I've seen guys who get their track out, but don't have anything to follow it with."

What about remixing? Are you mainly remixing within your genre?

"The remixes are mostly from the Techno or Tech House scene, usually because they want to give a track a different twist. Sometimes I wonder how useful it is to have 10 different Techno versions of the same track though."

Is it difficult to remix Techno into Techno again?

"No, I have the parts, put them in Pro Tools and the Transfuser plug-in to manipulate the loops and then quickly I will have another idea for the remix."

It must be easy to end up with something that sounds nothing like the original?

"It is, but that is not what I aim for. I really don't like it when there is no reference to the original version. You hear remixes where there's just one hi-hat or something from the original! For me I think it is vital to take the main elements – the important parts of the original – and work with them."

SOFTWARE

The Pick of Tomy's Plugs



> UAD Plug-ins

"I found that the combination of Pro Tools HD and UAD plug-ins on the master channel does wonders. UAD emulations are fantastic in sound... sometimes even better than the original hardware. Like Fatso Senior – just amazing"



> Boom

"The original drum machine in Pro Tools. All my main beats are made on it – a simple kick, snare and hi-hat, all tuned right sounds great from the start."



> Transfuser

"It's only for Pro Tools. Lots of people wanted to switch to Pro Tools just because of that plug-in once I showed them what is capable of. You can do marvels with loops or even simple one shot sounds... I prefer to work without the mouse than without Transfuser"



> Hybrid

"Once again only Pro Tools. I got to know this plug inside out and 90% of my sounds are created in it."

Apple Laptop

"This is always with me... I have a lot of music on it. Sometimes I just listen to tracks while I'm working on mine and also to go to Loopmasters and SoundsToSample to check and buy new samples."

NI Maschine

"To add even more interest to groove loops. You just start tweaking and you get great results. I also use it for my live setup to add stuff in my DJ set."

Mixing and Mastering with Tomy DeClerque

"The first thing is you have to do is listen to the whole song and decide what it is you want to bring out. Try and remember that your ears get tired very quickly. It's very easy to misinterpret something sounding good, with something sounding different. Try to take regular breaks because you'll pump the high frequencies and think it sounds better, but after a break you'll hear that the highs are too much and it was just the change in sound that made you think that it sounded better. Also, louder doesn't always mean good, you can pump those mid-frequencies but you will eventual lose that thick bass."



Yamaha CS1x

"One of my first synths. Underneath it is a Fender Rhodes. I have five different Rhodes plug-ins but this still sounds best."

M-Audio Axiom 25

"A handy keyboard if something must be played but 99% of the time, it's not by me."

DJ Booth

"My DJ booth where I record my monthly show 'My Chart' and do first test of the tracks mixing them with others."

Roland Juno-106

"My Juno-106 needs to be fixed. I think it's a classic – every Electronic music producer should at least have a photo of it in their studio."



ON THE DVD: Tomy's Studio Techniques

1



Pro Tools

Pro Tools is at the heart of Tomy's studio – watch as he takes you through the making of his track *Unknown*.

2



Mastering

Tomy takes you through the selection of plug-ins used in his mastering chain with a full before and after.

3



Track from Scratch

Using the Pro Tools native Boom drum synth and Transfuser virtual instrument Tomy puts together a basic track.

What's the next stage with your studio?

"I want to expand my Pro Tools HD rig with another card and I'm also looking to get a few more production plug-ins. Maybe get some more drum machines or something that twists the way I work. I realised when I worked a bit with Ableton Live, I was doing things in a different way and it keeps things interesting and inspiring."

So you buy gear for inspiration?

"Yeah and buy sample DVDs or downloads. I spend about 150 Euros a month on samples alone. I use the FM samples too and I actually discovered the Loopmasters and the SoundsToSample websites from *Future Music*. My tip to new producers is to check out all the other genres, don't just look at the Techno samples if you make Techno music. If you try and make music that is like the music you hear on Beatport, you are already making old music."

"Yes go and copy the tracks you like to learn the processes and the tricks but then you must go and try your own style after. Go in the studio, do your best and if it is good things will happen. If you have a track you truly believe in, send it to the right labels. If you don't hear no, then there's still a chance. But labels are busy so you must be patient. Really focus on getting it to the right label, because if you send the wrong style of track to the wrong label, then you could find yourself ignored for future releases." **FM**

WANT TO KNOW MORE?

For more info and for a list of Tomy's upcoming DJ dates, visit his MySpace at MySpace.com/tomydeclerque

Layering Bass Sounds with Tomy DeClerque

"We all know that the bass frequencies play an essential part in all forms of club music, as this is the element of a track that will really make the dancefloor move. In this

tutorial, I'll show you my method for getting all the power and dynamics you need in a good bassline by separating it on to different channels."



ON THE DVD

> "This example starts with a simple groove loop with some low percussion."

Then there is a classical bassline with one bass synth followed by each part of spliced bassline. Then at the end, all three bass sounds together."

1



Tuning Kicks

"For a good low end, it's very important to tune the kick and make it the right length or decay. Another crucial thing to make a low end work well is to use the same kick drum for sidechaining the bass. This way the envelope of the kick drum will influence the envelope of sidechain and blend them nicely."

2



Splitting Up Your Bassline

"Instead of using one sound for the bassline, take it apart and use different presets for each note of bassline loop. You will get even better results if you use a different synth for each note. Add some low percussion sounds and you will get a interesting groovy low frequency pattern."

3



Bass Treatment

"At this point, it's very important to mix everything right. As each note of the bassline has its own channel you can treat them as separate sound and apply different EQ, dynamics or even lo-fi or ring modulation effects. Also, stereo delay set at 33ms with wide spread and no feedback or a small reverb can work wonders."

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*Note that plug-ins pictured above are sold separately and are not included with MASCHINE.

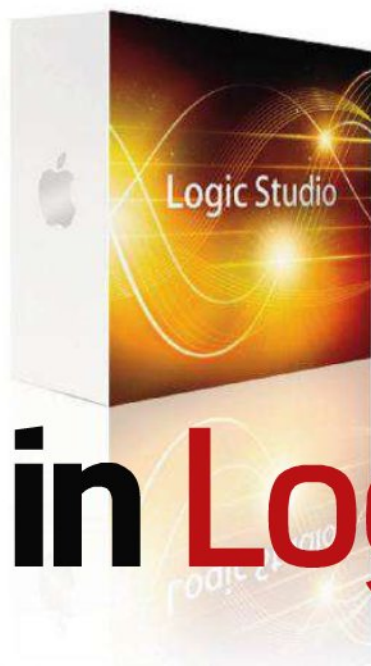


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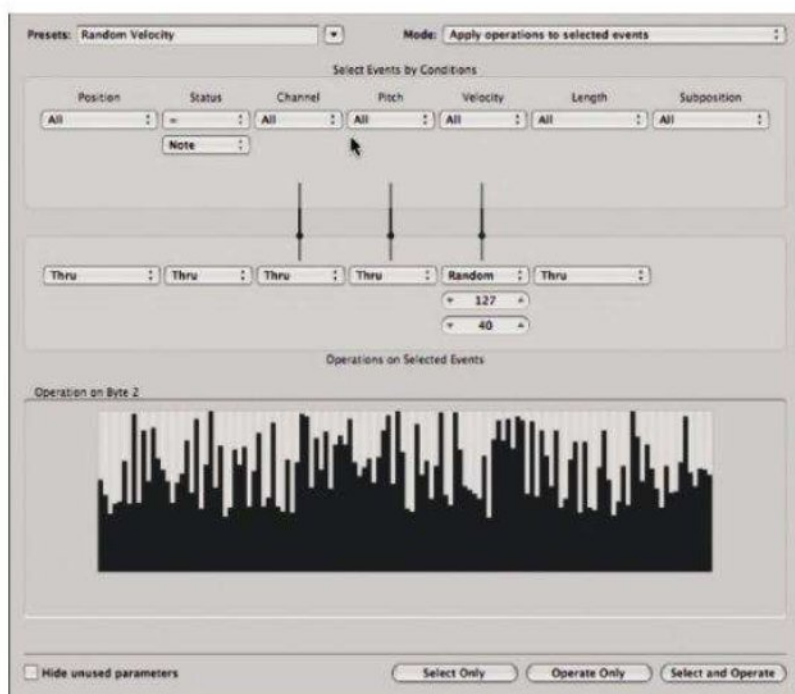
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LOGIC ESSENTIALS



MIDI Transform in Logic 9

The Transform window is designed to alter MIDI regions within your productions. Whether you're looking to tame velocity, get busy with CCs, or leave pitch and velocity to chance, there's something here for you. **Jono Buchanan** reveals all...



Don't be put off by the rather daunting GUI of the Transform window

THE EXPERT

Jono Buchanan
composer,
producer



Jono has been working in partnership with Logic for over 10 years. Their relationship is like a couple riding a tandem – Logic's up the front, sweating hard and setting the pace and Jono sits behind, creatively freewheeling...

For all of the pyrotechnics available within Logic 9 to process audio, particularly with Flex Editing techniques employed, it's easy to forget that MIDI instruments regularly play an active role in most productions Logic users put together.

Logic still contains a fairly unrivaled set of synths, a sampler, a drum machine and assorted other sound-making tools, to say nothing of the third-party options out there for those with a budget, all of which means playing instruments and editing MIDI data is familiar to all but the most audio-driven Logic users.

Manipulating MIDI

To support this activity, Logic's assorted editors allow you to 'get at' the MIDI notes you record in a number of ways – the Score editor allows for easy editing of pitches, for instance, while the Piano Roll display goes further, letting you change pitch easily again, as well as the option to drag note positions around, extend the length of

Algorithms Explored

Building your own Transform sets can be fantastically powerful and work starts in the top-right hand corner, where you can choose the Mode to determine which events will be Transformed. You can choose all selected events, apply operations to those selected and simultaneously delete the rest, simply delete the events you've selected or copy events before applying operations.

The Presets menu either lets you choose a pre-made Transform parameter set or tweak one close to the operations you have planned. Thereafter, you can decide which of the following categories to choose within your Transformations: Position (determining the time position of the events), Status (the type of event), Channel (the MIDI channel(s) you're affecting), Data Byte 1/Pitch (the first data byte or pitch, depending on whether you're transforming data or notes), Data Byte 2/Velosity (the same but data or velocity), Length (of event or note), Subposition (the position of the note within a bar).

Within these columns, you'll find Selection Conditions which you can decide upon, your choices here dictating where

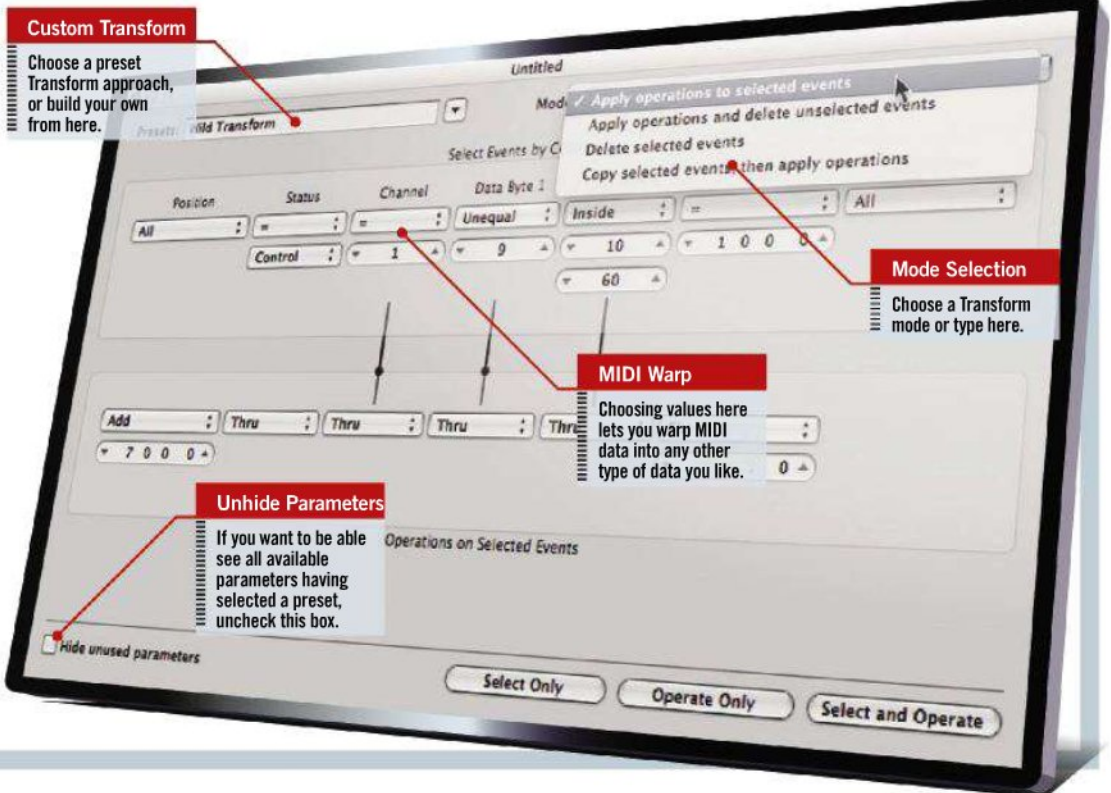
and what types of changes will take place. For instance, the '=' option works by transforming events which are equal to whatever comes next. So, suppose you wanted to transform all C1 notes within a MIDI drum part to B1 (to select a different kick drum for

instance), you'd select '=' and then C1 as your target. You could then select other parameters to drop this targeted value by one semi-tone.

Having targeted the group of values you want to Transform, the need to define exactly what you want to do comes next.

Again, options dictate the flow of your Transformations and a number of options are provided. Firstly, 'Thru' leaves events unaltered and this is the default state when you build a Transform window from scratch, whereas 'Fix' changes events and allows you to choose the

type of MIDI to be Transformed (Fader, note, poly pressure, control change, channel pressure etc). Lastly, a whole set of Event Parameters are offered to specifically determine how your MIDI data is to be altered. Read all about these in the *Parameter Magic* box.



notes by dragging out their bottom-left and right-hand corners and, via the Velocity tool, to change velocities too.

However, when it comes to transforming entire stretches of MIDI data in a range of ways, the Transform window can be a game-changer and can allow, with more extreme settings, the kind of tricks that can radically enhance the productions you work on. As the Transform window appears, at first glance, fairly complicated, it's regularly overlooked by even seasoned Logic users, who often unknowingly find themselves taking much longer to carry out MIDI edit procedures than they really need to – tasks that the Transform window can rattle through in seconds.

So this month's tips are aimed at lifting the lid on some of those capabilities in the hope that they'll inspire you to use them at the production stage.

Algorithmically unchallenged

To get started with the Transform window, it's often best to create a MIDI region, then



ON THE DVD

1. Piano Reverse pitch: An eight-bar piano part has its pitches inverted around a C3 'pivot'.

2. Random Velocity: The Transform window randomises velocity second time around, which is routed to Detune in the ES2. Accordingly, a different detune value is attributed to each note.

3. Halftime Loop: First, an audio file, then its result converted to a new sampler instrument and 'half-timed'. Each slice is shorter

open it in the Piano Roll display before selecting the notes you wish to transform in some way. To help you kick-start your activities, there is a list of Transform presets and the advantage of starting with

When transforming entire stretches of MIDI, Transform can be a game-changer

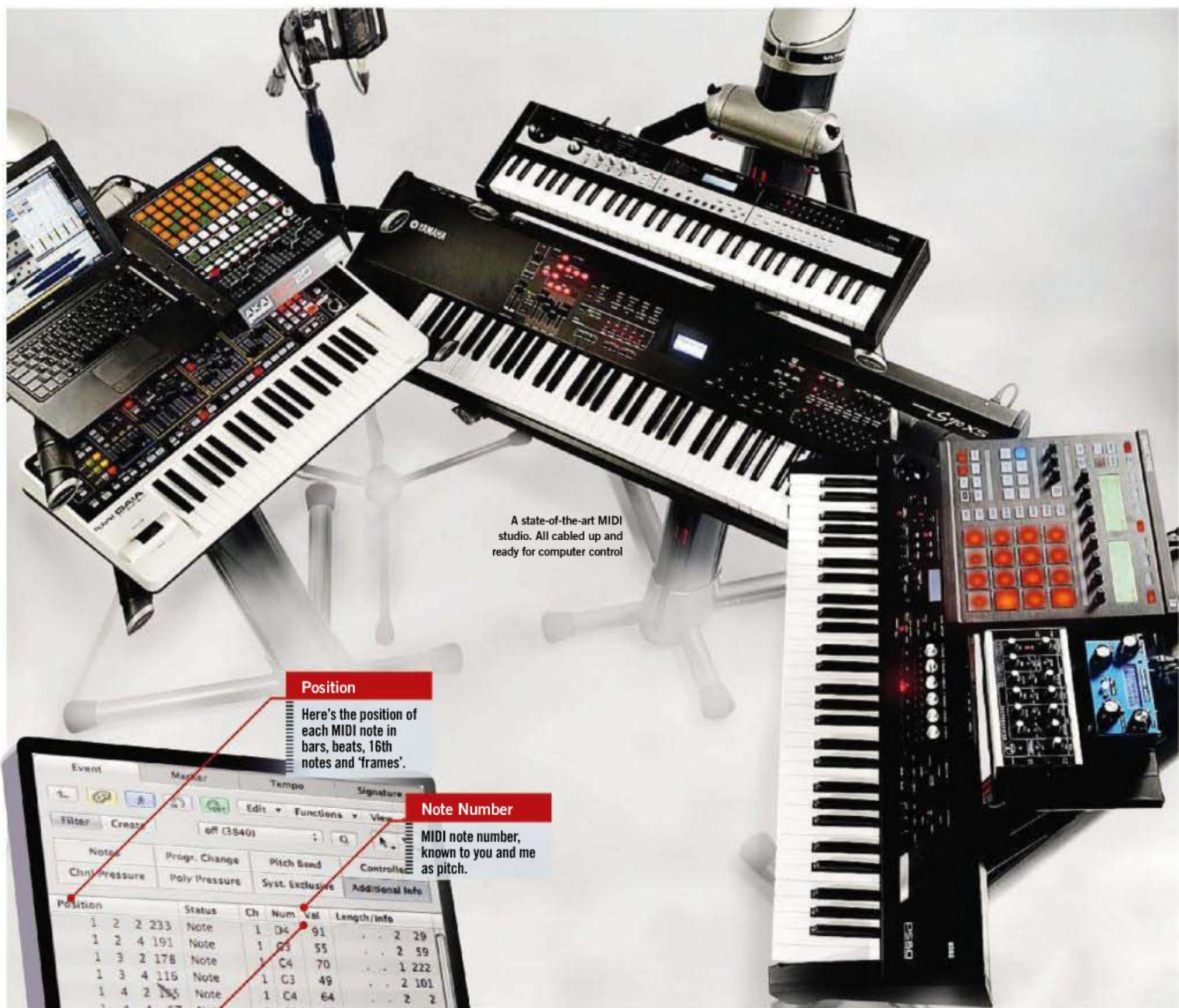
these is clear if you're new to this way of working – firstly they'll allow you to process batches of MIDI notes without having to configure the window fully yourself and secondly, they'll help you get a handle on how the Transform window sets about doing its work. Select the 'Random Velocity' preset from the drop-down menu in the top

left-hand corner for starters. What you'll notice is that only a few parameters are active and that they're immediately understandable. The 'Status' tab contains an equals sign ('=') below which lies 'Note'

with both of these printed on drop-down menus. Immediately this tells us that we're about to change Note Status and that other options are available should we wish to deviate from the preset's path.

Information for the Channel and Pitch headers is empty as you

might expect – after all, randomly changing velocity doesn't require pitch change or channel change either. In the Velocity column, there is activity and this is easily understood too. The first drop-down says 'Random' confirming that values are to be randomised, while the values below say 127 in the top box and 40 in the bottom



A state-of-the-art MIDI studio. All cabled up and ready for computer control

Position

Here's the position of each MIDI note in bars, beats, 16th notes and 'frames'.

Note Number

MIDI note number, known to you and me as pitch.

Velocity

Each notes velocity is listed here.

Length

Note length, with the same four value columns as 'Position'.

The Event Editor

As a technology, MIDI has existed for 30 years and has changed very little in that time. It's a rare technological example of lots of companies working together towards a common goal – that of interaction between their products – and the world could perhaps learn the lesson that when co-operation exists, lasting and worthwhile things can be built. A MIDI Note On message is at the core of any single note you record from your keyboard controller into Logic (or any other program for that matter) and its power comes from the fact that its components are stored as separate pieces of information, meaning that each can be manipulated independently. First comes the Note Number, more commonly

referred to as pitch with key 60 acting as middle C. Next comes Velocity, a 0 to 127 measure of how strongly you've played a note. Next is Gate Time – how long a note is held down for with a value calculated as your note is released and presented as bars, beats, 16th notes and frames (fractions of a semi-quaver).

Lastly, these same four divisions are used to calculate the Song Position position of each of the notes in your track. Many of Logic's Editors allow you to change several of these parameters in different ways but if you want the full forensic view to allow for microscopic editing of each of these four details, it'll be the Event Editor you want, found under the List button.

Map Making

The final option for Transformation involves using the map, the graphical grid that appears at the bottom of the Transform window. This will only show if Map is selected in one or more of the Operations pop-up menus at the top. When this happens, each vertical bar of the map represents a specific MIDI value, which can then be changed or 'mapped' to a different value. How the Transformation takes place is determined by the values above. For instance, each bar could represent a MIDI note value such as

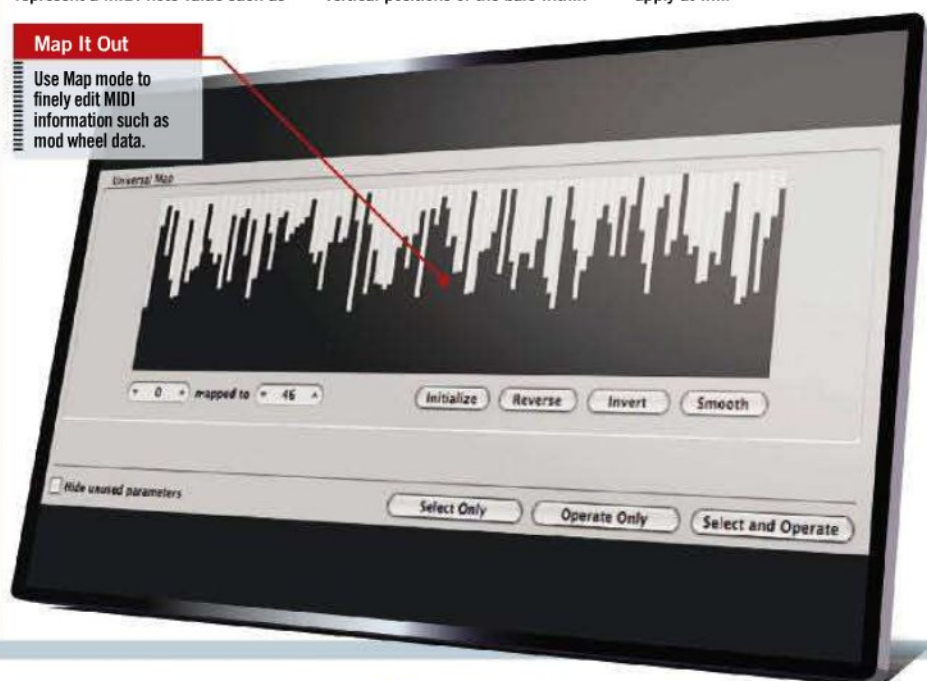
pitch or velocity but could equally represent a specific MIDI controller number and its values. The specific value (such as 60 to represent middle C) can then be Transformed as per the values below, as you'll see the number in the left-hand window below the graphical map represents the original value which can then be mapped to the value in the right-hand window.

Values can either be mapped in these windows or changed directly and graphically by changing the vertical positions of the bars within

the map itself. This can be used in a variety of contexts – it provides an easy way to apply wholesale transpositions, for instance, or quickly allows you to pick up mod wheel data and make all of it higher or lower in value to increase or decrease its effect. How the map works is determined by the options above as the Map doesn't concern itself with what type of data it is transforming – it's effectively a graphical way to crunch numbers which you can then apply at will.

Map It Out

Use Map mode to finely edit MIDI information such as mod wheel data.



one. From this, we can deduce that rather than fully randomising velocity across the full 0 to 127 range, this preset does so between values of 40 and 127, the exclusion of really low velocities set to ensure that no notes are rendered inaudible by having values which are too low.

The graphic at the bottom displays a rough graph of how your activity will translate to the velocities in your sequence and this gives you a chance to experiment with alternative parameters. For instance, select 'Add' from the upper drop-down in the Velocity menu and you'll find only a single panel is available below, allowing you to select the amount of velocity units you want to add to those currently assigned within your MIDI region.

The full monty

If that makes sense, extrapolating out to understand the possibilities of the other functions in the Transform window doesn't involve a huge number of steps but in order to have access to these, having selected a preset, uncheck the 'Hide Unused



ON THE DVD

via Envelope Decay and delay is added.

4. Double-time Loop: The same effect with the loop at double-speed.

5. Crescendo: A 909 snare roll is brought into time courtesy of the Crescendo preset, which applies an increasing velocity.

6. Humanise: This loop is dull with identical velocities and quantise. The Humanise Transformer shifts positions and velocities to produce a less static result.

Parameters' box in the bottom-left hand corner of the Transform window.

This makes all options available, allowing you access to a much wider range of commands. It's also best to do this having selected the 'Create Initialised User Set' option from the bottom of the preset drop-down to ensure you don't over-write a useful preset – as soon as you've selected this option, you can rename it by typing a new name in the relevant panel at the top.

Check out the box on the right for a full explanation of many of the Transform window's options, while the DVD contains content manipulated exclusively using this window. Familiarise yourself with the possibilities here and your productions can develop several new levels of sophistication. Make sure you load up the DVD for six tutorial videos on using the Transform Window to its full effect. **FM**

LOGIC TIPS NEXT ISSUE

Jono returns with audio examples next month, lifting the lid on more of Logic's features and functions. **FM240 on sale 12th May**

Parameter Magic

Here are the event parameter options offered to you through the Transform window, with an example of how they work in each case:

Thru: Events are unaltered.

Fix: Fixes all event parameters to the set value. Transform all pitches to play back at B2.

Add: Adds value to the events – turn all velocities up 19 steps.

Sub: The opposite of 'Add' – take mod wheel values down by 48.

Min: Any number lower than that specified here is converted to this value. Take velocities too low up to 50.

Max: Do the opposite, capping upwards pitch bend at 0.

Flip: Turn values upside around a specified pivot. Invert an upwards chromatic scale to play downwards.

Mul: Multiply the value of events – make them play back at half-speed.

Div: Divide the value – double-speed playback ahoy!

Range: Values outside the specified range are replaced by values within – set a velocity range between 60 and 70 and notes too quiet/loud will increase/decrease in volume.

Random: Random values are set within the limits you set.

+Random: Random again but up to a value you specify.

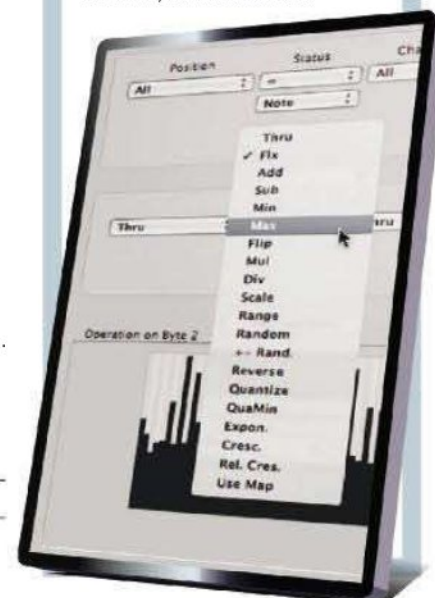
Reverse: Turn notes or values around within a time-period you specify.

Quantise: This one you know, except that it needn't just affect note data.

Expon: The parameter is scaled within outer limits of 0 and 127. Choose this for non-linear velocity fade-ins.

Crescendo: This needs start and end points to work but then does what you would expect.

Rel.Cres: Again requires the 'Inside' position option and then applies a crescendo, but retains the feel of the parameters being replaced, creating a non-linear, more natural result.



Maintaining Your Favourite Vintage Gear

Are you struggling with busted equipment? Or got your eye on a broken eBay bargain? **Jared Ellison** takes apart some vintage gear to show the strategies and tools used to fix and maintain audio electronics. Let's bring those classics back to life!

The problem is all too common: you drag an amp out to a gig and turn it on to find a loud hum, or perhaps you've found an amazing deal on the synthesizer of your dreams but it's half broken. Other musicians can easily change a string, reed or drumhead to keep their instruments going but it takes more knowledge and guts to repair failing electronics. Don't be deterred – understanding how your gear works and what to do when it doesn't can be an invaluable skill for anyone making music and fixing equipment is often only an extension of the problem solving electronic musicians do all the time.

Doing small repairs like fixing cables and cleaning pots saves money and a deeper knowledge of electronics will guide you to the sounds you're after. With a bit of time and research, you may find yourself doing an emergency repair on that busted amp or taking home the broken to nurse back to health.

Working with electronics at a busy recording studio, I see a number of the same issues with equipment again and again and in this article I'll look at a few of the problems that show up in popular vintage gear and the strategies for how to handle them. In any repair, the first step is to pinpoint the problem and wrap your mind around how the device works. Inform yourself with a bit of research – the Internet is an incredible resource for learning about electronics. For older equipment, service manuals with schematics are easy to track down as well datasheets that describe the function of individual components. Once you've got a plan for taking on the repair, you'll need a few tools and parts.

Nothing pays off in time, savings and sanity like good tools, though in a pinch it's often possible to improvise a workaround. Here are some essentials for getting started: screwdrivers in several sizes (both flat and Phillips head), an adjustable wrench and pliers, side cutters for cutting

THE EXPERT

Jared Ellison
artist,
engineer



Jared Ellison is an artist, musician and the in-house tech at DFA Records in New York City. Besides synthesizers, he lives for days on the beach and strawberry rhubarb pie.

and stripping wire, soldering tools including an iron, solder sucker and the solder itself (lead-free please), and tools for measuring electricity, a basic digital multimeter and oscilloscope for more advanced projects. Finding electronic parts is a challenge and even in major cities, you can't expect to find them in a local shop. Thankfully, online catalogues sell just about anything you'll need but double-check your orders, it's easy to buy the wrong parts by accident.

Finally, before you get started taking apart everything you own, a word about safety. Never work on anything that's plugged in and avoid big components including capacitors and transformers, these large parts deal with large power. Anything that plugs into the wall may carry lethal voltages, even after it's unplugged. A multimeter can be used to check that a circuit is free of dangerous voltages but when in doubt, go to a professional, or someone who'll help with your repair. And now, onto the gear!

Roland Space Echo

Although numerous plug-ins and pedals emulate the Space Echo sound, nothing compares to the mechanical charm of real tape and springs.

Tape echoes work by recording anything played into them on a loop of quarter-inch magnetic tape. In the time it takes for sound on the tape to travel from the recording head to one or more playback heads, a delay is created. Space Echoes allow for a variable tape speed and the

playback from several heads at once, with or without reverb – overall it's a wide palate of sounds. Anytime the unit is turned on, the motor spins and pulls the tape loop through its tray and over the tape heads. Gradually, the loop sheds bits of metal oxide onto anything it touches, wearing out heads and leaving a residue on the machine. Over time, sound becomes muddy and echoes come through with a wobble or stop altogether if the tape jams.



Four steps to get that tape echo up and running again:

1 Use some cotton swabs and rubbing alcohol to clean off the tape heads, felt guides and any metal part the tape touches. This will dissolve any tape residue for a clear sound and smoother operation.

2 If echoes are wobbly sounding or the tape is jammed, the pinch roller may need cleaning and lubrication. This is the rubber cylinder that moves the tape. Unscrew the roller and use a bit of machine oil to clean the metal inside but take care not to get any oil on the rubber, as this will make the tape slip.

3 Try using a new tape. When you put in the loop, make sure the tape is threaded properly. The most obvious threading is not always correct and any variation can throw the whole system off.

4 If the echoes coming from one tape head are noticeably quieter, you may need to adjust the height of the head so it's in line with the others. This is best done with a sine wave and oscilloscope – when the calibration is just right the sound is fantastic.



TO MODIFY OR UNMODIFY

Roland SH-101

With an abundance of online tutorials and the recent popularity of circuit bending, modifications to classic equipment are showing up everywhere. In the best cases, mods improve on an already good design by adding extra functionality. On the other hand, it's easy to destroy the value – and functionality – of equipment, so it's crucial to make sure modifications are useful, tasteful and most importantly, installed with care.

In the case of this Roland SH-101, a previous owner added extra jacks, pots and switches to overdrive the VCA, run audio through the synth's filter and use an external LFO. In this instance, each modification was useful but the installation was messy with tangled wiring, cold solder joints and a bizarre choice of knobs. Here are some tips to adding a useful modification to your pride and joy.

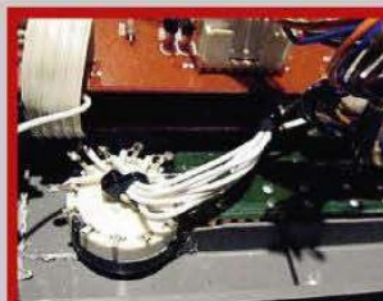
Here are some tips to make your mod a success:

1 Try before you install. It's possible to test out electronic modifications without making permanent changes to the instrument. Alligator clips can be used to test connections before soldering them in place and they make it easy to quickly sort out problems if they pop up. If the mod works and you like how it sounds, work out a way to install it that is both durable and attractive.

2 Make sure your soldering is up to par. Soldering takes practice and bad solder joints can spoil any mod. Try practicing your soldering on an old VCR or other electronic trash and learn to recognise a bad or 'cold' solder joint. Cold solder joints look clumpy and whitish while good connections are round and glossy. When in doubt, the beeping connectivity test on a multimeter is great way to find bad solder joints.

3 Use original parts wherever possible. This is less important with internal parts like pots and resistors but when it comes to knobs and switches, it's worth getting the look right. eBay can be good source for this kind of part and lately some excellent copies of original fittings have shown up as well.

4 Strain relief and colour-coded wiring make modifications sturdy and easy to troubleshoot. Solder joints are great for making electrical connections but physically they're fragile. Whenever possible, settle on a colour scheme for power and ground and run wires in groups securing them with plastic cable ties or heat shrink tubing. When the wires are tugged on, cable ties hold them in place and protect the soldered connections.



WORKING WITH TUBES

Fender Twin Reverb

Tube (or valves) amps have never gone out of style for guitarists after a full and rich tone. In a tube amplifier, transformers and capacitors establish a large potential current and the incoming signal uses the tube to control how much current flows to the output or speakers. In these amps, each tube plays its own role. Small tubes like the 12AX7 are used to amplify and EQ the incoming signal while larger tubes deal with big power and

amplifier's output. Other small tubes can be used for special functions like vibrato and reverb.

This Twin Reverb came in with a major hum and no reverb. As is often the case, it was possible to restore the amp just by swapping in the right tubes. Tube amps deal with hundreds of volts and can be very hazardous even for professionals, so I don't recommend taking them apart. Luckily, much can be achieved just by switching tubes.



Replacing a valve in a Fender Twin Reverb amplifier

1 First, try to figure out what stage of the amp isn't working. Signals move from the input preamp through an equalisation stage to a final output stage. A schematic of the amp can be helpful in this step. If it's available, listen to the amp's line out – this can tell you if the problem is in the preamp or output stage. If there is no sound at all, check that the speaker is hooked up OK.

2 Visually inspect those tubes. In a healthy amp, all the tubes should be lit up, warm and glowing just about the same amount.

3 Sometimes gently tapping the tubes with a pencil while the amp is on can help locate a bad tube. It's OK to hear a bit of the tap come through the speakers but if one tube is particularly loud it may need to go.

4 The next step is to try swapping in some different tubes. Ideally these should be unused but it's a good idea to use tubes from another working amp to figure out which ones need to be replaced. When switching tubes, make sure you unplug the amp and use a cloth to handle the hot and fragile tubes. Different tubes can have a big effect on the amp's sound and more expensive doesn't necessarily mean better – try out a few different ones and see what sound you like best!



WHEN DESIGNS FAIL

Roland Juno-106

The Juno-106 is an incredibly popular six voice analogue poly synth, more than twenty-five years after its release, but around ten years ago people all over the world started to notice that one or more voices in their keyboard suddenly didn't sound right or died completely.

Over time, the proprietary 80017A voice chips Roland used for the filter and VCA of each voice had started to malfunction. It seems that the plastic coating used to

protect the circuit becomes conductive and causes an unpredictable crackling or jittery sound on a single voice. Since the chips were only made by Roland, replacements were expensive and proved just as unreliable.

Thankfully, because the problem became so widespread a couple of excellent solutions have been found. If your Juno has a crackly voice, fear not, the repair is unusual but surprisingly simple.



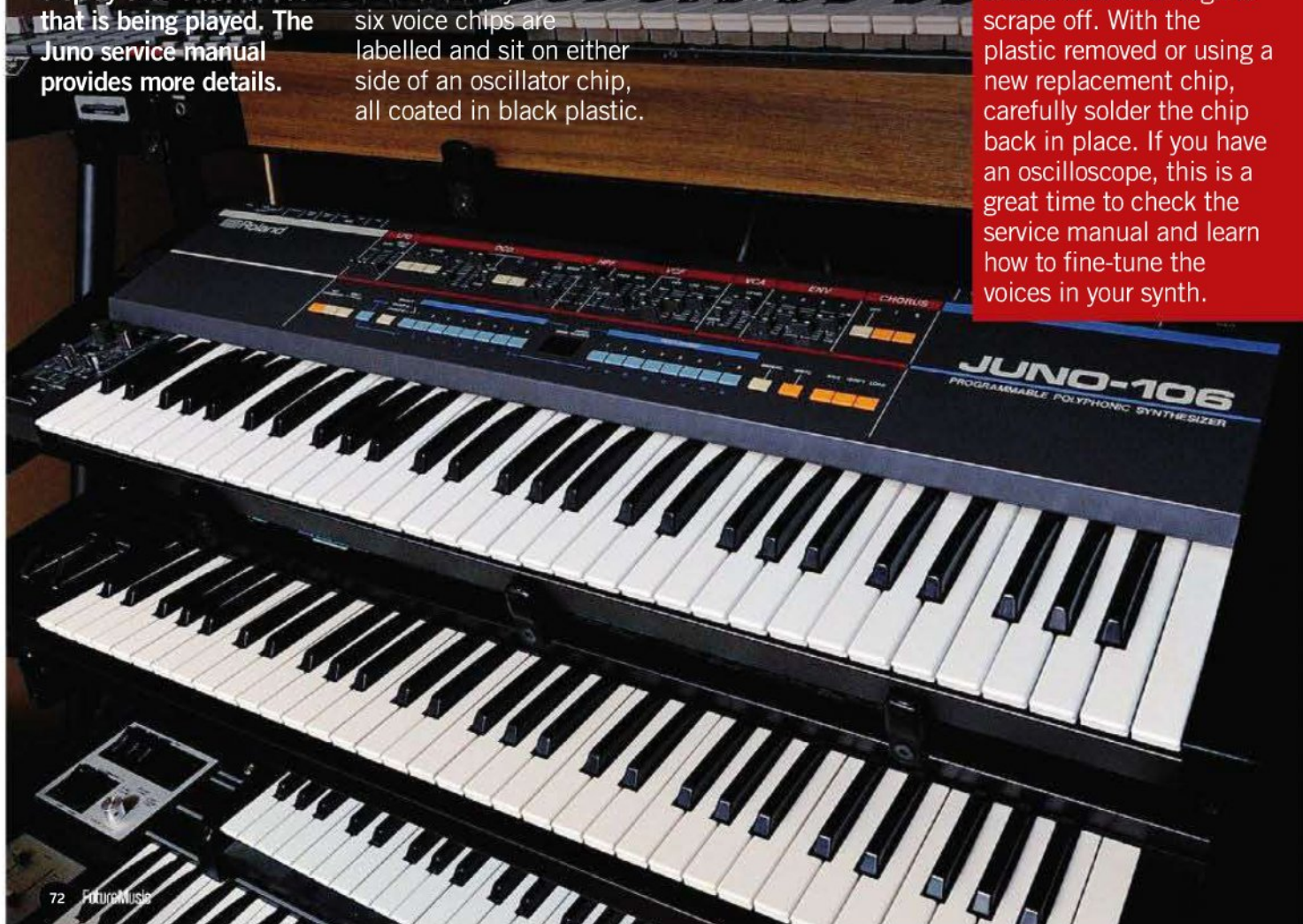
Testing and treating your broken Juno-106 voice chip

1 Figure out which voice is having trouble. Pressing the 'key transpose' button while turning on the keyboard sets it to test mode and by pressing 'poly 2' the screen will display the voice number that is being played. The Juno service manual provides more details.

2 Once you've isolated the bad voice, open the keyboard up by removing screws on the sides and find the voice chips, which stand vertically on the left hand side of the keyboard. The six voice chips are labelled and sit on either side of an oscillator chip, all coated in black plastic.

3 Use a powerful solder sucker to remove the failing voice. This part is most difficult – so work quickly and take care not to break the chip's pins or damage the copper circuit board traces.

4 Either order a new clone chip or remove the plastic coating with acetone. In a well-ventilated area, soak the chip in acetone over night. The next day the plastic should be soft enough to scrape off. With the plastic removed or using a new replacement chip, carefully solder the chip back in place. If you have an oscilloscope, this is a great time to check the service manual and learn how to fine-tune the voices in your synth.



THE WOES OF DIGITAL TROUBLESHOOTING

Roland TR-909

The most difficult repairs can show up when digital circuits run into trouble. Before personal computers and music software were available for making music, drum machines and samplers used rows of individual logic chips for math and programming.

In general, these digital circuits are simple and work quite well but sometimes the smallest problem is enough to bring down the whole system. The Roland TR-909 is

an incredibly popular drum machine that goes hand-in-hand with the TR-808. With a TR-909 I worked on recently, the machine worked just long enough to write a pattern, and then crashed and shut down altogether. By gently disassembling the machine and going through a series of troubleshooting steps I was able to find a mysteriously failing logic chip that was enough to derail the drum machine's computer.



Here are some things you can try for locating problems in a digital circuit

1 Check with a multimeter or oscilloscope to see that each chip is connected to power and ground. Digital chips often run on 5V and by looking up the number on the chip you should be able to find a datasheet to identify power and ground pins, and learn more about the device.

2 Many problems are the result of dirty or broken connectors and old leaking electrolytic caps. Try cleaning them with DeoxIT contact cleaner. Electrolytic caps should be replaced with capacitors of the same value (measured in uF, micro-Farads) and at least the same voltage rating. Note the polarity of the capacitors before you remove them and always discharge caps by grounding each side before working with them.

3 Often problems show up only when the device is tapped or moved around – in this case you know it's mechanical in nature. Look for cold solder joints, tiny bits of stray solder and loose connectors that might be causing short circuits or errors.

4 Sometimes problems come up inside chips themselves and the only way to find out is by removing or replacing them. Chips in sockets are easy to remove but replacements can be very inexpensive. Just be sure to put them in facing the right direction as indicated by a dot or 'U' shape on one end.

The Science Behind OSC

After nearly three decades as the leading control protocol, is the end in finally in sight for humble MIDI? **Greg Scarth** looks to the future

Even if you only own one piece of music hardware, there's a very good chance it's equipped with MIDI. The connection protocol has become so ubiquitous that it's almost impossible to find new synths, controllers or even software that don't support it. However, the sceptics would have us believe that its days are numbered thanks to new protocols arriving on the market.

While such alarmist attitudes are probably unfounded, it seems that there's an increasing demand for something slightly more advanced than the long-established industry standard. In this month's *Knowledge Base* we're looking at Open Sound Control (OSC), one of the protocols

vying to steal MIDI's crown. We'll see what it's all about and why you might expect to hear a lot more over the next few years.

The downsides of MIDI

A discussion of OSC is practically impossible without first understanding why MIDI might not be up to the job for today's electronic musicians. As we saw back in *FM207*, the MIDI protocol which has become an industry standard for transmitting note data, timing signals and controller information between Electronic music hardware and software. It contains no sound signals whatsoever, just the information required to allow pieces of equipment or software to generate and process sounds. For most everyday purposes,

MIDI does a perfectly satisfactory job – it's no surprise that it's been a mainstay of hardware manufacturers and musicians since its arrival in the early 80s. We almost all use it to control synths, get note information into our plug-ins or store patterns in our DAWs and sequencers. However, it's quite possible that you've already run into some of the protocol's limitations if you've tried to do anything more advanced.

The problems mainly stem from the fact that MIDI employs what has now become a slightly outdated approach to data transmission. In the MIDI protocol, messages are sent in real-time down a serial connection and processed the instant they're received by a device. MIDI's 31,250 baud rate (the number of pulses per second in the digital signal) equates to roughly 1,300 messages per second along a given MIDI cable (which may be carrying signals on up to 16 different channels simultaneously). If we quickly move a MIDI control from its minimum to maximum, we generate 127 messages in the space of a fraction of a second. Automate two or three parameters simultaneously and we soon start to approach the limits of the bandwidth.

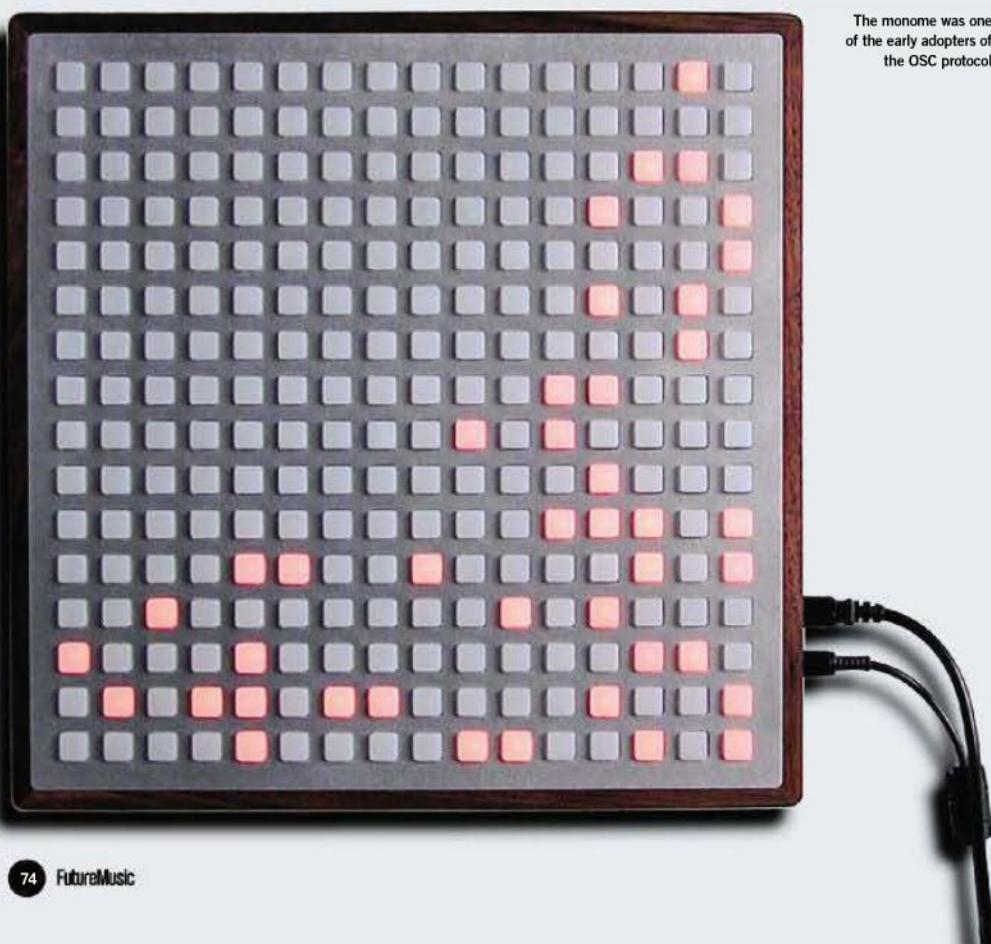
An inherent problem here is that no two messages can be sent synchronously (at precisely the same time), so attempting to send high volumes of messages down a MIDI cable results in timing imprecision. As a result, the more information we attempt to send down a MIDI cable, the less accurate the timing becomes. If you've ever tried to daisy-chain several MIDI devices on the same output from your interface, you've probably experienced the sloppy timing that can arise from it.

A further weakness of the protocol is that the MIDI specification limits the amount of data to be transmitted by allowing just 128 values (0-127) for parameters such as velocity, note value, pitch bend, modulation and so on. Send a MIDI controller value to a synth's filter cutoff frequency or oscillator pitch, gradually adjust the setting and you'll soon hear a digital stepping sound (often referred to as a 'zipper effect') as the controller moves from one discrete value to the next rather than sliding smoothly from one point to another.

Technological advancements

It should go without saying that electronic technology has advanced almost immeasurably in the three decades since MIDI was first developed. High bandwidth data interfaces are now commonplace – everything from USB and FireWire to home wireless networks and broadband internet connections. As a result, the potential for a high bandwidth musical instrument protocol

The monome was one of the early adopters of the OSC protocol



is far greater than it was back in the early '80s. At one point in the mid-1990s, all eyes were on the ZIPI (Zeta Instrument Processor Interface) protocol to replace MIDI altogether, but the technology was never widely adopted despite its improved bandwidth and apparent benefits over the older standard. For the foreseeable future, rumours of MIDI's demise are greatly exaggerated. Plenty of us still use apparently obsolete technology such as CV/gate and DIN sync to control our vintage hardware, so the chances of the music world immediately ditching MIDI for a newer standard seem slim at best. Instead, it seems that there's an increasing demand for a control protocol that can co-exist with MIDI, offering more powerful and flexible options where they're needed but not necessarily attempting to replace the old standard.

While it's always difficult to predict the future of music technology, the most likely contender seems to be Open Sound Control (OSC), a protocol developed (like ZIPI) by researchers at the University of California, Berkeley's Center for New Music and Audio Technologies (CNMAT).

What is OSC?

The Open Sound Control protocol was first developed in the mid-1990s and a full specification was published in 1997, but the majority of widespread interest in OSC has emerged in the last four or five years. Rather than being a rigidly defined transmission format like the original MIDI

The protocol can be implemented into hardware and run alongside MIDI

protocol, OSC messages can be sent over a variety of interfaces. OSC transmits data in packets, a standard approach to networking widely used in local area networks and internet connections. As such, the technology primarily lends itself to connection via local Ethernet and WiFi networks. In the case of OSC, each packet contains either a single message or a bundle of messages, each of which includes an address pattern (the details of where it's being sent), a type tag string (a description of what the message is) and an argument (the data contained in the message, such as a parameter value).

Perhaps the crucial difference between MIDI and OSC is that OSC allows a lot more

TouchOSC

OSC may be taking a while to cross over to the mainstream market, but for iPhone, iPod Touch and iPad owners, there's now a very cheap way of seeing just how versatile the protocol can be. Priced at just £2.99, Hexler's TouchOSC is one of the most fascinating applications of OSC that we've seen to date.

Using Apple's handheld devices as multi-touch control surfaces, the software generates OSC messages which are transmitted wirelessly to your laptop or desktop computer. When used on the larger screen of the iPad, TouchOSC comes remarkably close to the hands-on multitouch control power of expensive dedicated

devices like JazzMutant's Lemur (now discontinued, thanks in no small part to the competition from low-priced touchscreen tablet computers and software like TouchOSC).

The real beauty of the app is how incredibly flexible the whole setup is. When combined with utilities like OSCulator, Pure Data and MIDI Yoke, TouchOSC opens up a whole world of control options for a variety of DAWs, plug-ins and even hardware synths.

If we'd splashed out a couple of grand on a Lemur we might just be regretting it right now. If you already own an iOS device or you're wondering what all the fuss is about, check TouchOSC out at hexler.net



information to be sent between devices. Not only can arguments contain floating point values (as opposed to MIDI's 128 discrete values), but the higher bandwidth means that there's a much higher limit to the number of messages the connection can handle. Whereas MIDI messages are sent in real-time and executed as soon as they're received, OSC packets include time tags that define when the arguments they contain should be implemented. As such, the protocol's timing is inherently far more precise and stable than MIDI.

Most importantly, though, OSC is simply much more versatile and flexible than MIDI.

Networks can be expanded via widely available, cheap Ethernet switches rather than expensive multi-port MIDI interfaces and developers can implement a variety of different control parameters depending on the needs of a given piece of hardware or software. The protocol can be implemented into existing hardware and run alongside MIDI devices without any compatibility issues. OSC doesn't necessarily need to replace MIDI altogether – if you've got MIDI devices which work perfectly then there's no need to worry about them becoming obsolete just yet – but manufacturers are becoming increasingly aware of the advantages it can offer.

Practical applications

It would be misleading to suggest that OSC has been widely adopted at this stage, but a handful of high-profile products have started to bring the technology into the mainstream. Most notably, hardware controllers such as the JazzMutant Lemur and the Monome

range, released in 2007 and 2008 respectively, adopted the protocol for transmitting data. Software support is slightly less widespread for the time being, although OSC has been adopted by Native Instruments (for their Traktor DJ package and Reaktor modular synth software) and is supported by a variety of less mainstream music applications such as Plogue Bidule, SuperCollider and Max/MSP. Even if your software or hardware doesn't currently support OSC, utilities such as OSCulator (oscillator.net), Pure Data (puredata.info) and MIDI Yoke (midiox.com) allow OSC to be integrated neatly with just about any existing setup. It should come as absolutely no surprise if plenty more developers and manufacturers start to adopt OSC over the next few years.

Ignore the hype about the death of MIDI – the industry standard is here to stay for the foreseeable future. But the Open Sound Control protocol seems likely to be very important in the next few years, as hardware and software manufacturers look to take advantage of its accurate, versatile and powerful features. OSC is already gaining ground in commercial products, rather than being restricted to the more esoteric programming environments like Max/MSP and SuperCollider. The great news is that it's unlikely to make your existing equipment obsolete – your music computer probably already has Ethernet ports and/or WiFi, so integrating OSC hardware shouldn't be a problem. The advantages of the protocol are clear, now it's time for manufacturers to step up and adopt it. **FM**

KNOWLEDGE BASE NEXT ISSUE

Make sure you pick up *Future Music* next month for more studio science and industry insight. **FM240 is on sale 12th May**



Aeroplane

Internet darlings and genre wanderers Aeroplane continue to fly high as a one-man act. ***Declan McGlynn*** spoke to Vito De Luca about remixing, multi-track tape and the synths behind the sound

Starting out as a duo, Aeroplane soared to attention in 2007 with their Disco groover *Caramellas*, a conga-filled piano-led nod to the Golden Age of Synth Disco. It was their remix of Friendly Fires' *Paris* though, that propelled them to new heights – so much so that original singles took a backseat to the constant stream of remix offers. Reworks for Grace Jones, Lindström, MGMT, Robbie Williams, Chromeo and many more followed – each one fuelling the fire for the launch of their debut album *We Can't Fly*. And on the eve of the release, studio and DJ partner Stephen Fasano – now trading as The Musician – left the duo to pursue his own musical adventure, on no ill terms. Vito is the now flying solo and continuing to start the party around the globe with his DJ sets and remixes.

Having had the pleasure of performing the 500th Essential Mix for BBC Radio One last year and his In-Flight Entertainment mixes collecting well over 25,000 listens monthly, Vito continues to lead the pack of the ongoing Disco revival. We caught up with Vito to find out more about his production, studio kit and remixing approach.

FM: Let's get this out of the way first – how did you start making music?

Vito De Luca: "I probably started making music around 10 years old – learning piano and guitar. Then I was in Rock bands, and Metal bands but because of Daft Punk's *Homework* I switched to Electronic music and started buying gear when I was around 16 or 17."

What was your setup back then?

"My first setup ever was a SoundBlaster AWE32 with a MIDI keyboard – you remember one of those that was a normal keyboard to type and the



Vito's Roland Jupiter-8, ARP Odyssey and Access Virus TI Darkstar



Your Friendly Fires remix was probably what launched you into a more mainstream crowd – how was it made?

"It was a trick I used on that and on the Grace Jones remix where you begin the mix with the mastering. I



two together make the riff. It's a Yamaha TX81Z. It's like a DX7 but a bit different – I use that bass sound a lot. I think Daft Punk used it on *Face to Face* but they sampled it to avoid the dynamic problems that that machine can have. The big synth at the end is a Roland SH-1000."

I think Daft Punk used it on *Face to Face* but they sampled it to avoid the dynamic problems that that machine can have

bottom was a small piano keyboard? All plugged on a Philips hi-fi system. Awesome isn't it? I was working with Fastracker, a software running in DOS mode. Then I switched to Acid Pro, Fruity Loops and then Cubase."

How has it changed since then?

"Well it's quite different now. I have a Mac Pro with Apogee Ensemble Converters and a MOTU MIDI interface with Adam A7 and Yamaha HS80 for monitors and loads of synths. Not enough outboard, which I regret and am fixing. I just set up the entire studio around a 16-track tape recorder so everything will be recorded on that from now on."

setup a mastering chain with just the kick drum and the bass and I made it sound as big as I could, then started adding stuff on top. That way you can actually cheat on the mix to make it fit with the mastering you're using.

"You can turn a snare really loud to make it squashed and make the mix pump. But if you turn what's on the master off, the mix is awful. That's the only technical trick I used. The rest is music. The time stretch on the vocals is quite bad actually!"

What was the synth used for the main riff?

"It's a Roland JX-8P, preset called 'Vito Piano' – it's still there in fact. But the bass is important too, the

Before the album came out, remixes were where almost all your output came from. Why so little singles?

"Because there were too many remixes to do! And we didn't want to skip them because they were great opportunities. I

slowed down on remixes when I was recording and mixing the album, but lately I started again. The last ones were for Chromeo, George Michael, Gypsy & The Cat and The Human League. I just finished one for Black Van with Holy Ghost! and for Jori Hulkkonen's new project. At the moment I'm working on Cassius too. There are more to come."

How do you approach remixes?

"I basically take everything out except the vocals. Then I start composing around it. I love changing the chords and finding different chords that still work with the vocal melody. That's basically the only rule I have."

Aeroplane's Favourite...



Software Plug-in

"I love Softube. The Tube-Tech emulation but also the rest. I love it so much that I'm buying a Tube-Tech. I also love D16 [Group]. Everything they do is great, especially that reverb... [Toraverb]"



Studio Outboard

"I don't have much outboard, but from the ones that I use, it would be a Lexicon reverb..."



Hardware Synth

"Roland Jupiter-8 and SCI Prophet-5. I can't choose. Nobody can. Nobody should!"



What are your main bass synths and guitars? Do you have a particular pre you like to record through?

"I use a bit of everything. Like I said, I used that TX81Z on the Friendly Fires and Sebastian Tellier remixes. I also use an Studio Electronics SE-1, a

instead. When you stand in the middle of the room you can't hear anything below 200Hz. My studio has been evolving a lot. All the remixes until not long ago were made on a PC with an Edirol UA-101 and a pair of KRK Rokit monitors and Cubase SX. That

The room is real bad, I need to correct the acoustics – when you stand in the middle of it, you can't hear anything below 200Hz

Jupiter-8 and one of my favourite bass sounds comes out of the JX-3P. I love that synth.

"On the album there's only a Minimoog D and a Fender Jazz Bass for bass. I used to record everything at home through the Apogee and the mess around in the box. Now it's all preamped by the tape machine for tape saturation!"

Tell us about your studio.

"It's in the south of Belgium in the middle of nowhere, at the third floor of a random building, in the bedroom I was sleeping in when I was five. The room is real bad, I need to correct the acoustics but as I'm about to move, I'll do it in my new place

Edirol has never let me down in eight years. For the album I bought a Mac Pro and a Pro Tools because I needed to edit the recording sessions. But Pro Tools 8 had bugs and I didn't really like the MIDI section. Also the Digidesign closed system was a bit boring. But most of all, as I couldn't afford a HD system I had to buy an Mbox and the pres were terrible."

So which DAW did you swap to?

"I tried Logic for a while, I thought that was it but it wasn't. Ableton Live too. They actually all have their pros and cons, so I try to take the best of all of them and this is how I work today: I have a Mac Pro with Pro Tools 9 and two RME 32-channel AD/DA

converters all plugged into a Toft ATB 32 Channel Mixer. Then I have a MacBook Pro with Cubase 6, Logic 9, Ableton Live 8 and two Apogee Ensembles. I use those to sequence drums or sometimes stretch something in Ableton for a remix and I record and edit the result in Pro Tools. I often bounce separate tracks on tape and back to Pro Tools before I final mix, but lately I've also discovered that if you don't record it could also be 16 mono limiters. I just send the tracks as hard as I can into the tape machine, and it will limit everything to 6dB and add tape saturation. I love it on drum busses especially. This is basically the heart of the studio.

"Around that I have some Chandler compressors, which I love on live bass or drums. I have dbx 166XL compressors that I use for anything really – they're easy to use and sound good. I also use them to sidechain. I just got a Manley Massive/Passive EQ which is quite impressive! I use it as an insert on the master buss or sometimes as a dual mono EQ. It just sounds amazing.

"I have a Focusrite ISA that I mainly use for vocals or as a DI for my Fender Jazz Bass and that's it for the dynamics, but I have a [Empirical Labs] UBK Fatso on the way! That's going to be my main drum buss compressor. More will be added to the list soon. I have some outboard effects too like an [Ensoniq] DP4 and Eventide Stompboxes like the Time Factor or the Mod Factor. They're meant to be for guitars but they work just great on everything and best when you have a mono signal and want to make it stereo, with a slap delay or chorus."

So it's all basically external hardware? Any software gems you love?

"I'm avoiding using soft synths. One computer basically only runs MIDI to my analogue synths and drum machines. When I sample drums I use an MPC5000 then when the structure of the track is done I just record everything at the same time in Pro Tools. I keep everything MIDI and open until the last minute so I can change any note at any time. I only use soft synths for something I don't have like piano sounds, or orchestral strings or a clavinet, but I'm buying a Korg SV1 to fix the piano problem."

We Can't Fly brings together a lot of different genres and styles –

what was your intention going in to the album?

"Just compose the music I like. The album has a lot of cinematic atmospheres that I love, mixed with the golden era of Pop music. Pink Floyd, Fleetwood Mac, The Rolling Stones and all the early Electronic stuff – Italo Disco, '80s Funk... The way the album has been recorded is an attempt to respect the recording techniques and limitation they had at the time. There is no sequencing except in *London Bridge* for the arpeggio – I hate slicing audio." **FM**

WANT TO KNOW MORE?

Aeroplane's album *We Can't Fly* is out now. Keep your eye on myspace.com/aeroplanemusiclove for the latest news



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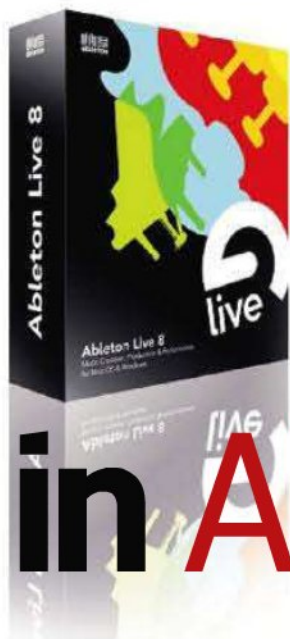
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ABLETON LIVE ESSENTIALS



Setting Up Your Devices in Ableton Live 8

No matter which version of Live you use, it'll include Devices – this is what Ableton call plug-ins. There are audio effects like Auto Filter, MIDI effects like Pitch and software instruments, like Impulse. **Martin Delaney** makes the introductions

Live is great for recording, importing and timestretching audio, but there's more to life than that. You'll need some audio effects to add more textures to your samples, a few software instruments to compose your own parts, and some MIDI effects to enhance your programming skills.

Even if you buy the 'budget' version of Live – Live Intro – you get Live's core Audio Effect Devices, including Auto Filter, Beat Repeat, and Redux, the MIDI effects, including Arpeggiator, Pitch and Chord, and the two main instrument devices – Impulse

and Simpler. You can of course, add more devices. The full Ableton Suite includes all of the instrument devices, including Analog, Operator, and Sampler – and the instruments can be purchased individually if you prefer. Some audio effects aren't present in the Live Intro version, notably Looper.

Obviously, you aren't limited to just using Ableton's devices – you can add third-party plug-ins too (I'm partial to a bit of PSP Vintage Warmer myself). Even if you don't want to add to the included devices, the Ableton creations are very well put together and are powerful sound design and

THE EXPERT

Martin Delaney
performer,
producer



Martin, aka mindlobster, has produced Live training material for MacProVideo and has taught Live to DJs, students, kids, and prisoners.



ON THE DVD

A Live Set containing the audio and/or MIDI you'll need for the tutorial – Live 8 is required. There's also a QuickTime movie showing the techniques in action!

programming tools. They give you the advantage of consistent interface design across the board, and of course they integrate perfectly with each other and the rest of Live (it has to be said that, historically, Live can have issues when it comes to dealing with certain third-party plug-ins). Devices reside in Live's Browser, and their presets can be accessed through the Device Browser itself, or by navigating to the Presets folder in the Live Library.

If you haven't looked at the MIDI devices (I run into this quite a lot when I'm teaching Live), you should start tinkering with them immediately. If you're doing any MIDI programming at all, you'll find that these are incredibly useful practical and creative tools, especially if you're suffering from the all-too-familiar writer's block. If you're not already programming MIDI, they're reason enough to start doing it! **FM**

LIVE ESSENTIALS NEXT ISSUE

Make sure you pick up *Future Music* next month for more vital Ableton Live techniques. **FM240** on sale 12th May



Don't forget to investigate the MIDI Effect Devices too – they're simple to use, but do some great things

Creating A Basic Device Rack

Chain together and save multiple devices as a single preset in one recognisable and easy-to-use interface



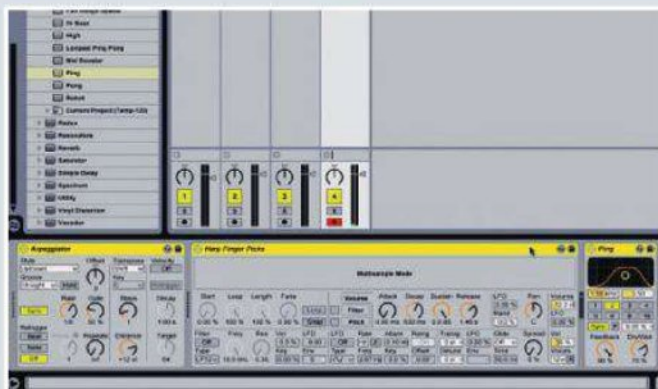
1 So now we know you can save custom device presets, which is good. But you can also save a preset that contains the settings for several devices, so you can recall complex chains with one click. Create a new MIDI track in your Live set, and drag the Arpeggiator/Classic UpDown eighth preset onto it.



2 That Arpeggiator won't do squat (technical term) unless you put an instrument after it. Drag Simpler/Guitars and Plucked/Harp Finger Picks onto the same track - it'll go after the MIDI device automatically. Use a MIDI keyboard or Live's Computer MIDI Keyboard to preview this combination - remember to arm the track for MIDI input.



3 Now let's go back to the Browser and navigate to the Ping Pong Delay, in the Audio Effects folder. Drag the Ping preset onto the track, after the Simpler instrument. Audition this again with the Computer MIDI Keyboard - ahh, it sounds pretty! Add some more effects if you want, but I'm going to stop there.



4 We intend to save this combination of devices, in a way we can easily recall later. Click on the name of any of the devices in the track, it'll highlight yellow. Now, you can type cmd/ctrl-A for select all, or Shift-click on each one. Either way, they should all end up highlighted.



5 All you have to do is type cmd/ctrl-G, and they are collected together. This is called an instrument rack (back in the Live stone age, they used to be called groups, which is why we use cmd-G, I guess). A new header and black buttons have appeared at the left of the chain.



6 Click on either of the black buttons to unfold the rack, click the generic name, type cmd/ctrl-R, and rename it. On the right is the familiar Save Preset button. Click that, and the new rack will be saved into the Library. There's more to be done with racks, but we'll come back to that another time!

Basic QWERTY Control

Even without a dedicated MIDI controller, there are lots of useful computer keyboard actions for Live devices



1 To get the most out of working with Live's instrument and effect devices, at some point, you'll definitely want to get a MIDI controller with knobs and faders, or maybe even a touchscreen device. Before that, though, it's worth remembering that you can do a lot with the basic computer keyboard – everybody's got one!

2 Let's use the instrument rack we just made, and have a look at the Arpeggiator. Click the Hold button, then play a simple chord on Live's Computer MIDI Keyboard, the notes'll keep going while we work on the rack. Click the Rate knob, then tap your down arrow twice, the rate'll change to 1/16ths.



3 If you want to reset the knob to the original, default, value, just tap your backspace/delete key. This works with any Live control – it's very useful for the Mixer's faders. Keep it at 1/16 for now, though. Click on the steps button, type '2', and hit enter. Sounds good, but I would say that!

4 Go to the Simpler instrument – the Harp sound – and type '6' in the Volume box at the right. Your levels might vary, but if your Mixer faders are all at default, this should be a usable level. If it's too loud and distorting, just bring it down a bit. Live's samplers default to quite low starting levels.



5 Don't forget that when the Computer MIDI Keyboard is on, you can use the Z and X keys to transpose up and down by one octave at a time, and C and V to change the note velocities. All we need now is pitch bend off our mouse! Oh well, we can't have it all, I suppose.

6 You can use letters on your keyboard to turn devices on and off, or to toggle switches within a device. Click the KEY button at the top right of the Live screen, then click the Arpeggiator power switch, and type 'n', then KEY again. Now you can switch the Arpeggiator on or off when necessary.

Loading Live Device Presets

There are tons of device presets in the Live Library – you might as well try 'em!



1 You can load a Live device with its default settings, or go straight to a specific preset and load that. Click on the Live Device Browser icon near the top left. If the Browser isn't already open, it'll pop open now.



2 Let's say we want to load the Beat Repeat Airpusher preset. Click on the triangle next to the Audio Effects folder, then on the triangle next to the Beat Repeat folder. Below that you'll see the Airpusher preset listed – drag that to your target track!



3 Try it using only keyboard shortcuts – cmd/ctrl-B to open the Browser, Alt-left/right arrow to highlight the Browser, arrow down to Audio Effects, right-arrow to open that, continue using arrow-right and down to access the preset, then hit enter to load it.

Saving Live Device Presets

Build an archive of your own favourite custom settings for recall from the Live Browser



1 When you manipulate your device to get a tasty sound, you might want to save it to use again. Let's take Auto Filter – load it into one of your tracks, and tweak the controls a bit. Click the device name and use cmd-R to rename your preset.



2 Click on the name, or thereabouts, and drag Auto Filter onto the shortcut folder icon for your Library (usually '1'). Keep holding it as the folder pops open and then move it to the Presets/Auto Filter folder, which will also pop open, then release it.



3 Alternately, you can use the Save Preset button, at the top right on each device. Click this, and Live will save your preset where it thinks it should go – in the Auto Filter presets folder (you can move, rename, or delete, this later if you want).

Even More Devices and Plug-ins

I've already mentioned that your selection of devices will be different (especially as far as instruments go), depending on which version of Live you have. If you pop for the full Live Suite, you'll get the entire collection of Live instruments: Analog, Collision, Electric, Impulse, Operator, Sampler, Simpler, and Tension. Live 8 and Live Suite also feature six audio effect devices that Live Intro doesn't have: Amp, Frequency Shifter, Looper, Multiband Dynamics, Overdrive, and Vocoder. Amp can also be purchased

separately, but you can only get the other effects by purchasing Live 8 or Live Suite. All of the instrument devices are available to purchase individually, for 99-129 Euros each.

I usually tell my Ableton training clients that the download version of the Live Suite is the best value for money. If you're going to buy just one extra Live device, it has to be the Operator synth – alongside Impulse and Simpler, it's the instrument device I couldn't do without. The Analog synth is also very good too,

but I have to say there are better guitar modelling plugs than Amp. Beyond the Ableton devices, Live supports Audio Unit (AU) and VST plug-ins – this opens it up to thousands of plug-ins from other

software companies – some free, some not so free. Mostly, these will work in Live just like the Ableton factory devices, and they can be automated, controlled by MIDI or QWERTY, included in racks, and saved in the Library. When you load a third-party plug-in you can click the Plug-In Edit button (the little wrench), and view the plug-in in its original window, or click the Unfold Device Parameters button, and you'll see every parameter is available in a more typical, no-frills, Ableton layout.



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Reviews

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



Highlights this issue...

Pioneer DDJ-T1
86 The industry's biggest DJing brand reveals its first ever dedicated Traktor controller. We take it for a spin.

RME Fireface UFX
90 Robust as ever, but will this top notch interface be as reliable as the rest of RME's family?

Traktor Pro 2
94 Now you can get the same sampledeck functionality of the Traktor S4 edition and loads more to boot.

Tone2 ElectraX
98 This plug-in claims to be four synths in one. But does it sound any good? We take it inside the DAW and reveal all.

Pioneer S-DJ05
100 Cleverly designed studio and DJ monitors, with a great wired remote, selectable inputs and EQ bypass.

Pioneer DDJ-T1 | £899

Pioneer's first dedicated Traktor controller is a big one. **Declan McGlynn** gets to grips with the T1

WHAT IS IT?

Pioneer controller for Traktor with two jog wheels and four faders

CONTACT

Who: Pioneer
Tel: +44 (0)1753 789 789
Web: pioneerdj.com

HIGHLIGHTS

- 1 Familiar interface
- 2 Simple layout
- 3 Needle Search ribbon controller to search through a track

Despite the CDJ-2000s offering full Traktor control over HID, and Traktor Scratch allowing you to get

your hands on Native's pride-and-joy using the industry standard DJ booth regular, it was almost inevitable that Pioneer would join the dedicated controller party. Over the past year we've been graced with a shift in the approach to DJ controllers and more and more companies are opting for the large, bespoke software specific units, either mimicking what you see on screen or sticking to a traditional layout.

The excellent Glanzmann Digital DJ Solutions 4midloop has its feet planted firmly in the former category while NI's flagship Kontrol S4 gives you clear control of a specially made software version. Pioneer's DDJ-T1 falls

somewhere in between with a classic layout and familiar components joining forces with Traktor-specific features.

Familiar interfaces

Familiarity is in fact the strongest aspect Pioneer have got going for them

with the DDJ-T1. The jogs, cue and play buttons and general design replicate that of their industry standard booth equipment. Though it might seem odd that Pioneer are pitching this as a bedroom or house party device, it actually makes sense as what you learn on at home will be familiar if you have to make the move to CDs or USB sticks in the club. The result is instant comfort for anyone who's used CDJs coming to the controller new and vice versa.

In fact, I roped in some friends who had never used Traktor before but were CDJ veterans and they got it within seconds. This kind of fluency is absolutely vital when it comes to performance controllers, and is definitely the strongest advantage the T1 has over NI's S4.

Speaking of the S4, I think it's fair to say, despite Pioneer's claims that the T1 is for home use, a lot of potential buyers will be directly comparing the T1

Traktor Pioneer Edition

Bundled with the DDJ-T1 is a special edition of Traktor Pro developed for and by Pioneer. It's pretty much the same as Traktor Pro LE except it includes the Record function – although Broadcast is still out of the picture. The effects section differs

in that, it's not possible to switch to Advanced mode and some are missing. Chained is the only option, but if you already own the full version of Traktor Pro, there is an option to switch to Advanced on the controller. It also allows

four-deck control, unlike LE. There is an upgrade path to Pro for 120 Euro. Furthermore, if you already own Pro, installing Traktor Pioneer Edition will simply add the DDJ-T1 to the list of Pioneer controller in the controller Setup Wizard.

Needle Search

Use the ribbon controller to search through a track

Mixer

Assign FX channels, adjust EQ and gain using the mixer

**I/O Connections**

TRS and aux out with a switchable aux and microphone in

USB

The T1 can be USB-powered, but the inputs are disabled

SPECS

Frequency Range: 20

– 20kHz

Harmonic Distortion:

0.005% or less

Channels: 4

Effects control: 6

Jog Wheel: 115 mm

Dimensions:

680 x 95 x 318mm

Weight:

5kg

and Native's flagship controller. To cut a long story short, it really comes down to what you need. With no Sample Deck or Loop Recorder control on the T1, now available to all Traktor users through Pro 2, you're limited to Cue Points, which we'll get to later. On the other hand, the CDJ-2000's Needle Search has found its way on to the T1, so quick searching and cueing is possible via the ribbon controller, something the S4 lacks, though it's not really a deal-breaker. What is nifty is pressing the Function button activates five hotspots on the ribbon, which are unmapped by default

and mixer range and Traktor's features such as hot cues, effects and sync functions. In fact, the jogs are lifted straight from the 350s and feel rather plasticky and, despite being slightly bigger, don't have the torque of the S4 equivalents. There is no way you're going to be scratching on these. There's two master outputs – phono and TRS – though they operate on a single channel. Like the S4 there is no dedicated Booth Out, though the second output can be used if you have a passive volume controller. Another oversight is the lack of LED meter levels. Sure Traktor offers auto gain but

Loop has also found its way onto the T1 too. Another thing I really love about the T1 is a simple one – one knob filter with an on/off button. That button is sorely missing on the S4.

The T1 tackles Traktor's Hot Cues in a fairly tasteful manner. Switch to Hot Cue mode and the loop size adjustment and seek buttons become cues one through four. Press shift and they're five through eight. It's simple, and it works well. That's kind of the mantra for the whole controller. It tames some of Traktor's complicated functions, presents them in a familiar format and

takes away the learning curve in the process.

Any DJ coming to Traktor from CDJs would do well to take a serious look at the T1. So we come

The T1 tames some of Traktor's complex functions and takes away the learning curve in the process

but could become your Sample Deck controls or whatever you can think of.

Lay it out

As I've already said, the T1 is somewhat of a hybrid of Pioneer's CDJ-350s, DJM

you lose that reference and the mixer section feels less like an actual mixer and you don't need me to tell you the less you look at the screen, the better.

The familiar yellow In Out buttons controls loops and the much-loved Auto

back to Pioneer's emphasis that this is aimed at the bedroom DJ market. Saying as very few beginner or amateur DJs will buy CDJ-2000s for their homes, let alone have enough money left over to pick up Traktor Scratch Pro, it makes sense that the T1 with Traktor Pioneer Edition is the logical choice, if you're dedicated to the Pioneer range.

Price wars

So what of the price? £900 is a lot of money for a beginner, especially if you need to add the price of a laptop. Then there's the size – we dissed the S4 for its large footprint, and this is even bigger – 18cm bigger to be exact. However, Pioneer have saved space by incorporating a slot for your laptop's keyboard to rest under the controller, which is a nice idea, but a USB slot for a mouse on the controller would have sealed the deal – I found myself having to lift the controller to access the trackpad more than once, though if you're prepared, it won't be an issue.

Furthermore, there's only one phono input versus the S4's two, meaning you couldn't run two CDJs or turntables alongside the T1. There is a mic input but it's switchable with the aux in so you can't run them at the same time.

**FX Control**

Simple and effective control with Advanced mode for Pro users

And while the T1 does run over USB bus power, the external ins can't be used unless the power adapter is in.

T1 party

Let's ignore the price for a second and take a look at pros and cons of the T1.

completely. At times, the T1 already feels out of date and at others, it feels timeless. Again it comes back to what you want to do – if you want to sample on the fly, hook up extra audio sources, loop, scratch and generally perform while you DJ, you will feel limited by the

sacrifice the extra performance options of the S4 for the benefits of immediacy and familiarity and pay more in the process? When it comes down to it, if I could choose either of these controllers to take home for free, I'd choose the Pioneer. It's more immediate, it's simple

and it's fun. But if I was parting with almost £1,000 for a controller, I'd choose the S4. It's a better investment as NI are guaranteed to continue to

If you're playing fairly upfront House and Techno, the T1 will delight you in its simplicity and quality

The familiar user interface will go a long way to both introducing beginners to the industry-standard equipment and also linking CDJ veterans to digital DJing. At the same time, that dedication to standards has meant some of Traktor's most unique functions being left out

T1. If you're playing fairly upfront House and Techno, without the need for any sampling or complex looping or triggering, the T1 will delight you in its simplicity and quality. The only question left is, are you willing to pay £100 more for less features? Are you willing to

support it, they won't change the software so that it becomes redundant and with the upgrade path to Traktor Scratch Pro (see *Time Code* box) you can continue to use CDJs in the club with the S4 as your soundcard.

Pioneer have made an excellent professional controller, and have priced themselves accordingly. True Pioneer protégés and DJs for whom £900 is but a number will love the T1. The rest will have to carefully consider the cheaper S4 before committing. **FM**

ALTERNATIVES



Native Instruments Kontrol S4

£779

Cheaper with more features, the S4 is the T1's direct competition. No Needle Search and without the Pioneer layout and components, but Sample Deck and Loop Recorder add to the appeal.

native-instruments.com



Numark Mixdeck

£700

XLR and booth out, two aux ins, two USB inputs, iPod dock, CDJs and Traktor control could make this outsider a winner for more mobile DJs.

numark.com



Denon MC-6000

£695

Booth and XLR out with two mic and aux ins and heaps of control. More of a learning curve than the S4 and T1 though.

denondj.com

Secret Time Code

A recent announcement by NI will make your decision even more difficult. Soon the inputs on the S4 will read timecode signals. This means you can hook up two turntables or CDJs to the S4 ins, load up a timecoded CD or vinyl and control the third and fourth deck (or any combination) of Traktor. This costs 129 Euro, comes with a pair of timecoded CDs and vinyl, upgrades your Traktor Pro 2 to Traktor Scratch Pro 2

and is available now. This means for the same price as the T1, you can get the S4 and Traktor Scratch Pro meaning you could still use CDJs in the club

as a controller. This makes the argument of familiarity a little less relevant, and future-proofs your investment even further. Something to think about.



FutureMusic VERDICT

BUILD



VALUE



EASE OF USE



VERSATILITY



RESULTS



An effective and powerful controller but one that lacks the future-proof features that would justify the price.



The Stuff of Legends



Meet the XENYX Premium Mic/Line Mixers with USB and “One-Knob” Compressors

With more than 5 million units sold, XENYX mixers rank among the best-selling audio products of all time! Advancing this legacy to the next level, the new XENYX USB Series mixers can not only handle your live gigs, but also provide the tools you need to make stunning, professional-quality recordings.

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* Not available on 1244USB. © 2011 MBSK Group P Ltd. Technical specifications and appearance are subject to change without notice. The information contained herein is correct at the time of printing. 985-90000-01464

behringer.com



RME Fireface UFX | £1,649

The UFX adds USB, DSP effects and a whole range of goodies. **Robbie Stamp** racks up and explores

WHAT IS IT?

30-in/30-out FireWire/USB interface with MIDI, DSP effects and standalone operation

CONTACT

Who: Synthax Audio
Tel: +44 (0)1923 693 756
Web: rme-audio.com

HIGHLIGHTS

- 1 Stunning routing flexibility
- 2 High AD/DA quality
- 3 Standalone operation



The new flagship Fireface UFX may have dropped the 800MBit/s bus speed of its forerunner to the more

universal 400MBit/s, but the form has only been added to and upgraded. The host interfacing has been augmented with USB 2.0, which more or less levels in performance with FW400, and there are four more channels of I/O available taking the total to 60 channels. Add to this a colour display for metering and hardware control as well as enhanced standalone capabilities and you start to wonder how much RME can really pack into a 1U rackmount.

Like the Fireface 800, the UFX sports the signature light blue and silvered exterior which is, as ever, neat and clearly laid out while feeling sturdy and well built. The protective hoop handles on the front state the very German reliability that, for me, has accompanied all the RME products I've ever owned. It would be fair to say I am a little biased by experience, but there is always an opportunity for a company to get it wrong. The front of the unit houses four preamp inputs for mic, line

and hi-Z instruments, all of which are digitally controlled through the front panel interface or the software. The two independently configurable headphone outputs follow on to the right as do the

second set of MIDI I/O and USB socket for flash and hard drives to be used as recording storage, though this function has yet to be incorporated into the firmware. The rear of the unit hosts the remaining I/O: eight TRS line inputs, two XLR and six TRS line outputs, AES/EBU on XLR, two sets of ADAT optical (the second can also function as optical S/PDIF), BNC wordclock sockets, the first set of MIDI I/O, FW400/USB 2.0 connections and a socket for the RME remote control (for level/dim and storage/recall).

Display and control

The new colour display seems a bit small at first but in use I encountered no problems monitoring large track counts on the main metering page. In conjunction with two encoders and volume knob the display doubles as a menu for setting all channel

UFX DSP

The DSP power of the Fireface provides each input and output channel, an EQ and dynamics processor. The EQ comprises of two parts: a low-cut and a three-band parametric equaliser. The dynamics also comprises two functions: a combined compressor and an auto-level function. There is also an FX send control on each channel and an FX return on each output that are routed through a dual effects engine made up of a reverb and a delay. These latter effects are useful for headphone and monitor



mixes though their quality and range is surpassed by native DAW plugs. The EQ and dynamics offer more quality and make handy tools for monitor mixes during tracking and on send/return paths to external effects. The EQ and dynamics can be

globally switched in/out of the direct record paths so they can be used for monitoring without 'going to tape'. There is a DSP meter that I maxed out with the reverb and echo as well as 13 outputs using both their EQ and dynamics processors.



There are six user and two factory setups that can be stored in the UFX so a variety of states can be recalled without need for a host connection. This allows the UFX to provide multiple routing, monitoring and AD/DA conversion solutions outside of the standard computer-based environment.

The Fireface UFX sees an expansion in the DSP capabilities for the series with the addition of effects for all inputs and outputs (see *UFX DSP* box), though powering the routing management of the TotalMix system is its primary purpose. From within the TotalMix software the user can set up absolutely any combination of routings between the hardware inputs and outputs as well as the playback channels from DAWs.

The four combo mic and instrument preamps built into the UFX are of a suitably high quality to match the AD/DA converters. At high gain settings the self-noise is exceptionally low while the high-end and transient response is clearly uncompromised. With a wide range of mics, from valve condensers to ribbons, I found the 65dB of gain enough for capturing most sources with a transparent frequency response that neither clouded nor exaggerated.

outboard and even with a range of choices in the studio there is no reason why the UFX preamps would still not see daily use.

It can do anything one can imagine
except make toast (that should
follow in a firmware update soon)

Issuing this new Fireface with both FW400 and USB 2.0 makes a whole load more sense than just making a USB version, especially as there is more on offer here than the previous model. Having trialled the UFX extensively using both interfaces I found the FW400 performance less CPU intensive (around 10% lower) than the USB, but this may have more to do with my chipsets than the Fireface itself. My time with the UFX using both interfaces was flawless: no crashes, glitches or hangs even when running high track/ plug-in count mixes.

detail but in short it can do anything one can imagine except make toast (that should follow in a firmware update soon): fader/mute/solo group assignments, copy and paste of submixes between hardware outputs, loopback of outputs for group/mix capture, MIDI remote control (using Mackie HUI or MIDI CC protocols), Mid/Side processing on any stereo inputs/software playback channels, Cue function for checking any hardware output without disturbing the mix and mono/stereo switching for all channels. Oh yeah, there is unlimited undo/redo for all changes within TotalMix and full snapshot storage/recall.

RME pride themselves on sound quality, especially in relation to price. Here the UFX does not disappoint. RME have continued to refine their AD/DA and preamp circuits as well as their software and DSP. There is real clarity and excellent stereo imaging on the analogue stereo outputs and headphone

amps. The overall conversion quality is excellent – for me it came closer than many to my Lavry AD/DA.

The UFX manages to top the previous flagship model with quite some aplomb and offers unparalleled flexibility. The constant development and refining of the TotalMix system is key to the strength of the UFX and the standalone capabilities make sure there is nowhere this unit cannot be useful. The front panel control further enhances the package as well as providing a surprisingly good source of metering. The sound quality matches up with the sheer quality of function making the UFX a peerless recording solution. It's not the cheapest interface, but the price is more than fair and represents an investment that will truly last. **FM**

Category	Red Segments	Orange Segments	Yellow Segments	White Segments
BUILD	10	0	0	0
VALUE	9	1	0	0
EASE OF USE	8	2	0	0
VERSATILITY	10	0	0	0
RESULTS	10	0	0	0

A convergence of flexibility, usability and sound which even RME will find hard to surpass.

Interface Type: FireWire 400 and USB 2.0
Sample Rates: 28kHz to 200kHz (24-bit) with full digital vari-speed control
Analogue Inputs: 4x XLR/TRS combo mic/line (front), 8x TRS line (rear), 4x TRS line (rear)
Analogue Outputs: 2x TRS (front – headphones), 2x XLR (rear), 6x TRS (rear)
MIDI: 32 channels via 1x In & Out (front) and 1x In & Out (rear)
Digital I/O: 2x ADAT In, 2x ADAT Out, AES/EBU In/Out (2x XLR – can be used for S/PDIF)
Wordclock: In/Out on 2x BNC with 75 termination switch
Clock Sources: Internal, ADAT In, AES In and Wordclock In
Buffer Size/Latencies: 48 samples (~1ms) up to 1024 samples (~23ms)
Mic Preamp Gain Range: 65dB
Instrument Gain Range: 55dB
Max. Line I/O Level: +19dBu
DSP Effects: EQ, Dynamics (compressor, expander and auto-level) for every hardware input/output channel and a stereo FX buss available at any output

Dimensions:
483 x 242 x 44mm
Weight:
3kg

Apogee Ensemble
£1,443

FireWire and Mac only, less channels, but the pres have an extra 10dB of gain and if you love Apogee converters this may suit your whims.

apogeedigital.com

**Metric Halo Mobile
I/O 2882 Expanded
+DSP**

£1.849

Also FireWire only and possessing a lower channel count, but with the DSP comes a high quality plug-in suite.

mhlabs.com

MOTU 828 mk3

£649

28-in, 30-out and sporting USB and FireWire, two sets of ADAT plus DSP, this is closest on features and less than half the price.

motu.com

CME Bitstream 3X | £408

Power is nothing without control. **Greg Scarth** takes on one of the most versatile controllers on the market

WHAT IS IT?

Ultra-versatile MIDI controller with built-in automation features

CONTACT

Who: Sonic8
Tel: +44 (0)330 2020 160
Web: cme-pro.com

HIGHLIGHTS

- 1 Four rotary pots and faders, crossfader, joystick and ribbon controller
- 2 Integrated LFO, motion sequencer and arpeggiator
- 3 Dedicated Mackie, Logic and Reason control modes

SPECS

32 rotary pots, 8 fader, Crossfader, X-Y joystick, Ribbon controller, 21 groups, 100 scene memories, Built-in LFO, motion sequencer and arpeggiator, MIDI In, Thru and two outputs, Footswitch input, DIN SYNC24 output, USB bus power or DC adapter, LCD screen, Dedicated configuration software for Mac and PC

Dimensions:

420 x 180 x 25mm

Weight:

4.7kg

The Bitstream 3X, jointly produced by Wave Idea and CME, offers an enticing blend of MIDI features and

customisable setup options which should add up to make a very versatile device. The new limited edition Ivory model on test here is internally identical to the standard black version but sports a look seemingly inspired by the grey and orange colour scheme of the Roland TR-909.

Stiff and sturdy

On removing the Bitstream from its box, it's immediately apparent that the all-steel enclosure is built to last. The downside of this sturdy construction is that the 3X weighs in at the best part of 5kg, so if you're planning to lug it around for live performances you may want to hit the gym first.

On its surface, the controller features eight columns of rotary pots and crossfaders, a vertical ribbon controller, an X-Y axis joystick controller and a small crossfader. In use, all of the controls are nice and sturdy with the exception of the miniature crossfader, which feels flimsy and a bit loose.

The joystick is light and sensitive, like a PlayStation thumb controller without the self-centring action, while



Bitstream 3X comes with a comprehensive software editor to map and save presets

the ribbon is nicely recessed into the front panel but perhaps slightly on the narrow side for larger fingers.

Twist and slide

Unfortunately, in use, the knobs and sliders aren't the best I've had the pleasure of tweaking. The rotary pots are nice enough, if slightly on the stiff side, but the faders on my review model felt strangely uneven, offering very little resistance along part of their range then suddenly stiffening up.

It may just be a case of the components taking time to break in, but I'd expect better at this price level. When it comes to taking control of your synths and software, the Bitstream is absolutely packed with features, from 100 scene memory slots to seven

alternative curve models for each control and dedicated Mackie, Logic and Reason controller modes.

Even more powerfully, the B3X can generate its own automation data, either in the form of an LFO signal (which can be sync'd to an internal or external MIDI clock), Electribe-style motion sequencing or an arpeggiator output which takes a note input and generates a rhythmic or melodic variation based on a series of predefined rules.

Complex

The in-depth feature set all adds up to make the B3X quite complex in operation. I'm not ashamed to say it had me scratching my head on a couple of occasions while I set everything up. Unfortunately the English manual is quite poorly written, but Wave Idea's support team were efficient in helping me overcome a few minor glitches and issues. I'd strongly recommend using the excellent Mac or PC configuration software to customise settings rather than trying to access all the parameters through the small LCD screen.

Once set up, there are very few complaints about the controller's operation. The Bitstream 3X isn't perfect but its wide range of features make it worth considering as a very flexible all-round control solution. **FM**

FutureMusic VERDICT

BUILD



VALUE



EASE OF USE



VERSATILITY



RESULTS



Sturdily constructed MIDI controller with versatile options but tricky setup process.



OMNISPHERE

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WHAT IS IT?

The latest major update to Native Instruments' landmark DJ software

CONTACT

Who: Native Instruments
Tel: +49 (0)30 61 10 35 1300

Web: native-instruments.com

HIGHLIGHTS

- 1 New Sample Deck and Loop Recorder
- 2 Varied sync options
- 3 Coloured waveforms

PRICING

Traktor Pro 2
199Euro

Upgrade
69Euro



Native Instruments

Traktor Pro 2 | €199

Traktor reaches another landmark with version two.
Declan McGlynn puts on his deck shoes

Traktor's grip on the digital DJ world continues to tighten. For a long time, Serato was the only name on DJs lips when it came to timecode control, but over the past three years, NI have done a fantastic job of selling Traktor not only to House and Techno DJs for its rock-solid simplicity but to the Hip Hop DJs who adopted Serato so extensively.

This was helped in part by their incredibly successful Maschine campaign and just like the MPC advocates have swarmed over its orange pads, Serato has found itself with stiff competition in the form of Traktor Scratch Pro. Now with the SP-6 sampling functions of Serato implemented in Traktor Pro 2 via the Sample Decks, the battle for the booth continues to heat up.

So what else is new?

Users of the flagship Kontrol S4 controller will already be at home with Traktor Pro 2. After all, the two main additions to Pro 2 have already seen the light of day in the bespoke version Traktor Pro S4 – namely the Sample Deck and Loop Recorder.

Without jaunting over old territory, they are simple but effective performance options based on sampling and retriggering. Sample Deck can load in either dedicated loops or one shots from your track collection or 'sample' from a loop currently activated in the Track Deck into one of its four slots – although it doesn't actually 'record' it in real-time, it's instantly transferred to its new home. The Sample Deck does need to occupy one of your four decks, but once it's been assigned, it has

access to all of the processing any standard track would, such as filter, EQ and effects. However, each sample slot in the Deck also has its own volume and filter control independent of the channel. If it seems like having to loop before you can transfer a live recording into the deck is a bit of a hindrance, the Loop Recorder is your friend. This nifty addition will let you record on the fly, quantised to a predetermined length, measured in beats from four to 32.

One thing that's kind of missing is an on/off button as cutting it in and out can sound great, but there's always a small fade via the Dry/Wet control. This is the way Traktor lets you sample on the fly without looping, and in fairness it's a pretty tidy solution. It doesn't end there though as not only can Loop Recorder take its input from the master out, any cued signal or an aux input (and external when using Ext Mixer mode) it can also be overdubbed for loop layering.

Considering its power and potential, NI have done a great job of keeping it simple and in combination with the Sample Deck, it will definitely raise one or both eyebrows from the Ableton Live performance crowd.

Upgrade options

Apart from the Sample Deck and Loop Recorder, the other obvious addition is that of coloured waveforms. As well as

being able to zoom in to almost sample level, you can now also change the colour of the waveforms in both Deck types. The brighter shades represent higher frequencies while the darker ones represent lower ones.

While there are three other options beside the default – Infrared, X-Ray and Spectrum – there is no option to turn it off, which is odd. It's designed for you to mix your tracks visually, identifying the kick and snare, for example, even if the transients are identical. Anyone who's used Serato Scratch Live or Deckadance will recognise this visual treat but it's more for scratch DJs than anyone syncing four-four.

Alongside some new effects in the form of Tape Delay, Ramp Delay, Auto Bouncer and Bouncer, a whole heap of one shot and loop content from Loopmasters' DJ Tech Tools series and twists and tweaks in the preferences, that's about it for Traktor Pro 2 – see the Sync box for more on the new options. Put quite simply, if you're looking to get in to digital DJing either from vinyl, CDs or from scratch (ahem) Traktor is the first software you should check out. It really is that good. For current users

Bitchin' Sync

NI have refined the way sync works in Traktor Pro 2. Now, in preferences you can set which sync type you want to use – either TempoSync or BeatSync. TempoSync will ignore the phase metre when the sync button is pressed and simply ensure that the tempos of

the tracks are matching. Now if you manually nudge a track or scratch, it won't automatically turn off sync or jump back into phase with the Master. It feels much more natural mixing this way and although you might need some practice to get used to it if you rely heavily on

sync, it is a very welcome addition. BeatSync keeps tempo and phase locked down so any scratching ends with a jump back to phase alignment. Depending on how you want to work, both settings perform well and are noticeably better than previous versions.



above). This could take anything from a few hours to a few days depending on the size of your library. It's not really about the price as much as it is about the turnover time. However, TP2 does not install over your current TP.

Right on Trak

If I were to find fault with TP2, I would say that it's becoming a tad bloated.

bit of a stretch to call this a 'flaw', I'm hoping NI put the brakes on in terms of bolting on to the interface for the foreseeable future, or release an iOS and Android browser app to search and load from your device, so your mixer, decks and effects can rule the screen – just a thought.

Also, there was a considerable difference in the CPU usage of Traktor Pro and TP2 – something to keep in mind if you were already stretching the limit of your laptop.

Traktor Pro 2 might not be a huge update in terms of features, but it tweaks and refines an already streamlined DJ tool. I can imagine some DJs never even looking at the Sample Deck or Loop Recorder and still loving TP2 for its sync overhaul while I can imagine others completely changing their performance approach to cater for its power. Whichever one you are, there's enough here to keep Traktor powering ahead of the pack, yet again. **FM**

I can imagine some DJs never even looking at the Sample Deck or Loop Recorder and still loving TP2

that's where it gets more difficult. NI admit that not all custom mappings will be seamlessly ported so you may have to test your setup extensively before your first gig with TP2, although we found no issues.

You will also need to re-analyse your collection thanks to the new strip view and sync functionality (see the box

Laptop screen sizes aren't getting any bigger and NI are trying to pack even more into the interface. There is a danger of it becoming crowded and the coloured waveforms only add to the amount of information you're taking in.

Although you can hide everything you don't need, you're not making the most of what you've paid for. While it's a



There's no option to sync your tracks via BeatSync or TempoSync

SPECS

System requirements

PC: XP (latest Service Pack, 32-bit), Windows Vista/Windows 7 (latest Service Pack, 32/64-bit), Intel Pentium 4 2.4GHz or Intel Core Duo or AMD Athlon 64, 2GB RAM

Mac: OS X 10.5 or 10.6 (latest update), Intel Core Duo, 2GB RAM, 500MB free disk space required (minimum), DVD drive

ALTERNATIVES



Serato Scratch Live

£Free

Rane hardware required, but it does have a Sample Player in the form of SP-6 and timecode control, but with a lower resolution.

Serato.com



Ableton Live

349Euro

As Traktor adds more performance options, Live becomes more of a similar solution. Add The Bridge to the mix and the competition heats up.

ableton.com



ImageLine Deckadance

127Euro

Heaps of unique features, sampler and loop recorder but no dedicated controllers. Also features wide but restricted timecode adoption.

image-line.com

FutureMusic VERDICT

STABILITY



VALUE



EASE OF USE



VERSATILITY



RESULTS



Traktor is now officially a DJing monster with more performance options than ever before.

ART TubeOpto 8 | £469

ART's latest offering steps straight into a crowded corner of the market. **Stuart Bruce** finds out if it gets to the front of the stall

WHAT IS IT?

An eight-channel input / output expander for ADAT light pipe equipped systems

CONTACT

Who: Sonic 8
Tel: +44 (0)330 2020 160
Web: artproaudio.com

HIGHLIGHTS

- 1 Versatile I/O
- 2 Solid build
- 3 Valve on each channel

SPECS

I/Os:
Front panel: Two quarter-inch high impedance inputs
Rear Panel: Inputs: Eight XLR and quarter-inch balanced combo jacks
Audio Outputs: Eight balanced quarter-inch jacks
Digital I/O: ADAT light pipe input and output
Word Clock: BNC Input and Through sockets

Sample Rates:
Internal: 44.1kHz: 48kHz
External: 40kHz to 52kHz

Max Gain:
Mic: 64dB
Instrument: 36dB

Dimensions:
483 x 366 x 44mm
Weight:
6kg

There are plenty of eight channel I/O devices out there at the moment each offering slight variations on the same

theme. The TubeOpto 8 gives you eight channels of discrete Class A valve mic amps each with XLR and quarter-inch jack inputs and up to 64dB of gain. These feed the built in A/D converters which connect to the outside world via an ADAT eight channel optical output.

The ADAT input in turn feeds eight D/A converters accessed by quarter-inch balanced jacks. Input channels one and two also have front panel quarter-inch jack high impedance instrument inputs so guitars and basses can be easily connected.

ART attack

On removing it from the box my first impression was that it feels substantial. It's deep 1U rackmount case is robust and well finished. ART have gone for a simple black and white screen-printed design and although the front panel is quite full it's easy to read and get to grips with. Each channel has two knobs, one for gain and one for output level. These feel reasonably firm and smooth in operation but quite a few did rub a little against the front

panel, which is an annoyance but doesn't seem to affect their functionality. It's the only obvious negative side of its Chinese manufacture as overall it scores well on build quality.

Channel surfing

Each channel also features three switches for phase reversal, a high pass filter set at 80Hz and a pad switch, which operates on both the Line and Mic inputs. In addition to these channels one and two also have high impedance instrument inputs on the front panel. At the extreme left are two phantom power switches, which enable channels one to four and five to eight respectively. Although this is perhaps done for reasons of cost or to save space I do prefer to see phantom switched individually on channels as this may dictate an illogical mic patch, or in some circumstances prevent the use of a ribbon mic or two in a mostly condenser setup.

To the right are the power switch and the sample rate / sync selector. This enables you to switch between 44.1kHz and 48kHz from its internal clock or to select external ADAT or word clock sync sources. I set up the

Opto 8 and having plumbed it into my RME MADI to ADAT bridge and given it sync from my master clock it was straight on to a bit of recording. In operation it couldn't be simpler. First up were a nylon and a 12-string guitar mic'd with an AKG 414. Setting the output gain to the middle and then bringing up the mic gain it's easy to balance your record level.

The valve circuit will clip if you push the mic gain hard but by pulling it back a little and then adjusting the output a healthy record level is quickly obtained and I liked the basic sound. I know the combination of guitar and mic well and the Opto 8 gave me just what I expected. I then DI'd a bass through one of the front panel instrument inputs. Again it was what I expected – a smooth bass response with enough punch to cut through.

Opt in

As a final test I did a pass of shaker and tambourine. Good clean transient response and a smooth top end. Listening to the D/A I was pleasantly surprised. Good imaging and a clean response. Perhaps lacking a tiny bit in midrange detail but as you can buy four of them for the price of the stereo D/A I was comparing it to really not too bad at all. I like the Opto 8. It's solidly built and no nonsense.

A good deal of thought has gone into its design and although it is at the higher end of its price range it represents good value for money. **FM**

FutureMusic VERDICT

BUILD

VALUE

EASE OF USE

VERSATILITY

RESULTS

A very well thought-out and executed device that will certainly get the job done.





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ADAM
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A3X

"...one of **the best** compact monitors"
(Professional Audio, 05/10)

A5X

"The A5X: a **superb** impression."
(Stereo, 10/10)

A7X

"...better in every **respect**."
(Sound On Sound, 08/10)

A8X

"...a hitherto **unheard** clarity..."
(Audio Test, 02/11)

AX-Series

For complete reviews and more information please go to: www.adam-audio.com



ON THE DVD

WHAT IS IT?

A multi-synthesis plug-in synth with analogue-modelled filters

CONTACT

Who: Tone2
Web: tone2.com

HIGHLIGHTS

- 1 Range of osc options
- 2 Low CPU usage
- 3 Flexible arpeggiator



Tone2 ElectraX | £149

The team at Tone2 garnered praise for their Gladiator 2 synth. **Bruce Aisher** wonders if they can generate the same spark with their new ElectraX plug-in

Tone2 is a German company, perhaps best known for their Gladiator 2 VSTi that introduced the concept of HCM (Harmonic Content Morphing) synthesis. Now they have introduced ElectraX, which boasts a number of different styles of synthesis (13 in total, according to Tone2), and with a simpler-looking interface plus the ability to stack four synth engines at a time.

Clearly the world is now awash with virtual synths, utilising all manner of synthesis methods, and at a wide range of price points (including free). Alongside an obsession with recreating 'vintage' gear in the plug-in realm, with increasing CPU power software developers add yet more features and explore both new synthesis methods as well as revisiting those from the past. This of course, makes it harder than ever to sort the wheat from the chaff in the field of modern plug-ins.

Let's get down to some specifics. ElectraX comes in both Mac (VSTi and Audio Unit) and PC (VSTi and standalone) flavours, with the both 32 and 64-bit compatibility on the Windows version. Installation is quick and straightforward, and authorisation is via a custom keyfile.

Electra glide in blue

On first loading you are presented with the main (and only) editing page, with the top part of the window dedicated to patch browsing and management, overall volume and global EQ and FX. Clicking the Edit button reduces the plug-in window's size to show just these elements. However, most of the interesting stuff happens in the lower portion of this window.

Four 'Synth' tabs (each with an 'On' button) allow you to access the four parallel and identical synth engines at the core of ElectraX. Essentially this

allows you to build a patch from four different layered elements. Each synth layer in itself is built from three oscillators and two filters. Modulation is catered for by four envelopes (two of which are dedicated to Amplitude / Volume and Filter issues), and four LFOs (with one of them being a programmable 16-step sequencer with variable glide time). A Modulation Matrix allows the routing of up to 10 modulation sources to 10 destinations. Finally, we have an Arpeggiator and Insert FX section. Each synth part also has a Settings section for configuring its sound engine, MIDI Channel and velocity / note-number splits.

Check out the Oscillators box for details on the considerable versatility of the ElectraX oscillator session. Whatever the oscillator mode though, you have control over the octave, semitone offset, harmonic ratio (of most use with FM), tone, pulse width, FM amount, keyboard pitch tracking and not range. Each oscillator has its own volume control (they can also be turned on or off individually), and a mix control to determine how much of its output is sent to each of the two available filters.

Both the filters can use one of the 23 available filter types, and each has its own controls for cutoff, resonance and drive (for adding harmonic distortion), as well as separate knobs for keyboard scaling, envelope depth,

volume and pan. In addition you'll find the Analog knob for adjusting the degree of 'hardware circuit-modelling' taking place as well as a Ring Modulator. An interesting feature is the ability to choose between different 'Sound Modes' that can tailor the overall sound to a particular character, such as 'Analog' or even 'Psychoacoustic', but you can also choose between different Quality levels (including a 'Low CPU' option), and a number of Microtuning choices, that can make for a fuller or more 'Analogue' sound. On top of all this sits the Master FX section that includes a simple Vocoder and Surround Encoder among the more traditional options.

Are friends electric?

In use I found ElectraX capable of some interesting and useful sounds. Clearly, some of the preset patches are aimed at showing-off the layered sequencing capabilities of the synth, but with little general usefulness. Once I delved a little deeper though, and started getting into some raw programming the versatility of ElectraX became clear.

However, I can't help but feel that the overall experience was marred by the graphical interface employed by the plug-in. Although re-skinable, none of the factory looks get my vote. As supplied, each of the ElectraX synth layers has its own look and feel, but to see which of them is enabled is not

Oscillators and ElectraX

One area in which ElectraX excels is in its oscillator section, especially when it comes to the synthesis options available. But be warned, the sheer range of choices can be quite daunting to the synth novice, particularly as each oscillator in each of the four synths can use its own synthesis method.

To start with, Oscillator Mode allows you to choose between Virtual Analog, Ultrasaw, Noise/Fractal, Sample and Wavetable types. Within the Virtual Analogue mode alone there is a choice of Virtual Analogue, Frequency Modulation, Phase Distortion, Resonant, Sync, Wavetable, Effects and



Electronic waves, with the PW knob being pressed into service for some selections as an additional editing parameter. Ultrasaw mode generates multiple detuned

sawtooth or pulse waves (in three flavours) with PW used to vary the amount of detune.

Noise/Fractal is complex noise generator with 12 sub-modes including some very interesting and unpredictable 'Fractal' modes, and Sample mode facilitates the loading of WAV files (mono only and only up to 10 seconds long), although no editing is possible from within the plug-in itself.

Finally, Wavetable mode offers single cycle loading (and even resynthesis for longer samples). The possibilities in this section make ElectraX more than just a wannabe Virtual Analogue in the synth stakes and open huge programming options.

always clear, and the artificial 'glow' given to some areas of the interface can be distracting and confusing. Despite a help system that should make the process easier – somewhat marred by the fact that you have to change some values to get feedback on they actually do – and other parameters without dedicated windows, buttons or knobs

are easily overlooked. Ultimately, the attempt by ElectraX to look like a piece of hardware with knobs and LCD screens does not work for me, and undermines the sound generation ability of the synth engine that sits beneath it. On a more positive note, familiarity does make everything clearer, and there is potential for Tone2 to provide improved alternative skins in the future.

Overall ElectraX is a mixed bag, and while its attempts to be a jack of all trades may hide some of the more

interesting aspects of its design, there is no denying that it is a very capable synthesizer and is especially rewarding once you delve beyond the presets. **FM**



The filter on the ElectraX features an Analog knob to dial in some pleasing randomness

SPECS

System requirements

PC: Windows XP, Windows Vista 32-bit or 64-bit, Windows 7 32-bit or 64-bit, Windows ME, Intel Pentium 4 compatible CPU

Mac: Mac OS X 10.4 or higher, G4, G5 or Intel Mac

Both: At least 800MHz CPU and 512MB RAM

Technical specification

PC formats: 32-bit VSTi, 64-bit VSTi, standalone

Mac formats: VSTi, Audio Unit, Universal Binary

Not compatible with Protocols/RTAS

ALTERNATIVES



Native Instruments Massive

£155

Highly-regarded and flexible synth from old-masters of plug-in synthesis, with a well-designed interface and huge range of mod options.

native-instruments.com



Waldorf Largo

£149

A modern take on a wavetable synth, that is also very capable of analogue-style tones.

waldorfmusic.de



Tone2 Gladiator 2

£140

Lacking the layering, extended modulation and oscillator options of ElectraX, but with its own HCM synthesis and a more satisfying user interface.

tone2.com

Once I started getting into some raw programming the versatility of ElectraX became clear

FutureMusic VERDICT

STABILITY



VALUE



EASE OF USE



VERSATILITY



RESULTS



Despite some reservations about the GUI, this is a very capable synth with wide a range of sounds.

Pioneer S-DJ05 Monitors | £500

Pioneer are aiming to unite the worlds of studio and DJ monitoring with their range of S-DJ speakers.

Jono Buchanan plugs in...

WHAT IS IT?

High-quality monitors aimed at producers and DJs alike

CONTACT

Who: Pioneer
Tel: +44 (0)870 600 1539
Web: pioneer.eu/uk

HIGHLIGHTS

- 1 Remote control of rear-panel options is clever
- 2 Clean but robust sound
- 3 Will appeal to DJs and producers alike

SPECS

Type: Bi-amp two-way powered speakers
Tweeter: 2.5cm soft dome tweeter
Woofer: 13cm (5 inches)
Maximum sound pressure: 105dB minimum
Frequency characteristics: 53Hz to 20kHz (±1.5dB)

Amplifier output:
Low Frequency: 45W, High Frequency: 25W
Balanced inputs: XLR, TRS (1/4")
Unbalanced input: RCA x 2
Power consumption: 45W
Accessories: Remote desktop Controller, Link cable, Power cables, Rubber feet x 8

Dimensions:
185 x 258 x 300mm

Weight:
13kg

Pioneer are no stranger to the world of speaker design or to that of DJing and their latest products are aimed at

building a further bridge between them. The S-DJ05 and '08 monitors are speakers designed for the studio and the DJ-alike with a high-quality monitoring signal for the former and some neat trickery aimed at making life in the home booth that much easier.

Overview

The '05 model is the subject of this review and like its big brother, it offers active monitoring. The '05 offers a 5" silver cone on the front with separate 2.5cm tweeter above, while the back panel is unexpectedly busy, with no less than four input sources available

to you. As well as an XLR input, two phono ports are provided, as is a TRS balanced quarter-inch jack input. Buttons on the rear panel allow you to toggle between these input sources (with LEDs on the front panel confirming your current choice), while a level dial can be adjusted to taste.

Like most modern monitors, EQ can be adjusted via High and Low dials and there's a separate button to toggle this tone modification on and off as well as an overall power button. However, the remaining ports on the rear hint at Pioneer's more radical design, namely that of 'remote' control of your settings via a separate device. Via break-out cables which connect to both sides of the stereo mix, the S-DJ speakers ship with a 'desktop' circular remote control which offers a range of

functions. Firstly, in Mackie Big Knob style, it provides a large rotary for level control but, on its rear edge, it also allows you to toggle the EQ of the speakers on and off, as well as mute them altogether.

The remote will also let you choose between input sources, so the great advantage, particularly in the studio, is that you can connect all sources you could conceivably want to monitor and then, with the flick of a switch, cycle through them without any need for re-patching. It's a neat and tidy system and, puns notwithstanding, a pioneering one, especially at this price.

The sonics

All the trickery in the world would be worth nothing if the S-DJ05's offered poor sound quality but fortunately, that's not an issue here. The woofer and tweeter are driven independently via the unit's built-in bi-amp circuit and, as these are speakers primarily aimed at Dance music producers, I was particularly pleased to note the solidity of the bottom end which is impressive, even on this smaller model (its LF cutoff is at 53Hz). The adjustable EQ helps and while in the neutral position I found the top end just a little over-bright, there is nothing serious to report here and certainly nothing that can't be adjusted via the rear tone controls. The mid-range is detailed too, allowing you to pick up harmonics in low-frequency content without this area being too dominated by an abundance of spanning bass below.

All in all, this system really impressed me and it's always refreshing to find companies that are looking to provide solutions for those with diverse musical lives. There are now so many giggering Dance music producers, it makes sense to offer them a practical monitoring solution which is as 'at home' in the studio as it is onstage. **FM**



FutureMusic VERDICT

BUILD



VALUE



EASE OF USE



VERSATILITY



RESULTS



A classy combination of high quality audio and flexible control at an accurate price.

elektron

OCTATRACK

DPS-1 DYNAMIC PERFORMANCE SAMPLER



SAMPLING JUST BECAME a true art form

Instant Sampling And Remixing • Radical Audio Manipulation Possibilities
Real-Time Pitch Scaling and Time Stretch • Next Generation Elektron Step Sequencer
Dual Assignable FX Per Track • Assignable Multi-Parameter Crossfader

FOR THE PRODUCER

With the Octatrack you will be able to treat samples in radical ways. You will appreciate functions like changing the pitch of certain sections of a sample without the sample going out of sync. The extensive audio mangling capabilities paired with the user friendly interface make the Octatrack an outstanding studio tool.

FOR THE DJ

Thanks to the real-time sampling functionality of the Octatrack you can sample your turntable and instantly playback the recorded loops. Treat the captured audio with effects and use the sequencer and the assignable optical crossfader to really add a twist to your set. The Octatrack can be regarded as an extremely flexible second turntable.

FOR THE PERFORMER

Each of the eight stereo tracks can stream gigabyte-large samples which is great if you need backing tracks during a live gig. All samples can still be subject to time stretch and can of course also be processed by the effects or rearranged by the sequencer. The Octatrack is the most capable performance instrument available.

VISIT WWW.ELEKTRON.SE FOR FULL SPECIFICATIONS, SOUND EXAMPLES, ONLINE ORDERING AND A LIST OF RETAILERS NEAR YOU THAT CARRY THE OCTATRACK AND OTHER ELEKTRON GEAR.



SSL Duende Native Plug-ins | from £155

SSL go native with their Duende plugs. **Stuart Bruce** dons his loin-cloth and heads for the audio jungle

ON THE DVD

WHAT IS IT?

Duende in native format

CONTACT

Who: Sound Technology
Tel: +44 (0)1462 480000
Web: solidstatellogic.com

HIGHLIGHTS

- 1 No hardware needed.
- 2 The best Strip and Bus Compressor emulations
- 3 A fabulous sounding set of audio tools

HIGHLIGHTS

Studio Pack (Everything but the X-Verb)
£838

Essentials Bundle (Channel Strip and Bus Compressor)
£359

The Duende hardware-based plug-in system has proved itself to be a highly desirable set of production tools over the last few years. Hardware-based systems can be highly beneficial as they require little if no extra processing power to run, but the trade off is that to run even a single plug you must start by buying an expensive hardware device.

As we all know digital hardware has a really bad habit of becoming obsolete pretty quickly and as processor and memory developments continue to forge ahead the life cycle of a device can be pretty short. With these facts in mind SSL have decided to go native throwing open Duende to everyone without those up-front hardware costs.

So, although there isn't ostensibly anything new, we thought the release of

the Native version gives an ideal opportunity to give you the low-down on all seven plugs and to test that they are indeed the same as the originals.

Channel Strip: £238

This and the Bus Compressor are certainly the most recognisable of all the devices here. Based on the XL 9000 K channel strip it marks the moment when all the great innovations of the 400, 6000, and 9000 series came together. Filters and EQ separately assignable to the dynamics sidechain, an additional hold control on the expander/gate and the bell controls on the HF and LF, which were one of the great features of the original 4000 EQ. As on the console, you can decide where the dynamics sit in the chain and you even get a phase reverse.

Stereo Bus Compressor: £238

If there could be one device that really does define the sound of the '80s and '90s it has to be the SSL Bus Compressor, the audio glue that launched a thousand hits.

It has only undergone one minor change in its history, during the 9000 K period the higher ratio was 20:1 instead of the original and subsequent 10:1. So here it is in that incarnation and it sounds great. 2:1 pumps like it ever did, 4:1 solidifies drums and the 20:1 with its higher ratio gets closer to limiting and, to my ears, is more usable than the 10:1 ever was.

Drumstrip: £155

This is a plug that combines a high and low frequency enhancer, a transient shaper with a gate and the splendid Listen Mic Compressor emulation. This combination allows for radical re-shaping of drum sounds, either on individual elements or across the whole kit. It also works great on plenty of other things, especially crunchy guitars.

Vocalstrip: £155

Combining a very effective de-esser, the novel de-ploser (what you need if you didn't use a popshield and good mic technique), a three-band EQ and a compander, the Vocalstrip gives you a great set of tools to control and enhance vocals. Each element works very well

and the flexibility of being able to re-assign the order makes this a very powerful vocal processing tool.

The drive control in the compander section gives vocals a real edge but works wonders on electric guitars and synths too.

X-Comp: £155

The most flexible of the three compressors in the suite, the X-Comp is capable of subtle mastering tweaks to complete audio character change. With a ratio of up to 50:1, continuous knee adjustment up to 40dB and a maximum gain reduction control it can be as smooth as silk or pump like a maniac.

The comprehensive sidechain filters also allow you to do some pretty impressive frequency dependant

Hardware Vs Native

The first question when going from a hardware to a native system is are the plugs really exactly the same? Duende already has a fairly big userbase so when SSL chose to go native they had to decide how they were going to do it without causing any compatibility issues.

Existing Duende users are being offered a free crossgrade to native but what happens when you pull up an old hardware based session on a native-only system. SSL

decided that would have to be a seamless operation so the plugs had to be identical. Although the codes have been optimised for native use in terms of sound and function, they are the same and all results out in the real world suggest there won't be any compatibility issues.

The other side of hardware based systems is instances. With the hardware version Duende gave very defined numbers of them: 64 or 128

depending on the system installed. With native it can be very different but I tested on an iMac with a 2.4GHz Intel Core Duo and 4GB of RAM and got 60 instances (including six X-Verbs) in Logic with the processors only registering half usage.

Pretty impressive for what today is considered quite a low powered system. It looks like all of that re-coding was well worth the effort and that going native was a good choice for SSL.

SPECS

System requirements

PC: Windows XP (SP2 or higher), Vista 32-/64-bit or Windows 7 32-/64-bit, Intel Core 2 running at 2GHz or higher (or comparable CPU) 2GB of RAM (or higher) VST (32-/64-bit), VST3 (32-/64-bit) or RTAS (32-bit) compatible host

Mac: OS 10.5.8, 10.6.3 or higher (32- and 64-bit Kernel) Intel Dual Core Mac running at 2GHz or higher. 2GB of RAM (or higher) AU (32-/64-bit), VST (32-/64-bit), VST3 (32-/64-bit) or RTAS (32-bit) compatible Host

Copy protection: SSL use Codemeter from WIBU systems to protect their software. You can choose to do it one of two ways. Either your computer has a software 'dongle' or a USB hardware version. If you are staying on the same computer the software should be fine, but if you are moving around the USB dongle may prove useful.

In use it's a joy. Really smooth highs, warm lows and as you would expect great midrange control

fine adjustments to their characters.

The Image control lets you mess with stereo so you can go from straight reverbs to some out-of-

parallel compression tricks too. Taming the high end of a kit while letting the lows breathe or leaving the top end of an acoustic guitar to ring clear while holding back some muddy mids are just two of the possible uses.

X-EQ: £215

Like its dynamic altering brother, the X-EQ is highly flexible and capable of incredible detail. If being split into low- and high-pass filters, low- and high-shelves and six parametric bands isn't enough each band can have a different characteristic (symmetric, asymmetric etc) so you can really build your own EQ to suit the task in hand.

There is also a parallel switch for those fans of old passive Pultec-style designs and even a built in analyser to help you find any problem areas in your source material.

In use it's a joy. Really smooth highs, warm lows and as you would expect from SSL great control of the midrange detail.

X-Verb: £264

The X-Verb is a big complex device with plenty of scope for tailoring very detailed reverb and room effects. It has two principal sections, early reflections and reverb. Each has its own sets of parameters, which allow for some very

speaker experiences. Sounds big and classy and if you get in there and fiddle there are a wealth of wonderful spaces to explore.

End of the Duende

SSL have one hell of a reputation among audio professionals. I have used their products for over 30 years now and so have very high expectations of any new product that they release. There are a lot of emulations out there that come close to the SSL sound but concerning the Channel Strip and Bus Compressor, these are the best I have heard.

As a full suite this is a very special set of tools with which to control and create great sonic landscapes. Now they are native they are more available to everyone than ever before and that can only ever be a good thing. **FM**

FutureMusic VERDICT

STABILITY



VALUE



EASE OF USE



VERSATILITY



RESULTS



Not cheap but at this quality they have very few equals. A great set of creative and flexible audio tools.

ALTERNATIVES



Waves SSL 4000 Bundle

\$650

With great emulations of the 4000G and E-channel strips, the G EQ and the Bus Compressor these are well worth checking out.

waves.com



SSL 4000 Plugs

\$449

A bit complicated as you have to buy the UAD card and then buy the plugs. Only the 4000E and the Bus Compressor are emulated, but they do sound good.

uaudio.com



URS 1980 Compressor and S series EQ

\$160 each

A different type of compressor but good quality and very usable.

ursplugins.com



Expert Sleepers

ES-3 | £186

Struggling to bridge the gap between hardware synths and software? **Greg Scarth** investigates a revolutionary new approach

WHAT IS IT?

Control software and interfaces for linking CV synths to DAWs

CONTACT

Who: Expert Sleepers
Email: os@expertsleepers.co.uk
Web: expert-sleepers.co.uk

HIGHLIGHTS

- 1 Silent Way includes a range of CV generator plug-ins
- 2 Excellent integration of hardware and software
- 3 Incredible options for controlling modular synths

PRICING

Silent Way: £32
ES-2-2: £71

For a one-man company, Expert Sleepers have certainly been busy over the last few years. Not content with creating

leftfield plug-ins such as the Augustus Loop delay and excellent Minky Starshine additive synth, Andrew Ostler has turned his hand to revolutionising the way we integrate CV-controlled synths with our DAWs. The Silent Way plug-in suite essentially consists of utilities for generating control signals to be sent to analogue synths, but it goes

way beyond the typical CV and gate features of most hardware alternatives. Not only does the software offer options that owners of traditional MIDI-to-CV converters can only dream of, but Expert Sleepers' own range of Eurorack format modules offer input and output options to suit everyone. So, armed with a couple of pre-MIDI analogue synths and a stack of modular goodies, I set about seeing what it could do.

In a Silent Way

The heart of the product range is the Silent Way software plug-in suite, available for Mac (AU and VST) and PC (VST). Following hot on the heels of MOTU's Volta software, the concept is remarkably simple, allowing you to generate control voltages in your DAW and send them to analogue synths, modular setups or CV-controlled effects via your audio interface. The ability to sequence CV synths is a selling point in itself, but Silent Way offers so much more than just basic MIDI-to-CV conversion. However, before we start using the software there are a couple of hardware questions we need to answer.

Since most audio interfaces block DC voltages at their outputs, Silent Way is picky about which hardware can be used straight out of the box (a full list of

compatible interfaces is available on Expert Sleepers' website). Alternatively, Silent Way's AC Encoder plug-in avoids the needs for DC-coupled outputs but requires a bit of DIY work to convert the signal back into DC for your synths. If you're not confident following the instructions to wire up cables or passive breakout boxes with built-in rectifiers, Expert Sleepers offer the ES-1 module, an active breakout box in Eurorack format which converts up to eight analogue outputs into DC control voltages suitable for your synths. It'll set you back £131 with DSUB input or £143 with quarter-inch jacks.

However, we decided to test the new ES-3 module, which works on the same principle as the ES-1 but accepts an ADAT lightpipe digital input rather than analogue signals. For those of us with a spare ADAT output on our interface, the ES-3 is almost certainly more convenient than tying up eight analogue outputs. It's also one of the most friendly plug-and-play pieces of hardware you'll ever have the pleasure to use. Simply hook up the Eurorack power cable, connect the Lightpipe input and everything works. If only all hardware was so simple.

Remote control

So, with the outputs sorted, it's time to get started with the software. Silent Way includes a total of 11 plug-ins that offer everything from the most simple DC voltage generators to complex options which will have you thinking about the potential of your analogue gear in entirely new ways. The Voice Controller is one of the more advanced plug-ins but it's also where most of us will probably start, allowing our DAWs to generate CV and gate control signals from a MIDI note input.

The initial tuning process demonstrates Silent Way's straightforward, logical approach to integrating software and hardware: connect the plug-in's CV output to your synth, route the output audio signal back to the plug-in's input and then hit one of the calibration buttons, either for the standard V/Oct mode or the less common Hz/V system depending on the unit to be tuned. The plug-in automatically sends a CV sweep to your VCO, analyses the frequency of the resulting signal and generates a calibrated tuning setup in just a few seconds. I tested Silent Way with a Roland SH-101, Korg MS-10 and a selection of modules and found tuning to be fast and trouble-free.



In addition to the basic note and gate signals, Voice Controller also outputs three multi-stage envelopes, a trigger pulse and a velocity CV, with all of the signals routed to six different outputs via a matrix mixer panel.

Complete control

Expert Sleepers can even generate polyphonic CV outputs for controlling multi-voice synths. Converting directly from sequenced notes to CV and gate without an intermediate MIDI stage ensures that timing is rock solid and there are no digital quantisation issues. In a modular setup, the Voice Controller plug-in alone could probably replace a dozen or more modules. Other plug-ins on offer include the self-explanatory LFO, with a wealth of options way in excess of anything I've ever come across in the analogue world, and the Step LFO which allows CV values to be sequenced in tempo-synced steps.

Plug-ins can also be chained together, so by running the output of the

CV Inputs

The focus of Silent Way is mainly on generating CV signals to send out of your DAW, but that's only half the story. The software also includes a number of plug-ins designed for processing CV signals sent into your DAW from hardware. However, getting CV signals into your DAW isn't as easy as you may hope. Audio interfaces are designed to block DC signals, so simply connecting a CV output from a synth to your interface won't work.

It's possible to use Silent Way's CV input plug-in in conjunction with a VCA module to encode a CV signal to AC and then decode it again in software, but the much

easier option comes in the shape of Expert Sleepers' ES-2-2 module.

Priced at £71, this tiny Eurorack module takes two 3.5mm inputs and converts the signals to audio on quarter-inch outputs. Hook them up to line inputs on your audio interface and the Silent Way CV Input plug-in will convert the audio signals back into CV in your DAW.

It's nowhere near as essential as the ability to send CV out, but being able to record CV to automate parameters or use a hardware module to control plugs makes the ES-2-2 a capable tool in its own right. Worth considering if you're investing in Silent Way.



SPECS

ES-2-2 and ES-3: Eurorack modular format. ES-3 requires audio interface with ADAT Lightpipe output

Minimum Requirements:
Mac: OS X 10.4.11 or higher, AU or VST host.
PC: Windows XP SP2, VST 2.4 host

Silent Way opens up sound design options that'd be expensive, difficult or impossible any other way

Step LFO to the Quantizer it's possible to tune the LFO's pitch output to pre-defined musical scales or turn a smooth LFO triangle wave into a jagged digital staircase. The potential to get creative is massive. Some of the plug-ins offer a huge range of controls to fiddle with, but the well-designed software remains easy to use if all you want to do is access the basic features.

For those who want to dig deeper, the documentation is also excellent, explaining every part of the setup process and each aspect of operation in clear steps.

Verdict

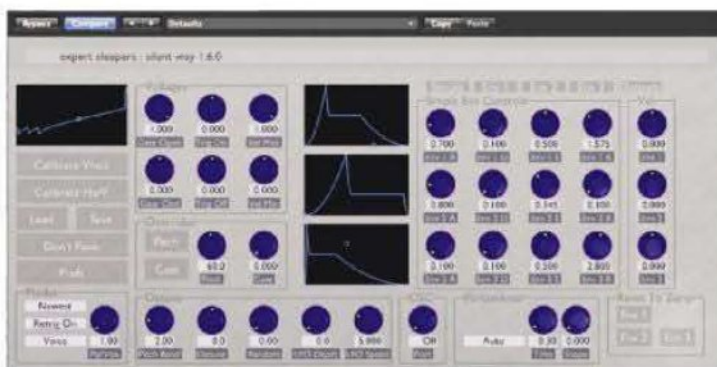
Owners of pre-MIDI analogue synths are sure to be attracted to Silent Way's Voice Controller options, but semi-modular or modular synth owners will benefit the most from the more advanced features, as will owners of CV-controlled effects such as MoogerFoogers. If you've got a DC-coupled interface and some CV hardware, Silent Way is a no-brainer at just £32. The voice control features alone may not quite justify the expense of investing in the Expert Sleepers hardware, but the price does compare

favourably to a multi-channel MIDI-to-CV converter.

However, if you've got a modular synth to take advantage

of the more advanced features, Silent Way and an ES-1 or ES-3 starts to look like a real bargain.

With the Eurorack format becoming more popular, cases and power supplies are easily available and I'm sure quite a few people will be tempted into getting started with modular hardware thanks to Expert Sleepers. Silent Way opens up control options and sound design possibilities that would be expensive, difficult or even impossible to achieve any other way. It's a fantastic new approach to controlling analogue Control Voltage hardware. **FM**



Expert Sleepers' Silent Way plug offers a conventional approach to CV control

FutureMusic

VERDICT

STABILITY

VALUE

EASE OF USE

VERSATILITY

RESULTS

Silent Way could change the way we think about synths and the hardware makes it easy to integrate.

ALTERNATIVES



MOTU Volta

£139

Owners of interfaces with DC-coupled outputs should also check out MOTU's own Volta software, which can produce many of the control signals Silent Way offers.

motu.com



Kenton Pro-2000

£320

Kenton's MIDI to CV products are the first choice for most vintage synth enthusiasts, and with good reason. The Pro-2000 is the top dog, with two CV/gate outputs, two LFOs and six auxiliary CV outs.

kentonuk.com



Doepfer MCV24

498 Euro

With 24 CV outputs all controlled via a single MIDI input, Doepfer's MCV24 is still worth considering, but with menu-based programming rather than control software it's not as user-friendly as Silent Way or Volta.

doepfer.de

GarageBand for iPad | £2.99

Synths, guitars, drums and eight tracks of recording?
Jon Andrews searches for a reason not to buy it



WHAT IS IT?

A one-stop solution to making music on iPad

CONTACT

Who: Apple
Tel: +44 (0)845 600 1683
Web: apple.com/uk

HIGHLIGHTS

- 1 Amazing guitar emulations
- 2 All-in-one synths and drum machines
- 3 Full eight-track audio recorder with effects

SPECS

Compatible with original iPad or iPad 2
Eight audio tracks
Five guitars
Eight drum kits/drum machines
10 piano/clav/keyboard/organ tones
72 synth tones
10 reverb types
8 delay types
One delay and reverb per arrangement
Library of Apple Loops
Phaser, Distortion, Chorus (for guitars only)
Smart Keyboard, Guitar and Drum instruments for simple single note chords, strumming and beat programming

While it's obviously heavily skewed at getting amateur music makers up to speed,

beneath its kid-proof surface GarageBand for iPad hides a power that pros will appreciate.

At the top level there is a DAW-style arrange view that works surprisingly well with the touch and drag iPad interface. There are simple track levels, mutes, solos and pan, echo and reverbs selectable from a short list of the usual suspects. And the good news is that the first iPad (which we used for this test) is more than up to the job of running a full eight-track project.

Track record

Once you hit 'plus' to make a new track your next job is deciding what

instrument you want on it. This is the home to all the fun with guitars, synths, keyboards, basses and drums to play with. They've even lobbed in a bunch of Apple Loops to get you going.

Sonically the tones on board are up with typical GarageBand or Logic presets though the effects section is limited to delays and reverbs (while the guitars have switchable distortion and chorus). This means you're not getting the massive 'track-ready' sounds-plus-channel strip you get in Logic but as raw material this stuff is well thought out. Have a listen to the examples on the disc. That said, 16 sounds in each of Synth Classics, Bass, Leads, Pad and eight in Keyboards and FX isn't a great deal, and the simple cutoff, resonance, attack and release settings don't go far enough for tailoring sounds to your

precise needs. This means that – for all but the most pious of producers – GarageBand can never be more than a sketchpad for your compositions.

Pad play

Similarly simple is the lack of DAW-style note editing. If you play it wrong you have to do it again. And even when you do get your notes right the clever (but unpredictable) velocity sensitivity can throw a spanner in the works. It's far better therefore to plug in your own keyboard via that USB camera connection kit therefore. And worth noting that Korg NanoKeys work without any need for external power. Bonus.

It's interesting that for all its 'speed and simplicity' you're always forced to 'play' your instrument, be it actually tapping the on-screen drums or holding notes on a keyboard. This isn't a 'computer that makes music', this is a 'computer pretending to be instruments, teamed with a time-correcting tape deck'. It's a subtle distinction, but one that means that there's no dotting notes around a grid Tenori-style in the search for happy accidents. You 'play' GarageBand in a very conventional, musical way.

Paradise Garage

At its simplest level it's a wonderful eight-track tape deck. Jack in guitars or mics via the iRig-style interfaces and you're off. Add in synths, drum machines and you've a bit of software that's the perfect introduction to music making. Meanwhile pros will have great fun and inspiration strumming the 'Smart Guitars' and programming full-sounding synth frameworks ready for export (via email) into GarageBand or Logic as audio or – via an imminent update – workable .band files.

Come on, it's £2.99 for heaven's sake! You'd pay that for a voice recorder. Buy it and dare to ponder what they'll come up with next... **FM**



FutureMusic VERDICT

STABILITY



VALUE



EASE OF USE



VERSATILITY



RESULTS



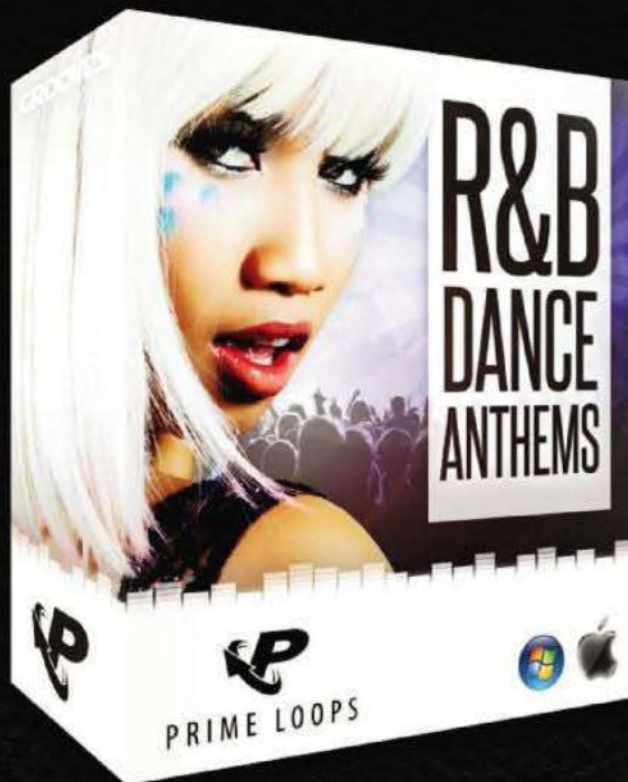
An amazing introduction to music-making and a great pro sketchpad too.



PRIME LOOPS

WE'RE IN THE MIX

Prime Loops provide award-winning sound libraries, fresh in-tune with the evolving music scene. We are an extremely passionate team of engineers, sound designers & DJs, hailing from London, UK



LIKE IT'S DYNAMITE!

When you're in the business of creating the cutting edge of next-level dancefloor shakers, you know you can rely on Prime Loops to deliver you only the hottest material!

"R&B Dance Anthems" is the biggest, most current and epic sounding song-writing package available on the market today. These are completely chart-ready songs, split into separate tracks for remixing, laying down vocals or mashing up with any of our other Prime Loops sample packs. Feel the energy fill the air when you raise the roof with this full-on collection of super-modern chart ammunition.

£19.95



RASTA VOCAL SAMPLES 2

You know how we run tings, seen? Prime Loops bringing the fire once again, this time burnin' hotter than a volcano! We've taken three top notch ragga MCs back into the studio for another blazing lyrical session, giving you a full array of original shouts and fearless phrases fit for any bass-heavy backing track.

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TRAP STARRZ

You are now rolling up front with the "Trap Starrz", the deepest crew on the block, on a mission to dominate the streets with the freshest sounds around. Prime Loops once again provide you with only the crispest, crunkiest jams for your mixing and remixing pleasure.

£19.95



HARDER FASTER LOUDER

Prepare yourself for "Harder Faster Louder" - the ultimate motherload of maximal madness that goes beyond EVERYTHING you've ever heard before! What are you waiting for? Fasten your seatbelt, push the throttle fully forward and feel the adrenaline!

£21.95



DUBSTEP ARENA

Feel your heart go boom as you enter the "Dubstep Arena", a sweat-soaked showcase of the sickest halfstep beats, dramatic tranced-out chord build-ups and fat wobbly bassline devastations you've ever added to your library.

£21.95



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www.primeloops.com

Mini Reviews

The latest musical bits and pieces racked and rated



Samson Expedition 308i PA | £400

samsontech.com

This portable system packs a fair amount of power and flexibility into its small and smart design. Two passive speakers are powered by a nifty 300W mixer amp, which cleverly slots into the back of one of the speakers, while the other holds the cables and kettle lead in its rear.

Two grooves allow the speakers to slot together face to face, and make carrying the entire system easy. The

quality is nice and punchy, but obviously limited by size when it comes to real low-end frequencies. Still it will happily power a small gig or make a great monitor setup for DJs, bands or Electronic acts.

The mixer sports four mic pres (switchable to mono line inputs), two stereo inputs, phono record out and a 1/4-inch jack monitor out and master speaker out. There's only two band hi-low EQ, but you'll rarely find

yourself touching it as the speakers can't take too much low end.

Lack of panning means that you have to use the stereo inputs and can't pan left and right on the mono though the inclusion of an iPod dock is a great bonus.

After DJing with this at a houseparty I can whole-heartedly recommend it. *Chris Barker*

9/10

Pickmaster | £20

gizoo.co.uk

Never run out of guitar picks again with this hole-punching gizmo! Line up any piece of thick card, or ideally credit card-style plastic and you can punch out a guitar pick shape instantly.

It's not cheap but once you've made around a hundred picks, you can relax knowing that your pickmaster has paid for

itself. Unfortunately extracting your new pick from the machine requires some strong and lengthy fingernails but that shouldn't be a problem for its guitarist target market. Easily the best use for a Nectar card ever. *Chris Barker*

7/10



IK Multimedia

iKlip | €30

ikmultimedia.com

The iPad's a great music tool, with apps for synths, sequencers, DJing, lyrics, and of course, guitars. The problem comes at the gig, though – you need to put it somewhere safe but accessible. IK Multimedia's solution is the iKlip, a burly-looking mic stand adaptor, made of impact-resistant thermoplastic, and coming in at an actually-not-burly 240g (IK make the Amplitube guitar amp apps, by the way).

Simply undo the oversized plastic knobs, separate the clamp, then attach it to a mic stand, whether it's upright, boom, or table-top style – I tried all of these, and it worked fine. The iPad slides into the 'X' shaped holder, and sits tight, with all ports accessible, whichever way you insert it – it's well-engineered, but I'd like some rubber bumpers between the holder and the iPad. You should get a working angle that suits you – loosen the frontmost knob and move the pad to a new angle, then lock it down. Less conveniently, if you want to rotate the iPad from landscape to portrait, you have to remove the iPad, then use a screwdriver. Hmm.

That said, the iKlip's a very good idea. Recommended for singers, musicians, presenters and DAW users. *Martin Delaney*

8/10



Tech House and Minimal | £39

loopmasters.com



When a new Wave Alchemy sample collection arrives in the FM inbox we expect big things.

This 125-130bpm collection is one of the company's most versatile yet, with a slick, professional sound that's restrained enough to fit into a variety of House and Techno production styles. The 930MB of content includes a total of 1340 samples, from bass loops and drums to tempo-synced FX and multi-sampled analogue synth patches. The collection is available in all the major 24-bit formats, along with sampler patches for Battery, Kontakt, NNXT, Halion, EXS24 and SFZ. With the release of Tech House and Minimal, the Wave Alchemy boys have delivered the goods yet again. Outstanding.

Greg Scarth

9/10

Alien Skies: Cinematic Ambiences 2 | £92

timespace.com



Following on from the success of Dark Skies, Zero-G return with the second release in the Cinematic Ambiences series. The focus here is on ethereal pads, dramatic soundscapes and portentous FX. The 4.1GB of samples are provided in Acidized WAV and AIFF format, with EXS-24, NNXT and Kontakt patches also supplied. There's no doubt that most of the content is more suitable for soundtrack composers than musicians, but the quality of the sounds is second to none. Not for everyone, but if you're looking for a good all-round ambient sample pack Alien Skies should definitely be on your list.

Greg Scarth

8/10

Commercial RnB: Trance & Dance Vol 1 & 2 | £25 each

producerloops.com



With the huge House and Trance influence on modern chart R'n'B it's unsurprising that Producer Loops have begun to develop collections aimed specifically at this growing market. The Commercial R'n'B sample packs each comprise five construction kits focusing on up to the minute Urban styles – think Dance-influenced uptempo tracks in the vein of recent hits by the likes of N-Dubz, Taio Cruz and the Black Eyed Peas. As usual for Producer Loops, absolutely every major format is available and individual construction kits can also be purchased separately. With not many alternatives available in this particular style this could be just what you're after. **Greg Scarth**

8/10

Progressive Electro House – Seamus Haji & Paul Emanuel | £35

loopmasters.com



The latest instalment in Loopmasters' 'Artist Series' comes fresh from sought after remixer/ producers Haji and Emanuel. As you would imagine this pack is pointed squarely at the House crowd so you get swelling pads, four to the floor beats and bass lines that that really swing and bounce.

700MB-plus gives you plenty of raw material (the drum sample library includes 60 claps!) and there's no less than 46 ready to play patches for those of the soft synth disposition. A healthy dose of bass tones, 'Sidechained Progressive FX', and chord stabs ensures that if your House track is missing some special magic it's highly-likely that you'll find it here.

Roger Watson

8/10

Tech House | £39

soundtosample.com



A startlingly effective batch of track-ready loops and hits. As ever Sounds To Sample have nailed a genre perfectly and

the loops on offer here range from great, full-frequency jumping-off points to entire rhythm sections in their own right. The accent is on massive bottom ends, bizarre noise and vocal snippets and crazy swinging top end. There's some great retro, glitchy vocal chunks, super-deep bass and full-on arms in the air, portamento crazy Dutch party-style breaks. With drum loops, bass loops, melodic synth loops and hits vocals and FX it's impossible to not come away from this pack inspired and ready to get it going on. Excellent. **Daniel Griffiths**

10/10

Drums and Bass Vol. 5 – Total Science | £35

loopmasters.com



Total Science – otherwise known as Paul Smith and Jason Greenhalgh – have recorded on just about all of the big D'n'B labels, and get name checked by the likes of Fabio and Goldie. Clearly there is some pedigree here, and at 1.2GB it's not lightweight. Neither are the basslines! Up in the 171-176bpm realm you'll find one shots, loops and 92 (yes, 92) patches. This is a well-stocked drum and bass toolkit that screams to be used, whether powering your D'n'B, Dubstep or Breaks. You've always said you'd go there didn't you? Well no excuse now! **Roger Watson**

9/10

PRIME LOOPS

WE'RE IN THE MIX

Prime Loops provide award-winning sound libraries, fresh in-tune with the evolving music scene. We are an extremely passionate team of engineers, sound designers & DJs, hailing from London, UK



BIG PHAT WOBBLE BASS

Oh my gosh! You already know that London-based sampling dons Prime Loops constantly deliver top notch material, but this dubstep sample pack is simply off the scale. Are you ready to destroy car stereos and flatten every club to the ground? Then this one's for you!

£17.95



SMOOTH KEYS

Whether you want to beef up your productions with some tasty soul flavours inspired by the likes of Herbie Hancock or Stevie Wonder or enhance your compositions with some contemporary pop coolness, we deliver you all the right ingredients to keep it real!

£17.95



DA SOUND OF BOUNCE

This brand new, mainroom-ready sample pack experience delivers over 300 sidechained, gated synth loops & patches, gritty electro basslines, pounding drum loops, hard-hitting drum shots, powerful FX plus a large selection of full-fat vocal samples, including energetic call-and-chant group shouts!

£24.95



RAZOR FX

This cutting edge collection has been created specifically for elite music producers, sound designers and soundtrack composers. If you are looking for world class, razor sharp effects, this comprehensive library will deliver the tools you need to streamline your production workflow.

£16.95

FutureMusic

Readers get 15% Discount
with discount code FM15

www.primeloops.com

Q&A

Our panel of experts answer your music-making questions, from hardware issues to software ideas, with tips and tricks along the way

Thunderbolt hits out at USB 3.0

Oliver Donaldson asks:

Q I've been thinking about getting a new audio interface for a while, but before I spend any money, I wanted to check on the situation with USB 3.0 models. Obviously, I want to future-proof myself as far as possible so I was considering buying a USB 3.0 card for my PC and then a compatible audio interface, but as far as I can tell, there aren't any.

Could you explain why and tell me if any are in the pipeline? Surely they'd give better performance than USB 2.0 models?

Mark Gyver replies:

A USB 3.0 audio interfaces aren't here yet, and it remains to be seen whether they'll ever arrive (in significant numbers at least). Things are far from clear-cut, not least because a rival standard from Intel called Thunderbolt recently made its debut on Apple's new MacBook Pros. This promises transfer rates of 10Gbps in both directions, which is double that of USB 3.0. What's more, it may well offer some degree of backwards compatibility: it's been reported that both USB and FireWire peripherals will be

connectable using adapters, though it remains to be seen how this will work with audio interfaces.

Does this mean that Thunderbolt will become the new audio interface standard, then? Again, it's hard to say, though it's worth noting that both Avid and Universal Audio have already indicated they're keen to explore the technology.

However, it's also worth asking whether most musicians will really need Thunderbolt's high-speed capabilities? The vast majority of us are perfectly happy with the performance of our USB 2.0 or FireWire devices, after all. This being the case, I wouldn't worry about waiting for the next standard to emerge – if you want a new interface, just go ahead and buy one.

PA on a budget

Dave Lawler asks:

Q I have a very small budget of £300 max and need a powered speaker that I can use for playing bass and keyboards, vocals through live. Something that's got plenty of bass and is loud but has great sound quality at the same time!

It would be great if it were portable as I don't want to do my back in as my keyboard is already heavy enough. Am I being unrealistic

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 expect something to fit the bill at this price?

Dan Goldman replies:

A Well, let's have a look at some options but first here's a disclaimer: as with most audio equipment, you do get what you pay for, so just to let you know not to expect anything outstanding for this kind of money, though you can certainly get something very decent. You've already highlighted that you'd like something that can handle bass well, so immediately I would direct you towards a speaker with a 15" woofer as these can handle bass a lot better than a single 12" speaker in general. Keep in mind that keyboards can kick out a huge frequency range so it's worth getting a 15" speaker.

In terms of power rating, something around 400W will probably do the trick for you, though if you want louder you probably need to up your budget. So here are my recommendations. First off is the Mackie Thump 15. This is the budget end of Mackie's PA range but nonetheless is a very decent speaker provided you don't push it too hard in terms of level or the amount of bass you put through it.

On the whole though, they sound great and kick out a fair old punch, plus they are very light at only 36lbs and have the addition of a three-band EQ. One downside is the input is XLR only, so you'll need to buy some jack to XLR leads to go with it. For the money though, it's pretty hard to beat at around £270.

Next up, check out the Samson Auro D415. Again this is a 400W 15" speaker but this time with only two-band EQ. On the upside though, this one has a normal jack input as well, saving expense on new XLR to jack leads. This speaker comes in at £299. 'Alto' also make a speaker worth checking – the TS115A. It's a good 400W speaker, though it's a simpler affair with no EQ onboard. Finally, the Behringer B215D is a good speaker for the money. It's louder than the Mackie Thumps and cheaper but only has a two-band EQ.

Unfortunately, your options are pretty limited at this budget but the best bet is to get yourself down to your local music shop, take down your keyboard and bass and try out as many of the above as you can as it's the only way to really get a definitive view. Personally speaking, my money

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**



Though it's not monophonic, the Memorymoog certainly doesn't lack in low end



Poly Synth for Bass

Phil Stavelly asks:

Q Something's been on my mind recently. I've been wondering whether a poly synth is capable of sounding as good for bass as a mono synth? I'm under the impression that you can't get as punchy sound with a poly but I'm not quite sure why this is? Is it something to do with the oscillators and the way they work or something else completely?

Dan Goldman replies:

A This is a great question and the answer is in the subtle differences in signal path architecture between an analogue mono and

analogue poly synth. Generally, the signal paths are very similar between monos and polys but more gain/headroom in the circuitry is needed in a poly synth to accommodate the extra frequencies that come from playing several notes at once, as opposed to playing just one note at a time on a mono. Whereas a mono synth can use up all the available headroom of the filter and amplifier gain stages when playing just one a note (and is optimised for this) a poly synth has to fit up to eight notes into pretty much the same amount of headroom/space. As a result, polys can sound a little weaker for bass

(particularly if left in poly mode) as the overall output level is often much lower than an equivalent mono synth pushing its gain/headroom to the max. However, it can be a different story when mono or unison mode is engaged on a poly, as all the oscillators and filters are stacked on one note, but still, the amount of bass and punch available depends how efficiently the poly's mono mode uses the available headroom/gain, plus of course the quality of the oscillators, filters and envelopes onboard.

Many dedicated monos (such as the Minimoog) sound great because of the way they use the headroom available and push the gain stages in the amp and filter circuits, giving some clipping and a punchier and almost compressed sound. This is a key element of many classic mono synth sounds. Many polys sound great

in unison mode too and get close to dedicated monos but in general I've found that you'll get a better bass sound from a dedicated mono rather than from a poly in unison mode – though there are some exceptions of course, MemoryMoog's being one, as my speakers will testify!

So there you have it, not a definitive answer by any means but it's basically all in the design of the circuits and the gain staging/ how hard the oscillator levels can push the amp/filter circuits, the general design of the synth's signal path and how the different elements in the circuitry interact. The harder the oscillators push the circuitry, the more harmonics and saturation, which in turn adds up to a richer/punchier bass sound. Monos generally do this more efficiently. Hopefully this clears things up for you!

is on the Mackie Thumps as they really do pack a lot in for the money, sound great and are light enough too.

How do I fix my 'broken' Logic Studio controller?

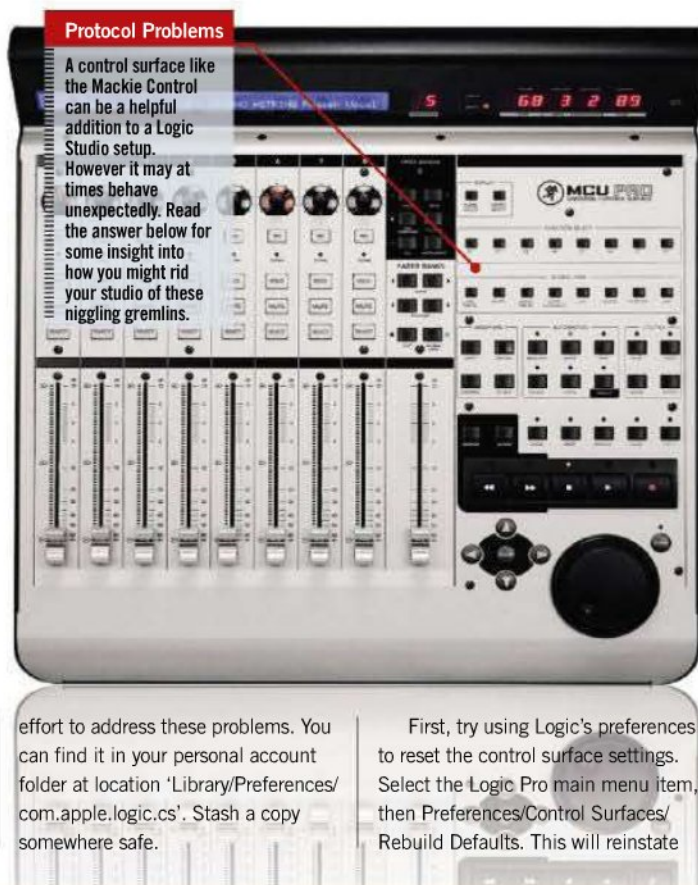
Matt State asks:

Q I've recently added a Mackie Control to control Logic Pro 8. The set up went smoothly and everything seemed to work fine for a while but now its acting oddly. I've tried reinstalling Logic Pro but that did not help. Any suggestions?

Doug Kraul replies:

A Logic maintains a special configuration file that contains various settings related to currently assigned control surface devices. This file also contains information specific to the status of each controller at the time Logic last ran. The file is crucial to proper control surface operation – errors or corruption can cause Logic to behave erratically.

You should make a backup of this crucial file before you commence any



effort to address these problems. You can find it in your personal account folder at location 'Library/Preferences/com.apple.logic.cs'. Stash a copy somewhere safe.

First, try using Logic's preferences to reset the control surface settings. Select the Logic Pro main menu item, then Preferences/Control Surfaces/Rebuild Defaults. This will reinstate

the out of the box assignments. Please note that it will also cancel any custom setup you might have done. Those are remembered in 'com.apple.logic.cs' and can only be manually reinstated.

If 'Rebuild Defaults' does not eliminate Logic's strange behaviour then the next step is to try Preferences/Control Surfaces/Setup... Delete the already assigned existing control surface(s) and then have Logic automatically find your control surface(s), or manually assign them.

Often one of these steps does the job, but not always. As a last resort exit Logic Pro and locate the previously mentioned 'com.apple.logic.cs' file. Delete it, then empty OS X's trash. Restart Logic and redo the control surface set up. Perform any desired customising then exit Logic immediately. This will save the new configuration to 'com.apple.logic.cs'. Save a copy in a safe place. That way if you experience problems in the future you can simply replace 'com.apple.logic.cs' with the saved version and get back to making music.

What's With All The Negativity?

Samuel Fleur asks:

Q Some of my software instruments have a switch to turn an envelope negative, while others have envelope amount controls that can be plus or minus. What does it mean for an envelope to be negative, and what is that used for?

Doug Kraul replies:

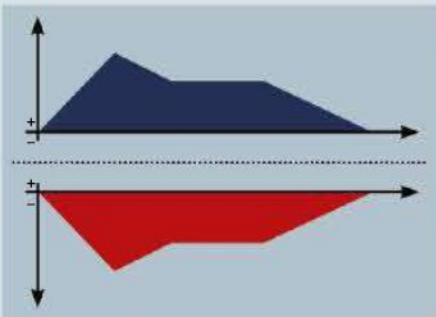
A Unless you are brand new to the synthesis game you already know that envelopes and LFOs are examples of control sources that are used to change (modulate) various synthesis settings. What you may not

realise is that even the panel settings like filter cutoff or resonance are also a type of control source. Internally, the synth does not care whether the control source is a panel control or an envelope. It combines all of the various control sources and the result determines the setting's

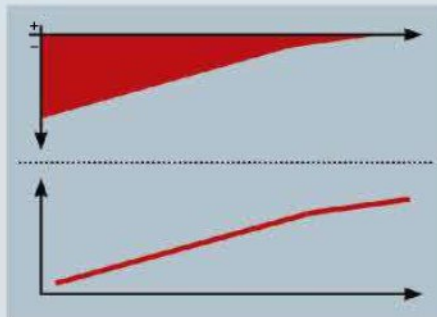
value. It is within this expanded meaning of a control source that a negative one starts to make sense. If you applied a negative envelope to the filter cutoff frequency, it cannot start at 0Hz and take it negative. However, set the panel's cutoff control to 1kHz and

then the negative envelope has utility – it decreases the cutoff frequency and, when released, allows it to return.

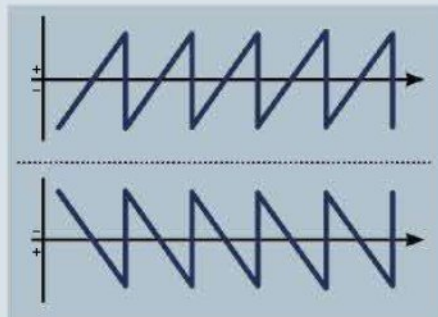
Negative control sources, or positive ones applied through a negative amount, can be quite handy for various synthesis tricks. Let's look at a few examples.



1 A positive envelope (blue) starts at zero, climbs to its peak value, then ultimately returns to zero. The negative envelope (red) also starts at zero but instead reduces towards its most negative value. Combine a negative envelope with other positive control sources to dynamically reduce a synthesis setting.



2 Negative filter modulation is often used with high-pass filters. Here the attack is fast, which immediately lowers the cutoff to allow more bass through. As the envelope decays the sound thins out as fewer low frequencies are passed.

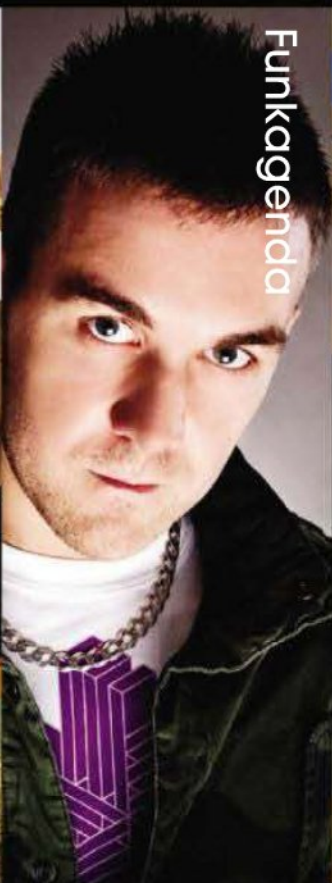


3 Combining drum parts, chords, and melodic elements One handy trick is to use a negative control amount to 'flip' an LFO waveform. Here a rising ramp is transformed into a descending one. Remember this if you need a down ramp LFO but your synth lacks one.

PrismSound



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Joshua Blair and Mark Ronson

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MIDI or OSC?

Harry Tomlinson asks:

Q I've just bought myself a copy of Logic Studio and for my next purchase I'm looking at a control surface for it (I want to use this for mixing, plug-in control etc). One of

the things I've heard about Logic is that it's compatible with OSC, which some people seem to think is better than MIDI. So, I was thinking that maybe I should buy an OSC-compatible controller instead of a MIDI one. Could you explain the benefits of OSC controllers and make

some recommendations as to which I should buy?

Mark Gyver replies:

A As a format, OSC (which stands for Open Sound Control) is certainly capable of doing things that MIDI can't, but it's a bit

simplicistic to say that it's 'better'. Fans of the network-based OSC point out that it offers enhanced performance and higher resolution in comparison to MIDI, but in your case, I can't really see much point in debating the finer technical points.

Yes, Logic offers support for OSC (as do the likes of Reaktor, Max/MSP, Traktor and Digital Performer, in case you were wondering), but the vast majority of controllers out there (particularly of the sort that I suspect you're looking for) are MIDI devices and don't suffer from being so. One notable exception is JazzMutant's multi-touch Lemur, but this is expensive, probably does way more than you need and is in the process of being discontinued, so I suspect it won't come under consideration. Another product I should mention is TouchOSC, an iOS OSC-compatible controller app that's now supported as a control surface within Logic. This could be worth a look if you've got an iPhone, iPod touch or iPad.

Driven to extraction

Alan Davies asks:

Q You've probably been asked this question before, but I haven't been able to find a decent

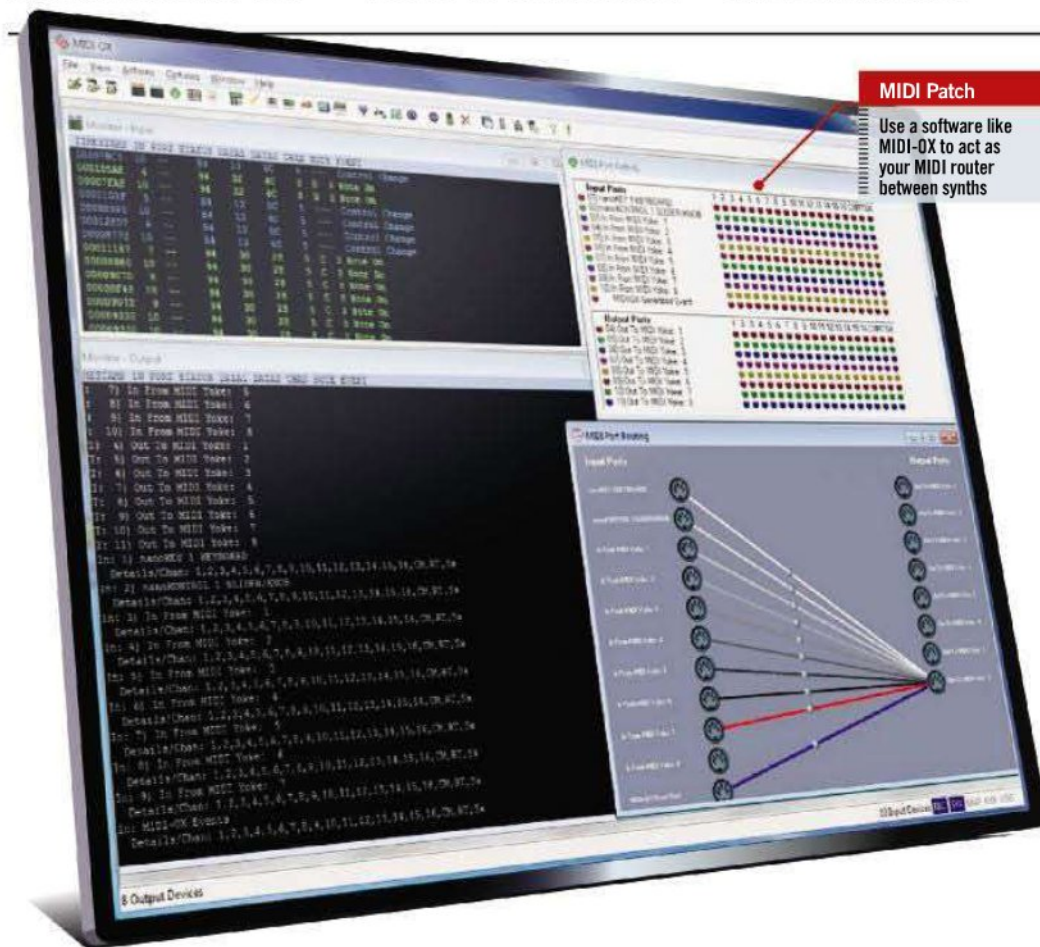
answer: is there any way of extracting the individual parts of a song once it's been turned into a stereo audio file? There are lots of tracks that I'd like to do this to. Would Melodyne Editor do the job for me?

Mark Gyver replies:

A The short answer is 'no', but there are products that might be of interest. Melodyne Editor contains

a technology called Direct Note Access. What DNA isn't really designed for is analysing and breaking apart complete tracks, but – somewhat surprisingly – there's a new piece of consumer-level software on the market that promises to do exactly that. It's called Hit 'n' Mix and its developers claim that it can indeed 'tear apart' a mix. Notes can be copied, moved and deleted, and their pitches and durations changed. What you can't do is automatically export stems which may put you off.

As I say, Hit 'n' Mix isn't currently a pro-level app but there's a free version that you can try (download it at hitnmix.com) so, providing you've got a PC, you might as well have a play and see what you think.



Software MIDI Patchbay

Gretch O'Neal asks:

Q I use a Roland MV-8800 sequencer to control my half dozen or so hardware synthesizers. Most of these synths are multi-timbral. I need a way to not only connect all of the synths but to control which synths respond to specific MV-8800 MIDI outputs and channels. I'd like to accomplish this without constantly fiddling with each synth's configuration menu. I used to have a hardware MIDI patchbay for

this sort of thing but I no longer own it and cannot find something comparable. Since I have a computer at could I just get by with a multi-port MIDI interface and some special software?

Doug Kraul replies:

A What you suggest is doable and in some situations performs on par with a hardware solution. An eight port MIDI interface, or even a pair of four port interfaces, does the hardware part. For software

look into something like MIDI-OX for Windows (midiox.com), or MidiPipe for OSX (bit.ly/eSkWSw). Keep in mind though that there are potential limitations.

The first is that your computer, and the special software, needs to be running whenever you use your hardware sequencer. You also need to create the MIDI-OX (or MidiPipe) patches. Timing can be an issue if your computer does not provide low-jitter MIDI I/O. There is also a fixed

MIDI delay that may or may not matter. A hardware approach, on the other hand, provides better overall timing.

One alternative is to acquire a MIDI interface with integral patchbay features. MOTU's MIDI Timepiece AV and MIDI Express XT interfaces (motu.com/products/midi) provide sophisticated hardware patchbay features that continue to work even with the computer turned off. This approach does, however, cost a bit more.

Q **Linda Hope asks:** I've been having a nostalgia trip back into the '80s and realised how cool those basslines and sounds are on old Madonna records, in particular, I'm loving *Get Into The Groove*. It's such a killer bassline and I really want to try and use a sound similar to this in my productions. Can you help me recreate this sound with a Logic plug-in?

A **Dan Goldman replies:** I can definitely help you out. Pretty much any analogue mono synth or plug-in will get you close to the original sound. Rumour has it that the *Get Into The Groove* bassline was played on a Roland MKS-80 (roughly equivalent to a Roland Jupiter-6/-8 polyphonic synth) and not on a Minimoog as many people think. Anyway, let's give it a whirl. For this example, let's use Logic's very capable ES1.



1 Add the ES1 plug-in to an audio instrument channel in Logic. Load up the default preset and set velocity to full using the amplifier's 'level via velocity' slider and the 'ADSR via velocity slider' also set to max (to mimic a mono synth or poly in mono mode). This mimics the behaviour of a mono synth which generally aren't velocity sensitive (certainly not during the '80s at least!) Next, set the number of voices to '1' so that the synth becomes mono.



2 Now that we have a basic mono synth dialed up, switch the filter to 24dB classic mode to mimic the MKS-80 filter. Set the cutoff to full and the resonance to minimum so we get a nice raw sound. Also set osc pitch to '4' as the original's bass sound is fairly high-pitched and not too bassy. Set the sub oscillator to broken step waveshape (the last wave before 'off').



3 Let's get the envelopes nice and snappy now. Set attack to its fastest, decay so five bars are lit on the slider, sustain so that four bars are lit on the slider and release to two bars. This gives us the punchy envelope that's needed for this sound. At this point as the level has dropped a little due to the envelope settings, boost the out level to 0dB and set the analogue setting to full to enable a little tuning drift, which adds to the authenticity.



4 Set the sub/main wave mix control to just below half now to introduce a more hollow sound into the bass. Also, set filter cutoff to just under half way to dull down the sound slightly. Now that the filter cutoff is down a little, we need to increase the sustain on the envelope to compensate. Make sure the key slider is set to halfway too.



5 Again to add more authenticity, pop the ES1 into legato mode to get that sweet glide between notes when playing. To add a little wideness to the sound, switch the chorus to C1 mode too. This gives the effect of oscillators phasing in and out with each other and adds some nice movement to the sound.



6 In this final stage, it's all about adding a little polish to the sound by adding some compression using Logic's compressor plug. Switch in Opto mode with an attack of 19.5ms, release of 8.4ms, ratio of 2:3:1 and a threshold of -27dB. This helps give the sound a little more attitude. There you have it! Now get into the groove! **FM**

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Demos



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Demo Of The Month



SELECTED KIT

Hardware

- > Apple iMac
- > Korg EMX-1
- > KRK RP6 monitors
- > Waldorf Blofeld
- > Lexicon iOmix u42s
- > Akai LPK25

Software

- > Logic Pro 8
- > Arturia V-Collection
- > Waves Mercury Bundle
- > Nomad Factory Integral Studio Pack

FAVOURITE GEAR

- > "Korg EMX-1. I've had this for five years and I still find it very, very inspiring."



TNA Snow In Japan (Dub Mix)

Contact: soundcloud.com/thenewanswers



This is easily the biggest-sounding track we have this month. The pounding, loose kick drum really fills

out the track and sounds great in that intro. Not every genre can get away with it but this loose, lolling Ambient Electronica feels all the better for it.

It's when the rattling and popping synths drop that you really feel the groove come through. And the step-by-step removal of sounds at the end really reveal the track's meticulous construction perfectly.

There's a great combination of

sounds here. Some super-loud analogue synth percussion effects, a lovely burbling bassline, perfectly locked in with the pulsating chords and then soaring above it all a simple, understated lead line. It's very analogue and natural sounding with – dare we say it – not a preset in sight. Love it.

And all the while the drums remain pleasingly forceful, preventing this from instrumental drifting into 'Ambient synth noodle' territory.

We're just intrigued as to why you sent the Dub Mix. While it's hard to imagine a vocal wrestling with the beats and groove we'd love to hear it if it's out there? Cheers!

The Artist



Name: Svyatoslav Kornienko
Where: Russia, Moscow
My track: "It's

worth pointing out that this was written long before the disaster in Japan. This track is the quintessence of influences on me: German Techno, French funk and the British Acid wave of the 90's."

Which bit of this track are you most proud of?

"The bass, surely the bass. I had been programming it for a couple of months a long before the time I've started working on this one. It was part of the groove which was done on my Korg EMX-1 about 3-4 years ago. I almost forgot about it. But when re-discovered on one of this gloomy winter's day it almost knocked me out completely! Then I sampled it, made some minor adjustments and had an awesome kinda arpeggio bass with a hint of Korg 12AX7 valves that sounded brilliant and were the exact thing I was looking for. The rest was made around it."

If we were to give you £5,000 for gear what would you spend it on?

"Here's my current wish list: A DSI Prophet 08, Tomoherheim SEM and a Reeloc Digital Jockey 3."

The Best of the Rest...

DJ Sega Brandtic

soundcloud.com/dj-sega



We love the high and dry simplicity of this one. While it's so tempting to pile on the effects in the search for

complexity (and lose all the impact as a result) this track tears along and ticks like a Swiss watch.

"This is a hyped up Drum & Bass track. It could be classified as Liquid too, but it has a good mood that gets you really hype," says its maker Serthat Gedik.

We love the simple drum sounds and but that piano is a little GM-style for our tastes. Nice spot effects such as the roll at 1:45 show that the track can go off on one when it needs to so it's a shame that they're so rare. Giving a few more your basic tracks (your piano or bass) a little dose of

reverb or delay from time to time would make this sound more exciting.

Right now it's a great statement of intent but with a few more edgy moments and some braver use of effects in the mix would really release this track's potential.

[Stop press: Track entirely produced with a copy of NI Komplete 7, FL Studio 9 and a PC laptop. Time for an investment in some effects? And maybe a set of monitors too, eh?]

Filthy Fiction Midnight

soundcloud.com/filthyfiction



Compared with some of the other tracks this month, this one sounds enormous.

That warm reverb'd synth chord sound sounds amazing. A great counterpoint to the twanging and delayed electric guitar. "That's our favourite part," say the track's makers

Teo Cretella and Jeevan Sagoo. "We initially got a friend to lay down the notes using an Apogee Duet. Then upon re-recording in the studio, we put it through a DAV BG501 mic-pre and layered a few reverbs down on top until we got that eerie sense of midnight. We also Melodyned different takes from an elbow, recording the guitar feedback. It created that effect of a string orchestra towards the end of the track. It opened up a lot of space in the mix and it really just came together after that."

We love the ticking clock sound (and the way the reverb increases to give it a more forboding presence) and the way the instruments work together. It's definitely an odd combo as there's clearly a great Dub influence at play here too. Slick.

Monk She Can Dance

monk-music-monk.com



Come on, whack up that snare drum! There's a great thwacking, crunchy

sound here but it's a little too low in the mix. Unlike the great vocals which are nicely up front but in need of some more compression for our ears. Just to get that big, Gaga-style pop sound that the rest of the track pulls off so nicely.

There's some great backing vocals, plenty of spot effects and some great pitch shifting for harmonies. We just need that extra lift, extra space and width on the main verse vocal. Simple double tracking, with a little spread left and right would do it if you don't fancy slamming that compressor Katie Perry or Taio Cruise-style.

This is a great Pop track which is bursting with great musicality, production skills and ideas.

Building Subterranean Enrichment

youtube.com/jonnycollapes



We reckon that behind the po-faced, stern, too-serious-for-its-own-good performance and heavily restrained instrumentation there's a real sense of humour at play



SELECTED KIT

Hardware

- > Apple iMac
- > MOTU Ultralite Hybrid MK3 audio interface
- > M-Audio Axiom 49
- > M-Audio BX5a Studiophile monitors

Software

- > Logic Pro 9
- > Ableton Live 8
- > Lennar Digital Sylenth1
- > Sampletank 2.5
- > Ozone 4

FAVOURITE GEAR

- > "I've just got Nexus2!"

Migra Isabella (A Miracle Has Born)

Contact: soundcloud.com/migra

Yes! This one is tough as nails. The kick drum clicks like pistol and the wall of gated and shimmering synths sound great if you crank it up loud!

Right from the off it's a pretty impenetrable sound. Only the textbook reverby kick drum drop at 1:37 give the track room to breath. The acoustic guitar and bright piano lines here are great – along with the waves washing on the shore and other 'twittering' FX – but there's a little too much top end for us. With no kick or bass you really feel as

though something is missing and when it does return at 2:33 you wish that clicky kick had a bit more sub bass that you could really feel.

Once we get past 3:00 and the choral backing track comes in you really feel like this track has arrived. We just wish it had got there a bit sooner and that some of the reverb and delays had been reined in a bit to allow room for a warmer bass and bottom end.

That said, punishing mix aside, this is a brilliantly exciting experiment in Trance. Well done. Send us some more soon!

Hot Pick



SELECTED KIT

Hardware

- > Gibson Les Paul
- > Marshall JMC800
- > Epiphone Thunderbird bass
- > Presonus mic pre
- > Roland SH101
- > Roland Juno 1
- > Samson C03 mic

Software

- > Logic Studio 9
- > Sugar Bytes Unique
- > PSP Vintage Warmer

FAVOURITE GEAR

- > "Tom loves his Edirol R-09 recorder for being able to record sounds from around London and secretly record conversations... It has amazing gain and crystal clear sound so it can pick up details from a long way away."



Pixelkid VS column:inches On The Shelf

Contact: myspace.com/columninchesmusic

This is one of two quirky Electro Poppers this month. This one takes the vibe to another pro-sounding level however

and gets it's reluctant vocalist effortlessly crooning just right though. There's some subtle double-tracking and plenty of movement and interest produced by spot backing vocals and different treatments for choruses.

Face it: He just sounds cool.

All in all it's a remarkably up front sound for a track that clearly isn't trying too hard. The octave bassline is steeped

in Electro Pop history and the choice of retro drum machine sounds and simple jangly shakers and tambourine really work to produce a home-made feel. We only hope that was the sound you were going for – if this intended to be a Rock and Dance crossover then you're rather wide!

Add in some enthusiastic and electronically-treated guitar work and you've a great little powerhouse of a tune that we can see sitting nicely next to a suite of similarly melancholic Electro. Time for an album, you two!

The Artist



Name:
Tom Ward (pixelkid) and Steven Separovich (column:inches)
Where:

London, UK

My track: "Dance music you can rock to and rock music you can dance to."

Which bit of this track are you most proud of?

"There's the track dynamics. The upfront vocals (double-tracked/ Samson C03 mic/Presonus TubePre/ processed through Logic's EQ and compressor). The chorus (especially the double chorus at the end). The pulsating bass (processed with Logic's compressor/ side chained kick). The 'angular' guitar solo (Gibson Les Paul via Sansamp). And finally the 'loose' live percussion."

If we were to give you £5,000 for gear what would you spend it on?

Tom: "I would buy a speed boat and park it outside my house."
Steven: "I would buy a Moog Voyager and a set of good monitors."

here. You're not being too serious here are you? Or are you?

This track is all about the vocal and the rolled-off top end EQ gives this a nicely downbeat sound that perfectly suits the mood of the piece. It's very interesting what you've done with the drums, using EQ to suck all the life out of them, with complex sounds reduced to hollow clicks and thuds. No, really. We like it.

We really enjoy this one but every time we hear the 'Subterranean Enrichment' repeats at 1:18 we can't help but hear some curious flat notes in there. If you're ever having trouble picking out a vocal melody from an in-progress instrumental work try programming it as a solo synth sound. Once you've made that melody work with your backing you'll know exactly which notes you should be singing. Simply 'going at it' and letting your natural ear lead the way doesn't seem to be working here.

The mix is as quirky as the performance here but it's the enthusiasm and fun that's obvious in the track that makes it hard not to love so full marks for being so original!

Skinny Chris Symphonic

skinnychris.com



Some beautiful soundscaping at play here. We're reminded very much of Daft

Punk's Tron soundtrack here, with the French horns locking nicely with the buzzing synths.

"It's a cinematic sounding Progressive House track with lots of punch and orchestral sections," says the man with the plan, Chris Parker. "I use sampled strings in a lot of my tracks and wanted to include some more instruments this time around and be more ambitious. There is actually a full virtual string ensemble in there split over several tracks in addition to the horns, cellos and

orchestral percussion. I've tried to create something different that stands out from genre."

There's a nice feel to your bass and drums and the sawing string work really sits well in the gaps you've crafted between your drum tracks. Great sense of space throughout here. It's clearly very live and ambient but the tight, swishing hi-hats and splashy snare drum and tom work keep things beautifully taught.

Hard to say where this track would work – it's clearly not 'for the dancefloor' despite its feel and sounds – but for soundtrack or videogame work it'd be spot on.

AfroDJMac and SuperKid B and C Down In History

afrodjmac.com



We love the lightweight strumming, summery vibe of this one. The

EQ trick at the start is great and you're really waiting for the track to drop and pop into its gorgeous wide stereo. Opinion is lightly divided at this end regarding the vocal treatment but you're to be applauded for at least trying something different! And full marks for going for it – with some nice edgy distortion – rather than hiding under swampy reverb.

There's a great tight set of drum sounds that are kept nice and dry and fake and the low-fi effects and general background madness make this feel fresh and exciting. There's some great guitar playing (love that pair of wide strummed acoustic guitars right and left) and while it's a very unusual combination the Chiptune blips and pops give the track a quirkiness that's all its own.

The mix is great – it sounds very clean and fresh – but a little more of that warm bass would offset some of the slightly shrill and crunchy Electronica elsewhere. All in all a great song, well performed, recorded and produced. Nice one. **FM**

Hot Pick



SELECTED KIT

Hardware

- > Acer Laptop
- > Epiphone Les Paul
- > Marshall Valvestate VS100 amp
- > Focusrite Saffire 6 USB
- > Akai APC40
- > Shure PG58 mic
- > KRK Rokii 5s

Software

- > Ableton Live 8
- Dcam Synth Squad
- Rob Papen Albino
- Guitar Rig 4

FAVOURITE GEAR

- > "I love using my APC40 in the studio. It makes arranging a track feel that bit more natural."



Craig_FS Cupcake

Contact: soundcloud.com/craig_fs

One of the nicest mixes we have this month. There's plenty of bottom

end and a crisp, neatly tapping top. We're not too sure about the timing of your main synth line and side-chained guitar. There's a funky rhythm in there fighting to get out but just as you think you've got an angle on it the delay effect throws it out of whack.

And we've got the classic 'mix the vocal really low because we're not happy with it' going on here. If – for whatever reason – you feel that you can't run a vocal

loud and centre stage then either re-do it until you're happy, turn it into an effect with a vocoder or autotune, say, or get someone else to sing. Half-hearted vocals are worse than non at all.

It's a good job that the momentum and intent picks up dramatically at 2:14. Suddenly the track tightens up with a great lead and bass sound. It's very much a game of two halves: The murky Numan-esque meandering of the verses and the Electro House stomping of the choruses. We know which part we prefer so a little more of that energy please!

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- 1) Upload a your ORIGINAL track and gives us some details (see below)
- 2) NO DJ-sets, tracks laden with illegal samples or remixes please!
- 3) If we like your track we'll be in touch. Don't call us – we'll call you!

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1 Non pros please!

Are you unsigned, non-MCPS or PRS registered and making music? Our Demos pages are for you. We want to broadcast your work to the world! Head to futuremusic.co.uk, our virtual home.



2 Look for the SoundCloud DropBox

We're big fans of SoundCloud, the online audio sharing service that let's you effortlessly pass your audio around. Check out soundcloud.com to get your own SoundCloud box. Ours is on the right.



3 Click on the box and upload

Click on *Future Music's* DropBox then click on 'Choose files'. MP3s only please. YOU MUST add a description – your name, address, band name, track name – and give us your email address too!



4 Start work on that bio...

If your track is selected, we'll email you and ask you a bunch of questions. We're always on deadline, so a concise reply is appreciated. Please put your name, artist and track on all correspondence!

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€ 88.-
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24bit/96kHz linear PCM, real X-Y mic arrangement, built-in monitor speaker, auto recording level, lo-cut filter, timestamp, track mark function, A/D and D/A conversion, 128 times oversampling, recording media: micro SD memory card and micro SDHC memory card (up to 16GB), USB 2.0, incl. 2GB micro SD card. Bundle incl. the t.bone HP-66 headphone and 2m USB cable.

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€ 244.-
€ 211.-

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Olympus LS-1 I

Digital recorder

24bit/96kHz, 2 built-in mics, internal 8GB HDD, expandable to 32GB with SDHC Card, up to 23 hours record time, edit functions, PCM/WAV/ WMA/mp3 record & playback, built-in stereo speaker, backlit display, SD/SDHC slot, USB, headphone out, silver metal housing. Weight: 165g (including batteries), connection for external power supply, includes wireless remote and Steinberg Cubase 4 LE.

€ 269.-
€ 233.-

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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, Kewalk Pyro AudioCreator LE, wireless remote controller and small table mounting plate. Bundle incl. 4GB SD card.

€ 295.-
€ 255.-

o. code 207377

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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.

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€ 294.-

o. code 232016

Zoom R16 Bundle

USB audio interface and DAW controller

16-track playback and 8-tracks recording, 24bit/48kHz PCM recording, internal stereo condenser mic, 8 mic ins, 2 outs, 8 balanced XLR / 1/4" TRS connections, internal effects, Mackie Control emulation via USB, works as USB storage, support for Win XP/Vista and Mac OS, incl. Steinberg Cubase LE4 and 1GB SD card. Bundle incl. the t.bone MLS66 stereo headphones and 4GB SD card.

€ 349.-
€ 302.-

order code 245238

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.

€ 738.-
€ 639.-

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Multi-track field recorder

24bit/192kHz, up to 8 recording tracks, records on SD/SDHC media, Broadcast WAV (BWF) and mp3 recording/playback, mp3 multi-track recording, 44.1kHz, 48kHz, 96kHz, 192kHz, pre-recording buffer, +48V phantom power, low cut filter and limiter, headphone output, USB 2.0, cascade feature to combine two or more DR-680, built-in loudspeaker, incl. power supply. Dimensions: 20.2 x 5.4 x 17.6cm. Weight: 1.2kg.

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Dual MP3/CD player

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32bit digital DJ mixer

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€ 259.-

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Single CD player

Hot loop, hot start, cue / loop memory, shock-proof, 100mm jog dial, pitch bend, fader start/back cue start, relay play and frame search 1/75 sec, master tempo, tempo control ranges (CD) ±6/10/16%, BPM counter, front slot-in, disc formats: CD, CD-R, CD-RW, MP3 CD, MP3 MPEG-1 320kbps - 320 Kbps / MPEG-2 16 Kbps - 160 Kbps.

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Single CD player

4 USB MP3, AAC, WAV, AIFF, USB (flash recorder, disc drives), USB A/B connection, includes Recordbox music management software, beat display function for better scratch and looping performance, auto beat loop function, dimensions: 21.8 x 29.6 x 10.8cm, weight: 2.7kg, system requirements: Windows VISTA/XP, Mac OS X 10.4 or higher.

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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.

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€ 85.-

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Behringer Xenyx X1222 USB

16-channel mixer

6 mic ins with 48V phantom power, low cut, internal 24bit FX, 16 presets, 2 stereo ins, 3-band EQ, 7-band master EQ, weight: 3.7kg, incl. energyXT2.5 Compact music production software for Windows XP/Vista (32bit), Mac OS X and Linux.

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€ 169.-

o. code 243146

Behringer Xenyx X1204 USB

4 mic + 2 stereo inputs.

€ 168.-
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Behringer Xenyx X2222 USB

22-channel mixer

8 mic ins, 48V phantom power, internal 24bit effects processor, 16 presets, built-in USB audio interface, 4 stereo ins, 3-band EQ, 3 aux, 2 subgroups, weight: 4.78kg, incl. 19" rackkit, energyXT2.5 Compact music production software for Windows XP/Vista (32bit), Mac OS X and Linux.

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o. code 243138

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6 mic ins.

€ 228.-
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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.

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New XDR 2 preamps, 6x mono mic/line inputs (XLR/jack), 4x stereo line inputs (jack), 2x stereo aux returns, 2x aux sends, 6x inserts, 3-band EQ, 18dB lo-cut filter, PFL, 48V phantom power, internal power supply, balanced master outputs (XLR/jack). Dimensions: 8.1 x 35.6 x 32.9cm (HxWxD). Weight: 4.5kg.

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€ 419.-
€ 363.-

order code 217454

SX3242FX

32 channels.

€ 469.-
€ 406.-

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Mackie Onyx 24.4

Live console

20x mono ins, 4-band EQ with full parametric mids and fixed lo/hi, 2x stereo ins, 4x subgroups, 3x outs, 48V phantom power per channel, 30dB pad, phase reverse and low cut, 6x aux sends in pair pre/post and stereo switchable, inserts per channel, 6x matrix, 4 mute scenes, LED per channel, talkback, phones out, main insert, 1x BNC lamp connection, internal power supply.

€ 966.-
€ 837.-

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Behringer SX 4882

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24 XLR mic ins, meterbridge with LEDs, ceo-classic British 4-band EQ with 2x parametric mids, 100mm faders, 13-segment main LED, insert I/O per channel, direct out, main ins, 8 subgroups with inserts, 6 aux per channel, 2 headphone outs, 2-track I/O, 20dB pad, 6 stereo aux returns, 2 BNC lamp connectors, internal talkback microphone, dimensions HWD: 7,2/22 x 94 x 75cm, weight: 27.7kg.

€ 985.-
€ 853.-

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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.

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€ 996.-

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16x mic/line ins, inserts aux direct outs on each channel, 4-band EQ, 2 parametric EQs, 6 pre/post auxes (switchable), switchable phantom power per channel, 4 sub groups, control room out, internal talkback mic, ProTools M-powered compatible (officially licensed), integrated FireWire access point, incl. rackmount. Dimensions: 61.7 x 44.2 x 19.1cm. Weight: 13.5kg.

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JZ Microphones BT-201/IS

2 small diaphragm condenser microphones
Polar pattern: cardioid, transducer type: electrostatic, operating principle: pressure gradient, diaphragms active diameter: 13mm, frequency response: 20Hz - 20kHz, impedance: 50Ω, S/N Ratio DIN/IEC 651 A-weighted: 82dB-A, max. SPL 0.5% THD @ 1000Hz: 140dB, requires 48V phantom power, gold plated contacts, dimensions: 16.2 x 2.4cm.
a. code 260035 **€579.-** **£501.-**

AKG Perception 220

Large diaphragm condenser mic
1" diaphragm, metal housing, cardioid polar pattern, 20Hz-20kHz, switchable 300Hz low-cut filter, switchable -20dB pad, 135/155dB max SPL, includes elastic holder and carrying case. Dimensions: 53 x 165mm (diameter x length). Weight: 525g.
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order code 256707 **€295.-** **£255.-**

JZ Microphones Vintage 47

Condenser microphone
Polar pattern: cardioid, transducer type: electrostatic, operating principle: pressure gradient, diaphragms active diameter: 25mm, frequency response: 20Hz - 20kHz, impedance: 50Ω, S/N Ratio DIN/IEC 651 A-weighted: 82dB-A, max. SPL 0.5% THD @ 1000Hz: 134dB, requires 48V phantom power, gold plated contacts.
a. code 260040 **€966.-** **£837.-**

tc Helicon VoiceTone Correct

Vocal performer
Combines pitch correction with tone and dynamic shaping that puts a recorded gloss on live vocals, pitch correction, adjustable auto-smooth compression, multi-band auto-shape EQ, silencing smoothing de-ess algorithm, accurate input pitch and correction display, clean, studio quality mic pre-amp with phantom power, dimensions: 13 x 13.2 x 4.1cm, weight: 0.72kg.
order code 117111 **€133.-** **£115.-**

tc Helicon VoiceTone Double

Double Vocalist
Automatic voice doubler, 4x virtual auxiliary voices, mic input (XLR) with 48V phantom power, balanced line out XLR (L=mono, R=dry), LED display, switch for A/B and on, rotary knobs for input, pitch, time, overdub and uMod, 9 presets, incl. power supply. Dimensions: 13.2 x 13.0 x 4.1cm (HxWxD). Weight: 720g.
order code 205719 **€144.-** **£125.-**

dbx 266 XL

Stereo compressor/limiter/gate
Patented OverEasy technology (attack & release times), XLR I/O, -10V/+4dB switch, stereo link, dbx sound.
order code 131808 **€125.-** **£108.-**
dbx 166 XL
2-channel compressor/limiter/gate, stereo or dual mono, OverEasy or hard knee mode, PeakStop limiting.
order code 131035 **€211.-** **£183.-**

tc electronic M3000

Dual engine multi FX processor
Two simultaneous reverb or effects, award winning intuitive user-interface, 600 factory presets and multiple I/O formats, AES/EBU (24bit), S/PDIF (24bit), 44.1kHz & 48 kHz sampling rates. Dimensions: 19"/1U.
order code 131732 **€966.-** **£837.-**

tc electronic Finalizer 96k

Studio mastering processor
Gain maximizer, 96kHz 24bit AD/DA, multi-band compressor/expander, 3-band spectral stereo image and un-correlated dithering, format conversion AES/EBU, S/PDIF and Tos-link, enter and exit at any sample rate e.g. 32, 44.1, 48, 88.2 and 96kHz (even asynchronous conversion is possible), manual or auto fade tool.
order code 133460 **€1245.-** **£1078.-**

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 **€144.-** **£125.-**
KRK RP8 Rokit G2
8" + 1", 140W.
order code 213090 **€239.-** **£207.-**

Genelec 8020BPM

Active 2-way studio monitor
Power switch, 66Hz-20kHz (±2.5dB), 105dB SPL peak @ 1m, 95dB SPL @ 1m, 105mm (4") high efficiency bass driver, 19mm (3/4") metal dome tweeter with Directivity Control Waveguide, 3kHz crossover, magnetically shielded, aluminum cabinet, includes wall bracket. Power per channel: 20W (bass), 20W (treble). Dimensions: 22.6 x 15.1 x 14.2mm. Weight: 3.7kg. Unit price!
a. code 235038 **€319.-** **£276.-**

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 Millennium BS-500 adjustable nearfield monitor stands.
order code 244787 **€325.-** **£281.-**

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.
a. code 245513 **€439.-** **£380.-**

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 Millennium BS-500 nearfield stands.
a. code 227555 **€519.-** **£449.-**

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

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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 | £2,042

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 Kobl. Great tones with the benefits of MIDI and automation.



u-he Zebra 21 | \$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 Mangers	Warp your sound and break new ground
124	Performance Samplers	Take control of your audio live and direct
124	High-end Audio Plug-ins	Treat yourself to the best that money can buy
124	Field Recorders	Record your band or go searching for found sound
124	Microphones	The best mics around for everyone's budget
125	eBay Classic Retro Finds	Keep an eye out for our suggested list of nostalgic love
125	Ways To Stand Out	Dare to be different and reap the rewards
125	Digital Audio Workstations	Which DAW is best for the music you want to make?

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Roland Gaia SH-01 | £579

Review FM227 No menus with hands-on controls all over. Despite the rosey presets, Roland are back to what they do best.



tomoberheim SEM | €950

Review FM232 A classic returns. Creamy filters and powerful oscillators with modular capabilities



M-Audio Venom | £390

Review FM237 Fantastic value considering its features. A great starting point for people that want DAW integration and a fab synth.



Novation UltraNova | £599

Review FM237 A jack of all trades, with a keen, fresh sound. Priced well it's an ideal step outside the box.



Minimoog Voyager XL | £4,084

Review FM237 Incredible sound and amazing features but a wallet bustin' price makes it super-specialist.



Spectrasonics Omnisphere | £299

Review FM207 Great sounding, flexible and unique, this is truly a powerhouse of sound design.



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.



Waldorf Largo | £175

Review FM217 Waldorf take their Blofeld sound and technology and create a powerful and unique soft synth. Check it out.



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.



SonicProjects OP-X Pro II | \$99

Review FM238 A recreation of a legendary analogue synth, including some very famous preset sounds.



Novation Nocturn | £69

Review FM199 Your cheapest entry into the world of Automap, the Nocturn is a mini bargain.



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.



Akai LPD8 & LPK25 | £45 each

Review FM224 A better keyboard design and build than its rivals. Shame about the short throw rotaries.



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.



Behringer BCF-2000 | £140

Review FM153 Eight 100mm motorised faders for such a low price, this is still a great controller.

Gear Chart

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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 UFX | £1,649

Review FM239 The usual reliability and rock-solid build from RME. Now with great DSP and the flexibility of both USB and FireWire...

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.



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.

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**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.

**NEW ENTRY****Pioneer SDJ-05** | £500

Review FM239 A great price considering the quality. Plus, the design solves many problems for the home studio offering four inputs.

**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 IO 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

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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.



NEW ENTRY

Korg Mono/Poly | £400-£600

Released 1981 A forgotten gem, that will give you powerful, Moog-like basslines with a poly approach.



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 6 | £508

Review FM237

Cubase 6 comes with the highest price tag of its closest competitors. But an expansive feature set still makes it a worthy choice.

Best features include:

- > The new timestretch and pitch-shift algorithms sound great.
- > New multi-track editing features.
- > Amp Rack for guitarists.
- > Massively in-depth MIDI and audio editing capabilities.

Good and bad:

It's caught up in terms of built-in features, Cubase 6 still suffers from an old multi-windowed user interface and a steep price tag. Multi-monitor screens is a must.

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 giant leap for 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 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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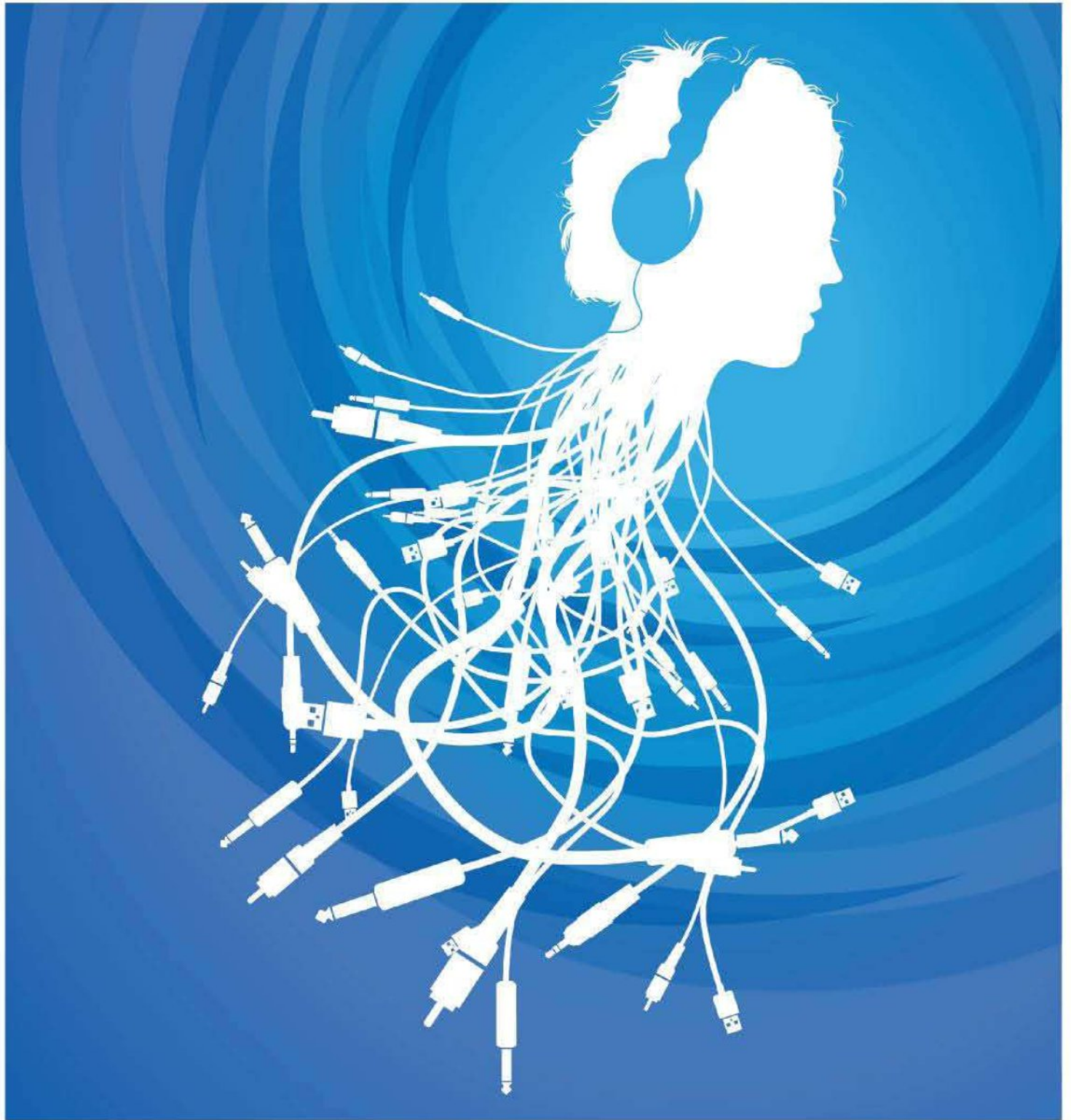
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Reason 7

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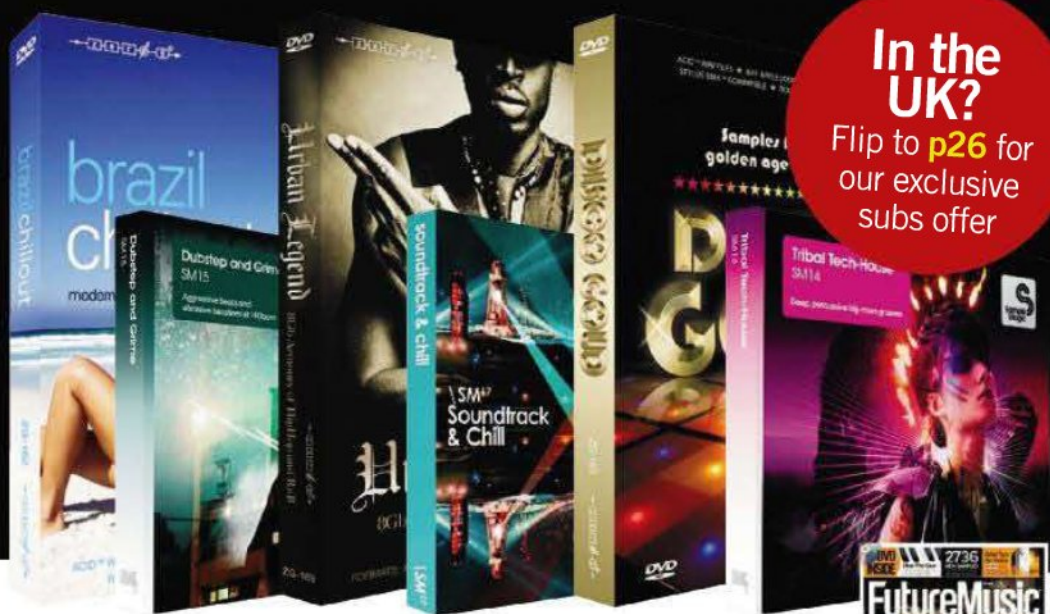
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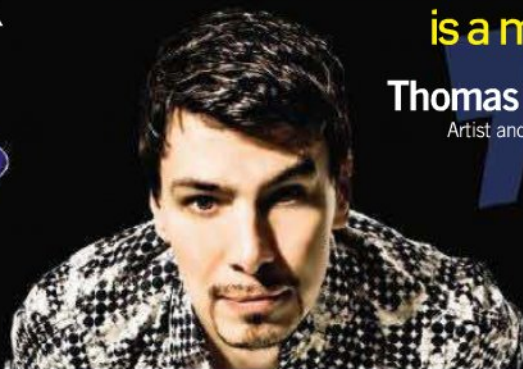
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Chromeo The stadium Funk masters invite you into their gear-laden studio and take you through their collection, synth-by-synth



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The KORG Kaoss Pad Quad - Dynamic Effects Processor

The sublimely sexy new KP Quad lets you combine and control up to 4 effects simultaneously with the stroke of one finger for earth-moving sonic performances. Each of the 4 studio-quality effect modules contains 5 options for a total of 1,295 combinations! And when you want some hands-free fun, hit the freeze button to hold your effects settings. But despite its power and advanced features, the KP Quad's intuitive nature means that within minutes you'll feel like a master DJ.

The new Kaoss Pad Quad. Four times the fun.

KAOSS PAD
DYNAMIC EFFECTS PROCESSOR
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