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Adrian Utley of *Portishead* & Will Gregory of *Goldfrapp*

IN THE STUDIO Discover what happens when
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REVIEWED Roland Jupiter-80 / Nord Stage 2 / Apogee Duet 2
Pioneer DJM-900 Nexus / FL Studio Mobile / **AND MORE**



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Welcome!

A Place for Everything



Technology has made it possible for a single producer to make an entire track. We can bypass cajoling the bass player into playing your bass part, or cursing the quirks of your drummer but – just like persuading a wayward bunch of musicians into playing along – getting the parts of your track to work together in a mix can be just as troublesome.

Fortunately, there's a powerful weapon we can use. Our *Pro Producer's Guide To EQ* on page 32 is all you need to understand and apply the important gifts that your hardware and DAW have given you. When to tweak a little, when to go overboard and – most importantly – to know when to walk away and let the sound do its thing.

Elsewhere in the mag and on DVD, watch out for a brilliant *In The Studio With* as French House hero Fred Falke makes an entire track just for you on DVD. And we get in the company of greatness as Adrian Utley of Portishead and Will Gregory of Goldfrapp show us around Will's studio (with video on the DVD, of course). Just space left to point you at this month's supersynth – the vast, powerful and amazing-sounding Jupiter-80 – gets reviewed on page 82 and the hottest Nord yet – the similarly-sizey Stage 2 – gets tested to death on page 86.

All in all, quite a month. And we can't wait to do it all again. Cheers!

Daniel

Daniel Griffiths, Editor
daniel.griffiths@futurenet.com

EXPERT CONTRIBUTORS THIS MONTH...

Ian Shepherd
engineer, producer



After our excellent *Compression* feature two issues ago, we had to have Ian back for some more back-to-basic

tutorials with his experienced edge. Turn to page 32 to rediscover EQ and get inspired!

Dan 'JD73' Goldman
musician, producer



Dan 'doctor of Jazz' Goldman was our go-to guru to tackle Roland's boldly-badged new supersynth. Find out what he reckoned from

page 82. He also turned his golden hands to Nord's new Stage – it's all ahead of you, on page 86.

Jono Buchanan
engineer, producer



Never one to slouch, take a day off, eat or sleep, Jono was hard at work for us again this month, tackling Apogee's new Duet, NI's Session Strings Pro and Waves new tape emulator plug Kramer MPX. Get his lowdown, from page 82.

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Artists

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On The DVD

This month's exclusive digital content from Future Music



THE TECHNIQUES



Handheld Percussives

Robbie Stamp of Cyclick says:

"Small, cheap and guaranteed to add that high frequency sparkle to your track – hand percussion is a rhythmic must-have. Though you can sample up your favourite shake-ables and even keep a few basic MIDI patterns stored away, there's nothing like laying down a fresh track of percussion once the track is arranged, allowing for a more nuanced and human rhythm section, as the subtle timing shifts can add much needed life to ruthlessly rigid drum programming. You don't even have to buy hand percussion as there are so many household objects that can quickly 'rock the mic' – jars full of lentils, bunches of old keys, thumb-tacks in a plastic bottle – hit it, shake it and record it."

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: CYCLICK SAMPLES

Topline Percussion

1 "This collection goes high frequency with shaker, tambourine and hat/snare pattern loops for your common or garden four-four kicks.

"The shakers and tambourines are all taken from the Sandpit Studio percussion box and sampled as individual hits. Though some loops were played by hand, to get exact swing characteristics some were

programmed. The loops come in straight and swung rhythms. The hand percussion was recorded with a Calrec CM654 condenser mic and treated EQ and a small 'transient-nibble' of limiting. The hat and snare patterns are also in the straight and swung formats. These were treated to some filtering and modulation before being given analogue snap, crackle and pop with tape-style distortion."

PACK TWO: GROOVE CRIMINALS

Electronic Percussion

2 The second part of our collection this month has plenty of processed sounds along with Battery kits and a good selection of loops

PACK THREE: FROM THE FM ARCHIVES...

Home-made Synths

3 We dig out 55 different NI Kontakt synth patches and multi-samples made exclusively for *Future Music*

In The Studio With...

SEE THEM IN THE MAG – AND ON VIDEO TOO

Fred Falke

This French legend lays down some classic basslines, heavy-weight synth action and talks through his final mix tips as he creates an exclusive track for *FM*



Adrian Utley & Will Gregory

Talk to *FM* about their favourite studio gear

Reviews from p82

HEAR THE GEAR VIA FM'S EXCLUSIVE AUDIO SAMPLES

- > FL Studio Mobile
- > NI Session Strings Pro
- > TC Helicon VoiceLive 2
- > RND Portico 5042
- > Roland Jupiter-80
- > SubtleNoiseMaker
- > Cacophonator
- > Nord Stage 2
- > Waves Kramer MPX
- > Yamaha TNR-i



Technique from p32

TAKE YOUR PRODUCTION SKILLS TO THE NEXT LEVEL

Get That Sound: Calvin Harris – Bounce



Watch this month's video tutorial and find out how this top-10 synth sound was created



Logic, Live & Cubase

We've ten tips on video for Logic. **PLUS** project files for Cubase

Reader Music from p117

10 BRAND NEW TRACKS FOR YOU TO ENJOY EVERY ISSUE



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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

DELECTABLE GROOVES: TECH HOUSE 02



"Prepare to load your speakers with funky-out club-ready grooves, sub bass, tech'd-out percussion grooves that will fill dancefloors and crazy vocal cuts that will slide into productions effortlessly."

THE NEW SOUND OF DUBSTEP



"In detail the new sound of Dubstep includes 66 cone-wobbling subsonic and tearing bass loops, 43 atmospheric chords and stabs, 122 heavy-weight drum loops, 20 resonanting FX and 100 single drum samples."

THE BAKER BROTHERS: FUNK SESSIONS VOL 2



"The Baker Brothers have been rocking dancefloors far and wide with their huge live show for nearly 10 years. The band have toured extensively delivering an explosive, killer Funk show!"

BHK: NI MASSIVE



"BHK's Massive contains no filler patches just upfront banging Dubstep and D'n'B sounds with real underground attitude. If you liked BHK SE3 Dubstep get ready, these patches are going to be your go to sound source for NI's Massive."

ZENHISER: TRANCE SYNTHS



"Fresh from the Zenhiser camp comes a collection of Trance Synth Loops and Grooves. Made up of 1.59GB of incredible synth leads, euphoric hooks and prime time trance sounds this sample pack will absolutely blow your mind!"

ALEX NIGGEMAN: I CALL IT HOUSE!



"This is a very solid pack of samples from a leading light in the current Dance scene and will no doubt feature on many future dancefloor smashes."

BOMB SQUAD: TACTICAL BEATS AND SAMPLE ARTILLERY



"Contains over 1GB of original BOMB SQUAD audio samples exclusively sound designed and engineered by Hank Shocklee for Loopmasters."

DUB FX: VOCAL BEATS, BASS AND FX VOL1



"Dub FX aka Benjamin Stanford is a unique and original talent who creates live songs, beats and melodies using only his voice and FX processors and foot pedals."

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!

HY2ROGEN: BIG ROOM SONGSTARTERS 3



"Hy2rogen opens his personal vault of original unreleased track stems to create 16 massive mainroom track-starting folders for Tech, Progressive and House producers."

CRATE DIGGERS: GOLDEN AGE OF WIRELESS VOL 3



"Bursting with authentic vocal foley from the original bygone era of radio, this third volume spans science fiction to radio noir, musical references to talk radio and everything in between."

SAMPLE STATION: GENERATION ELECTRO 2



"Walking the line between dirty Dutch, Swedish House and Fidget bassline, this 525-strong collection of cone-crushing beats are precision engineered to destroy the mainroom."

BFA: INDIE ROCK COLLECTION VOL 1



"Indie Rock in its purest form: 3+ GB of gritty guitars, dirty drums, driven bass, piano and more across 10 construction kits oozing with authentic attitude."

SAMPLEMAGIC: INDIE DANCE



"Featuring a sweaty selection of Disco-trash, Electro-Thrash and Indie-smash, Indie-Dance packs in 100s of guitar hooks, retro-Electro beats, livewire drums, twisted vox cuts and FX, plus 374 live-infused drum hits and chord shots."

ZENHISER: DRUM ROLLS/ FILLS CLUB



"Ranging from live-sounding drum rolls through to heavily processed drum machine fills, Drum Rolls & Fills Club is a powerful beats and transitions tool for high-octane producers."

SOUNDS TO SAMPLE: TOYZ NOIZE



"Glitched beats and circuit bent synthery combine in this 290MB collection of chaotic cuts for Electro, Nu-Rave and other genre-bending jams needing a pure noise injection."

DIGINOIZ: WEST COAST WAVE 3



"Urban all-stars Diginoiz bring the summer-time vibes in the third instalment of their best-selling West Coast Wave series, serving up more sunshine-soaked beats, bass and orchestral instrumentation across nine scorching construction kits."

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WHAT DO YOU THINK?

We want you to tell us what you like and what you want to see more of. Got a great idea for a bank of samples? Hey, we do requests! Email us at fmdvd@futurenet.co.uk.



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Highlights this issue...

Z3TA+2

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Classic Album

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Studiofile

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Find The Reason

After years of telling us otherwise, Propellerhead finally put audio inside Reason – plus they went and made some hardware too!

Out of the blue, Propellerheads just announced Reason 6, a completely revamped version of their flagship DAW. Not only that, but they launched an audio interface too! Packed with new features, Reason 6 changes the game for Propellerheads, putting them directly against the other big DAWs.

Let's look at Reason 6, which now combines the audio features we saw from Propellerhead's Record into one single product. Now Reason users get the same classic console design, complete with channel EQ, dynamics and the special master-buss compressor for the final mixing glue. This means every audio and instrument rack automatically gets its own channel on the mixer.

Also ported over from Record is the auto-tuning rack, Neptune letting

users add tuning and vocoding effects, harmonies and audio transposing in a single rack.

New reasons

First of the new-comers is Pulveriser, a dirty distorting compressor, multi-mode filter and flexible modulation rack. This new rack promises to squeeze, squash, wobble and crush your audio like nothing before. Use the modulation to create extreme envelope following effects or apply subtler moods by dialling in the Pulveriser in parallel, by adjusting the wet/dry blend knob.

Next up is a classic echo effect called The Echo. This hides some modern features behind its saturated sound. Capable of everything from brilliant stereo delays to murky, modulated and pitched craziness, The Echo also has inputs around the

rear, which allow insertion of other effects into the feedback loop, plus trigger and roll inputs for live triggering and performance of The Echo. Finally, a rack called Alligator brings another creative edge to processing your audio. Based around three gate effects Alligator can turn a simple pad sound in to a cut up, effected monster with a separate effects section and filters enable interesting and instant effects.

All-in-all, when you throw in 64-bit support and all the other tweaks, including better ReWire integration. It seems like this is the software Reason was always intended to be. No doubt it's going to leave a few Record customers slightly miffed.

In the Balance

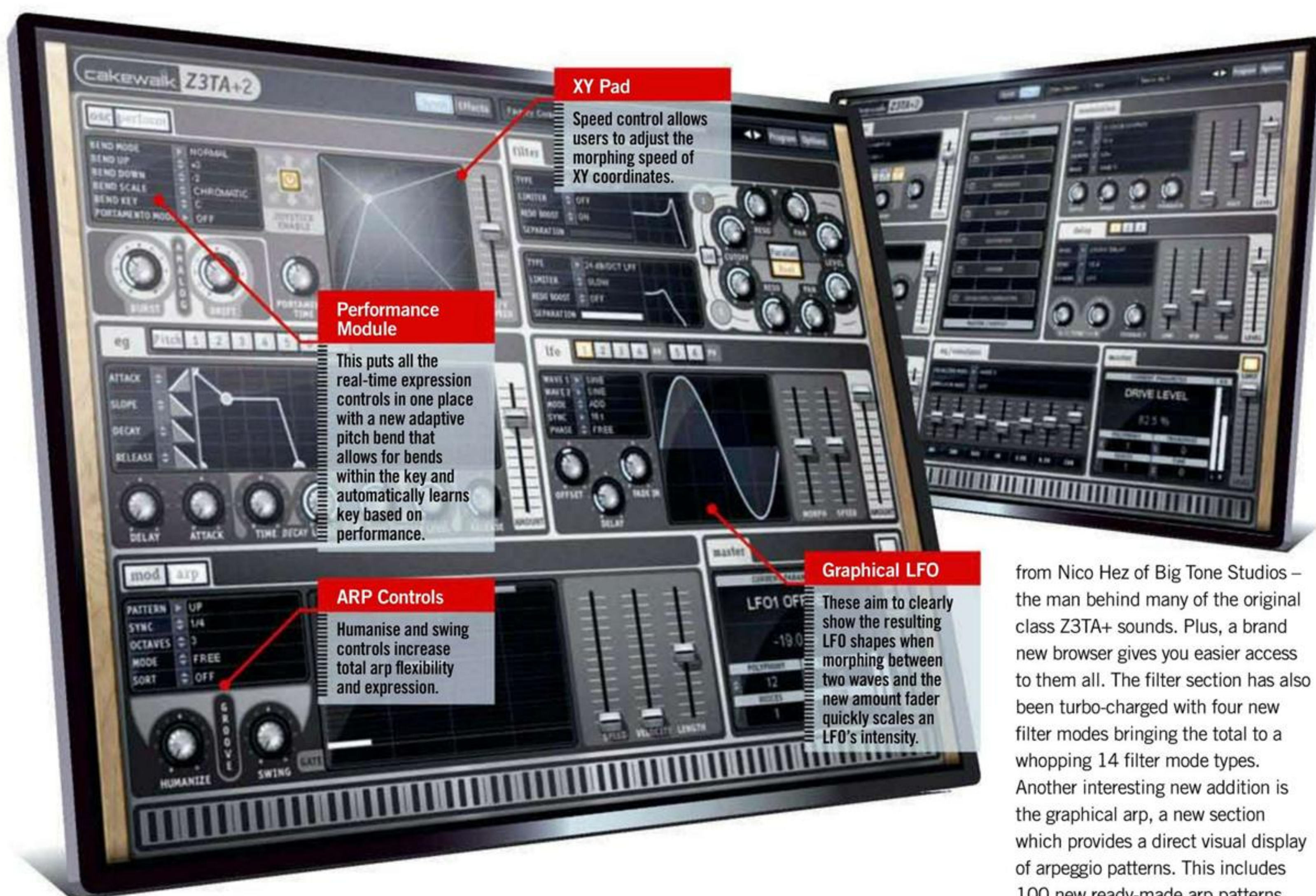
That leaves us to talk about the fantastic design of their new two-in,

two-out audio interface, Balance. Propellerhead have recognised that most of us are tucked away in our studio all alone recording one input at a time. What they've done is simplified these inputs – mic, guitar, line – into switches on the front of the unit and made the unit work seamlessly with both Reason 6 and the cut-down Reason Essentials software. One of the clever features of the Balance interface is a switch labelled Clip Safe.

Enable this switch and there'll always be a distortion-free take of your recordings to fall back on. Or as Propellerhead's put it – it's red eye remover for audio. The interface works class-compliant with OS X so no driver is needed and on a PC it installs ASIO drivers with Reason. Also, the interface acts as a dongle for your Ignition Key and it's all powered over USB. It's an exciting time for the Swedish sound sorcerers, both with Reason and this clever little hardware interface – bravo!

WANT TO KNOW MORE?

Both Reason 6 and the Balance interface should be on sale in September with pricing for Reason 6 at £349 or £139 for an upgrade, Reason Essentials £229 and the Balance interface with Reason Essentials £379. Reviews coming soon! propellerheads.se



Z3TA Max!

One of the greatest soft synths ever made gets a major overhaul and some stunning looking new features

Z3TA+ has been a VST that's managed to ride the various fashions of music for the last ten years and still be one of the few must-have synths. Originally released by rgc:audio way back in 2002, its huge arsenal of instantly usable presets, great effects and easy-to-use interface made it a real stalwart synth. So, it's with

massive excitement that we begin the anticipation to get our hands on the latest version. Here's what we know about Z3TA+2 so far:

Inside, the synth is still based around the core ideas that made it so popular, with the waveshaping synthesizer still having the unique per-oscillator wave-shaping capability, vast filters, multi-stage envelope

generators, morphing and advanced modulation matrix. Now, there's a whole new user interface aiming to bring better control of the synth and its performance features and the waveshaper itself is now an integral part of the oscillator with four new modes. Z3TA+ 2 still loads all the original presets, plus comes complete with a huge new set of fresh patches

from Nico Hez of Big Tone Studios – the man behind many of the original class Z3TA+ sounds. Plus, a brand new browser gives you easier access to them all. The filter section has also been turbo-charged with four new filter modes bringing the total to a whopping 14 filter mode types. Another interesting new addition is the graphical arp, a new section which provides a direct visual display of arpeggio patterns. This includes 100 new ready-made arp patterns and 50 new 'Gate' patterns from arp aces, Dance MIDI Samples.

The effects have also been overhauled with a new design making simple drag-and-drop routing possible and more control over routing of the distortion module, allowing distortion modes to occur in the filter busses for, the effects section, or both, as well as Cakewalk's new Hypertube distortion algorithm.

We can't wait to get our tweaky fingers all over it, so watch out for an in-depth review in *FM* soon.

WANT TO KNOW MORE?

Z3TA+ 2 will be on sale soon for £89. Plus, registered Z3TA+ customers upgrade via download for just £35 too. cakewalk.com

MUSIC TO OUR EARS

The FM Playlist

What we're listening to this month...



City Rockers
Futurism 2

Been digging more Electro Pop and Clash in this instalment of the classic City Rockers label comp. **Chris, Dep Ed**



Various
Paisley Park Records

It's been everything Purple since Hop Farm. The Family, Sheila E. and Brownmark, to name a few. **Declan, Production Editor**



Africa Hi-tech
93 Million Miles

Incredibly futuristic yet shot through with ethnic polyrhythm and vocodered tribal shouts. Amazing. **Daniel, Editor**



SBTRKT
SBTRKT

Top-quality Garage-influenced 'Post Dubstep' album with killer vocals and guests. **Will, DVD Editor**



Arturia Triple Threat

As part of their summer sale, Arturia are offering three special deals while stocks last!

Three new bundles from Arturia offer great value for all budgets. First up is the top of the range Arturia Analog Experience The Laboratory which comes bundled with Arturia's mammoth virtual synth arsenal, the V Collection meaning all presets from The Laboratory can be opened for editing in the full version of each soft synth. This comes in at £529 rather than the £751 if bought separately.

The second bundle is a combination of the Arturia Analog Experience, The Factory with the huge package of 3500 sounds and

The One which let's you decide which full licence you'd like for

Any Arturia soft synth and comes priced £269 rather than £424 price when bought separately. Third up is the compact and budget conscious bundle of Arturia's Analog Experience and their Hip Hop producer package. This contains a top 25-key controller, Ableton Live Lite, 1,000 tweakable synth sounds, 1,200 samples, Analog Factory Hip Hop Edition, Lounge Lizard Session. Not bad for £179, again considering it would have previously been £247. Grab while you can! sourcedistribution.co.uk

Host With The Most

As more and more small and portable MIDI devices become USB only, Kenton have delivered a solution to use these products directly with hardware, without the need for a computer.

Providing the USB device is class compliant, hook it up to the USB port on the Kenton and you can connect the regular MIDI In and Out ports straight to hardware. A nice way to convert that small



rack synth into a portable, compact unit. The Host comes with a power supply and can also provide the device with up to 500mA of USB bus power to the device. Available now for £84 kentonuk.com

Ohm Again

Named the Ohm64 RGB, this wooden MIDI controller adds as colourful new feature, by backlighting the grid of buttons in seven different hues,



depending on their assigned state users can get visual feedback from their software. Livid have also included new advanced mappings. There's also expansion jacks on the rear letting you add up to eight additional controls and two expression pedals. It's still USB-powered and class compliant, so no drivers or power supplies required, and it's available now for \$699 from lividinstruments.com or £TBC in the UK from reddogmusic.co.uk



Latest Releases



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How To...

- Produce Neurofunk basslines
- Get your demo heard
- Set up a digital label
- Get that dubstep wobble

PRODUCER SESSIONS LIVE

We confirm Starsmith as another incredible producer taking part in our upcoming event at London's SAE on **September 3rd & 4th**

On September 3rd and 4th the teams from *Future Music* and *Computer Music* will be taking over SAE London's flagship school with five floors and twenty demo rooms full of tutorials, gear demos and expert

advice through intimate sessions, not to mention the amount of networking possibilities with fellow producers.

Now, we are extremely pleased to announce that the unbelievably-talented Starsmith has also been confirmed for a guest session.

Starsmith is a classically-trained musician and gifted producer and songwriter. He produced the majority of the first Ellie Goulding album and the whole of Diana Vickers' number-one debut. He's also worked with and remixed the likes of Kylie Minogue, Cheryl Cole, Alan Braxe, Robyn, Katy Perry and many more.

His producer session takes place at our event at SAE on Sunday 4th September at 3pm. Tickets are £10 per day with each Producer Session costing an additional £5.

A day ticket will also include free entry into Ministry Of Sound on the Saturday night where *Future Music* are hosting a room and the legendary Steve Mac will be DJing, plus more TBC. What are you waiting for? This WILL sell out, so book now!

WANT TO KNOW MORE?

For up-to-the-minute information, the full line-up of manufacturers and guest producers and to buy tickets, head to producersessionslive.com

Buy any day ticket and gain **FREE** entry to



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- > D.Ramirez
- > Dave Spoon
- > Steve Mac
- > Artful Dodger
- > Kid Massive
- > James Hockley
- > Starsmith
- > Nu:Tone
- > James Reynolds
- > Danny Byrd
- > Tommy D



Starsmith has confirmed a slot at our Producer Sessions Live event in September

REMIX & WIN

Get remixing to bag a prize bounty **worth over £3,000!**



Prize bundle worth over **£3,000**

Together with Joey Negro's Z Records and audio hosting legends SoundCloud, **Producer Sessions Live** is hosting a remix competition with an incredible prize bundle. Download the parts to Joey Negro & Gramophonedzie featuring Shea Soul smash club track *No Sugar* over at the account soundcloud.com/producersessionslive.

We want you to remix the track in whichever style you like and upload the track to the PSL SoundCloud drop box. The *Future Music* and *Computer*

Music teams will then pick a shortlist of ten finalists who'll be judged by Joey Negro and a panel of producers and experts on the final day of Producer Sessions Live 2011.

The lucky winner announced on the day will then not only walk away with admiration and respect of our resident producers, but also a prize booty worth over £3,000!

The Prize

There's the superb PMC DB1S-All monitors, Native Instruments' Komplete plug-in bundle and an M-Audio Axiom Pro controller, Venom synth and Fast-Track interface.

Rules

1. By entering this competition you may be contacted with exclusive offers. 2. Only one entry per person. 3. Employees of Future Publishing Ltd, Z Records and their immediate families are ineligible for entry. 4. The competition organisers reserve the right to change the specification of the prize offered. 5. No cash alternative is available. 6. The judge's decision is final and legally binding, and no correspondence will be entered into.

Closing date: Monday 29th August 2011

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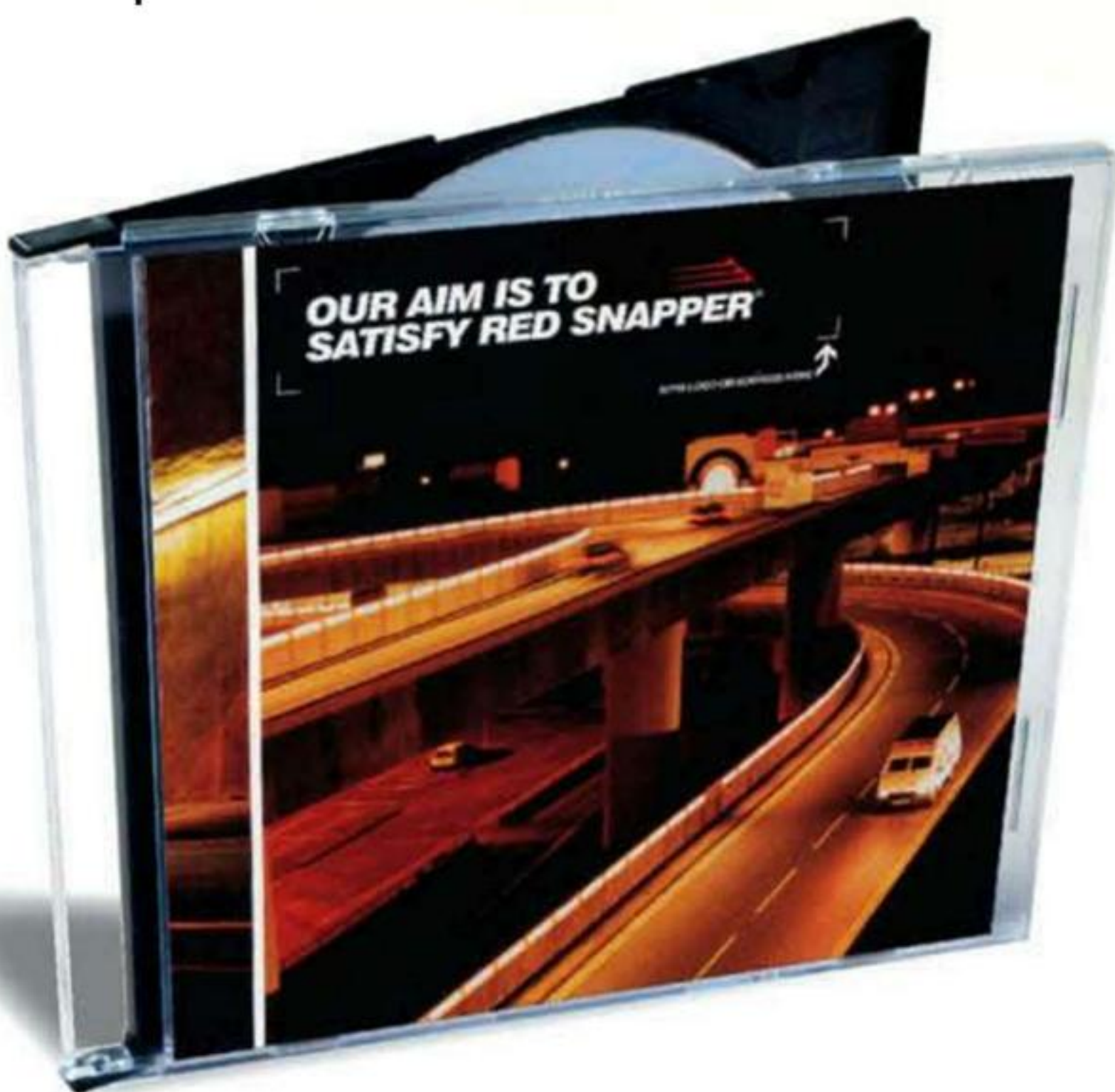
THE
CLASSIC
ALBUM



Red Snapper Our Aim Is to Satisfy

Warp, 2000

Their aim wasn't to get dropped on the day of release. Shame, says **Roy Spencer**, this could've been Warp's crossover album



You're in the big old elevator of artistic life that is being in a band. You're in Red Snapper. Everything's

going peachy. Your second album, *Making Bones*, has granted you access to new levels of fame and fortune hitherto unimaginable.

You're supporting Massive Attack, Björk and the Fugees. Then you're

touring with The Prodigy, and even playing on the Boogie-Woogie piano showcase that is the Jools Holland show. You're going up.

"It got to the point where we all agreed that we needed to do another album to keep the momentum going," says Red Snapper co-founder and drummer, Rich Thair. You make the album. It's full of leftfield Funk

flex, cinematic scope and forward-thinking retro vibes. It would go on to be voted a must-hear album, but before that, the lift breaks.

A light blinks. The capacity has been breached. Your label drops you on the day of release. This floor: *Our Aim Is to Satisfy*. What went wrong?

Money

"I dread to think what Warp Records spent on this album," says Rich Thair. "We wrote and recorded it in our own studio, but they wanted us to totally re-record it and remix it in the super professional and expensive Townhouse studios. You can just imagine what it would have cost when the Townhouse was going, per day..."

Money was too tight to mention, it seems. The cost of putting an experimental live electronics band into U2's favourite studio was too much to bear. The label had just moved from South Yorkshire to the capital, and was cutting loose a few of its live bands due to new costs of operating out of the Big Smoke.

"It was ironic," says Thair. "Because on the day of renewing our contract we gave the label a budget of what it would cost to go out and tour the new album, which was done every year, and they couldn't afford it."

"It's a shame, because I thought we were recouping our costs with our touring, and they thought this would have been the album to crossover into the more mainstream. With the right promotion the album would have been a lot bigger than it was."

It's a shame

True dat, as the album is certainly a blinder. It's the perfect realisation of Electronic music through traditionally educated musicians and instrumentalists. It's got the Dance music chug and skank, but an ear for melody and hook you can only get by being able to truly play.

It's based around the core Red Snapper line-up, with a few special guests adding extra flavours throughout. "It was always centred around the three of us," says Thair. "Myself on drums, and Ali Friend on bass and David Ayres on guitar. We'd worked with MC Det before on the previous album, so we knew he was going to be involved in some way. We had also been working on more live stuff with Jake Williams who'd helped our live show be more electronic. We'd always involved electronics, but

we were approaching it from a different angle now.

"We knew we wanted a female singer in too, so we involved Karime Kendra, who was doing a lot in the West London scene. There were various other people involved at a later date. We brought in Mike Kearsy on trombone. Then when we were mixing we brought a few other people, like Hugo Nicolson, who worked with us at Townhouse."

Happy times

Although they were dropped on day of release, Red Snapper then spent a year promoting it live. "Considering what happened, we did really well," says Thair. "It's a great album, and the touring only made us tighter. For me, what the whole experience really represents is just being in a band, and it all being a team game and bouncing ideas off each other. It was a real changing point in our lives then. We'd had a taste of how it could be, gone up so high, and wanted more. Sometimes the lift just gets stuck, though."

Track by track with Rich Thain

Keeping Pigs Together

"We were really trying to do something with a soundtrack feel, that really represented us, and worked really well live. Big breakbeats, subby bass, and David supporting live with his very epic melodies."

"This track was all about a grimy, twisted sound, being squeezed out, before it opens into this huge soundtrack feel. If you listen to it, it's got what was originally just a Classical guitar line, which was filtered and mashed up. It was a real starting point for us, that track. It was a time when that epic Breakbeat thing was really working. We'd spent a long time with string samples, making a nice warm orchestral sound, which plays across the album."

Some Kind of Kink

"We were listening to a lot of Liquid Liquid and ESG at the time. That Punk Funk style. It's funny, because not long after this album we split with Warp and we split up and things. I always think what would have happened if we'd have stayed on this Punk Funk thing, because that sound really blew up again in the charts."

LIKE IT? TRY THESE...



MC Det presents Knights of the MC's Vol.1.

Red Snapper mic man plays King Arthur and assembles a round table of the sharpest swords on the UK Urban scene.

ADD THESE TO YOUR PLAYLIST:

Ed Solo & MC Det – Hit Em Hi;
Shabba D & MC Det – Say What U
Sayin'



Various Still/The Joint: Sugar Hill Remixed

Classic Rap label gets a modern refix from the cream of the UK's finest Dance producers. Red Snapper's *Don't Go Nowhere* was inspired by their remix.

ADD THESE TO YOUR PLAYLIST:

Trouble Funk – Hey Fellas (Red Snapper Remix); Sugarhill Gang – 8th Wonder (Pressure Drop Remix)



ESG A South Bronx Story

Red Snapper were feeling a lot of bands from the Punk Funk/No Wave era. Especially the Scroggins sisters.

ADD THESE TO YOUR PLAYLIST:

Moody; UFO



Red Snapper Key

Recording sessions at Rich's Welsh home were a jam-packed affair, with people and gear crammed in, and guitar amps on the washing machines.

ADD THESE TO YOUR PLAYLIST:

Fat Roller; Biffa Bacon



Toob Chromaphon EP

Latest release from Rich Thair and long-time collaborator, Jake Williams aka Jakeone.

ADD THESE TO YOUR PLAYLIST:

Harmonic Ping; Chromaphon

In The Studio With... Rich Thair

"We found a studio right underneath Waterloo Station, right under London Bridge. I think it was called London Bridge Studios.

"It was a great place, apart from when we were recording and we had to move the amps and double bass because they were picking up the trains above us. We did what we always do when we get a new

space – we kitted it out and bought new equipment. I remember thinking that we had to do it properly, so we went down to Turnkey and bought a Mackie desk.

"By then, we were using a Mac and Logic. We'd always combine current computer gear with old school Dub boxes and things like that. We used a Roland SH-101 quite

a lot. I'd do a bit of playing then we'd chop it up in Logic. We often ended up going one of two ways. Either we would go very live sounding and leave it as a live thing, or we would be playing and do a really tasty loop, then chop it and tighten it up inside the computer. Then we do a lot of overdubbing, obviously. To be honest, it was kind of a long

process. We were in there for about a year, writing and so on. It was always hard with us because a lot of bands tend to shut down and hide away and write. With us, all the gigs kept coming in.

"That was our way of making money. We would break the studio down and go away and do the gigs then come back in. It was still very creative."



That's typical Red Snapper, that is. We'd had the whole thing as an instrumental and it was working really well. Then out of the blue, much much later on when we were mixing, we got MC Det to kinda sing on it. It was the first time he'd ever sung. It really came together."

Shellback

"We got Karime Kendra to do vocals on it. She did these amazing lyrics,

The job that Hugo did on the drums... It's a very phat drum sound that he got. A lot of the sound of the production on tracks like this is down to Hugo."

Don't Go Nowhere

"We wanted to do something that had a real Hip-Hop feel, and a summer vibe. It was around the same time that we'd done a remix of Go-Go band, Trouble Funk, for a Sugar Hill

we layered up loads of stuff on it. You can hear a lot of the Electribe drum machine on there and a lot of filters and the Kaoss pad. Underneath you have a lot of David's funky guitar, which works really well.

"I was listening to this is the car the other day and it just sounds so phat and grimy, but you can hear everything. If you'd have heard the track when we recorded it in London Bridge it would have sounded really small and bitty.

"It just goes to show that if you record all of that stuff really well and then put it all through a Neve desk [laughs], well, you

It's all about a grimy, twisted sound being squeezed out, before it opens into a huge soundtrack feel

but it all seemed a bit obvious and corny. So we just used outtakes of her in the vocal booth, asking how many bars she needs before she comes in and that kind of thing... We chopped it up and, weirdly to us, it sounded more epic with these little snippets. I have to say that this is an example of a track that morphed a lot over the course of the year.

"When we mixed it with a guy called Hugo Nicolson in Townhouse Studios, we re-recorded everything.

record label remix album. It was on that similar vibe.

"We were all sat outside drinking a few beers and having a BBQ and all dancing. Jake came in and did some keyboards. It's got a little vocal from Det in there. That was the track that really went down well when we played it live, still does."

The Rake

"This track sounded a lot more organic when we first started. Then

get what you pay for."

The Rough And The Quick

"Originally this started very Punk Funk. Like a live band doing a House record. It morphed into this. We got Karime in and she wasn't sure how to sing on it. I suggested that she should look at the track like it was off a Porn film. Just very rude and dirty. Which was pretty much what Karime was like anyway [laughs].

"The sad thing about this album was that we pretty much got dropped from Warp the day of release.

Everything was geared up to the release of *The Rough And The Quick*. I remember, it was Christmas, and this was the single for the New Year.

"It's a shame because it's one of those tracks that could have really crossed over."

Bussing

"I would say that this is a more melancholic version of *Don't Go Nowhere*, it's very much in the same bracket. It's got that nice flute sample and Mike playing trombone, giving it that skanky feel.

"The thing with Red Snapper is that we never take a really obvious sample, except on Some Kind of Kink, with the David Essex sample from *Rock On*. We dig a little deeper.

"It's a really warm and uplifting track. It's a nice surprise in the album. Like when you stumble across a 12" Hip Hop record that has a B-side that is really hooky."

I Stole Your Car

"This started as a Dub track, but went through a lot of guises. In the end it ended up more upbeat, and more Roots Reggae or like a Ska tune. Then Det came in and wrote that wicked lyric. In many ways, it worked better that way. If it was just another 'Red Snapper does a dark, Dubby

Back in the Studio with Rich Thain

"We were very lucky to have David and Ali in the band. It's really nice to have someone that talented, like David, on guitar. You're able to ask him to try stuff out on a Classical guitar, instead of screeching

through and amp. Or Ali can just pick up a string bow, like on *They're Hanging Me...* So instantly you've got a bass sound you can sample, or lay stuff over the top like cellos. You've got something you can

use that sounds like no one else. I think we were really lucky to be able to create the textures we did using more organic instruments.

"Listening back to the album, what really work are

those rich, warm layers that were in there. We'd get that from having a standard guitar sound and then David would put it through his effects that he was using live. Then we'd record it into Logic and really go to town with the plug-ins. It was that period when plug-ins were 'wha-hay!' Back then it was like having new toys. A lot of the filters were really good fun to use.

"I remember at the time I hooked up with Alan Scally from Korg – that was the first time I got a Kaoss Pad, which I loved. I also picked up an Electribe drum machine as well. Listening back to the album, you can hear a lot of those in it. I was just running them live over the track and recording them straight into Logic. Then chopping them up, reversing them, mashing them. It was a great time."



sounds just enough like us to be a little bit different."

Alaska Street

"I put this in the same bracket as the first track off the album, *Keeping Pigs Together*. *Alaska Street* was something that David was working on. We'd come home in the evening and he'd be sitting, working for hours on

"We called it *Alaska Street* because it really summed up what our lives were like at that time, trying to come up with this album in the studio all the time."

Belladonna

"We wanted to write something really simple and beautiful, but with this creeping double-time Techno kick that creeps in.

"It's one of my favourite tracks that we've ever done. It can be so easy in this point in the album to throw in your filler track,

but this a track that really suggests the more unusual Classical music, or the soundtrack music that we've grown up with.

"It's about textures and moods. The album really needs that breathing space. Especially before the last track, *They're Hanging Me Tonight*."

They're Hanging Me Tonight

"What I like about it is that you've got live drums going on in it, but it also has this electronic pulse going through it. It's not a drum machine, you can't quit tell. We'd often do that and take live drums and turn it into a loop where you don't quite know where it's from. One minute it'll sound like an old loop, and the next you're playing live drums over that.

"Around this time we'd done a show with Mogwai in New York, and I've always been a really big fan of Mogwai. We wanted to do something really epic, like them, where you make a track that you don't think can go any further, but it then just goes up a gear. We wanted it, not to just be a wall of sound, but a real emotional purging. A perfect ending." **FM**

We wanted it, not to just be a wall of sound, but a real emotional purging. A perfect ending

thing' that would have been fine. But *I Stole Your Car* ended up sounding like us just walking around. By London Bridge and Waterloo Station, in the garages...

"To me it sounds very Urban and very London, but not us going 'oh, now we're trying to be Reggae.' It

string parts and things. I think this track is a real testament to his talents and playing live and on the guitar. He really created something very beautiful there and I love the way it develops as it goes along. Without sounding too clichéd, it does take you on a journey.

WANT TO KNOW MORE?

For the latest tour dates, news and releases, visit their official website at redsnapperofficial.com

NEED TO KNOW

Five Essential Facts About...

Red Snapper and Our Aim...

1 Our Aim Is to Satisfy is featured in the book 1,001 Albums You Must Hear Before You Die.

2 New album, Key, was self-funded and cost around £3,500 to make.

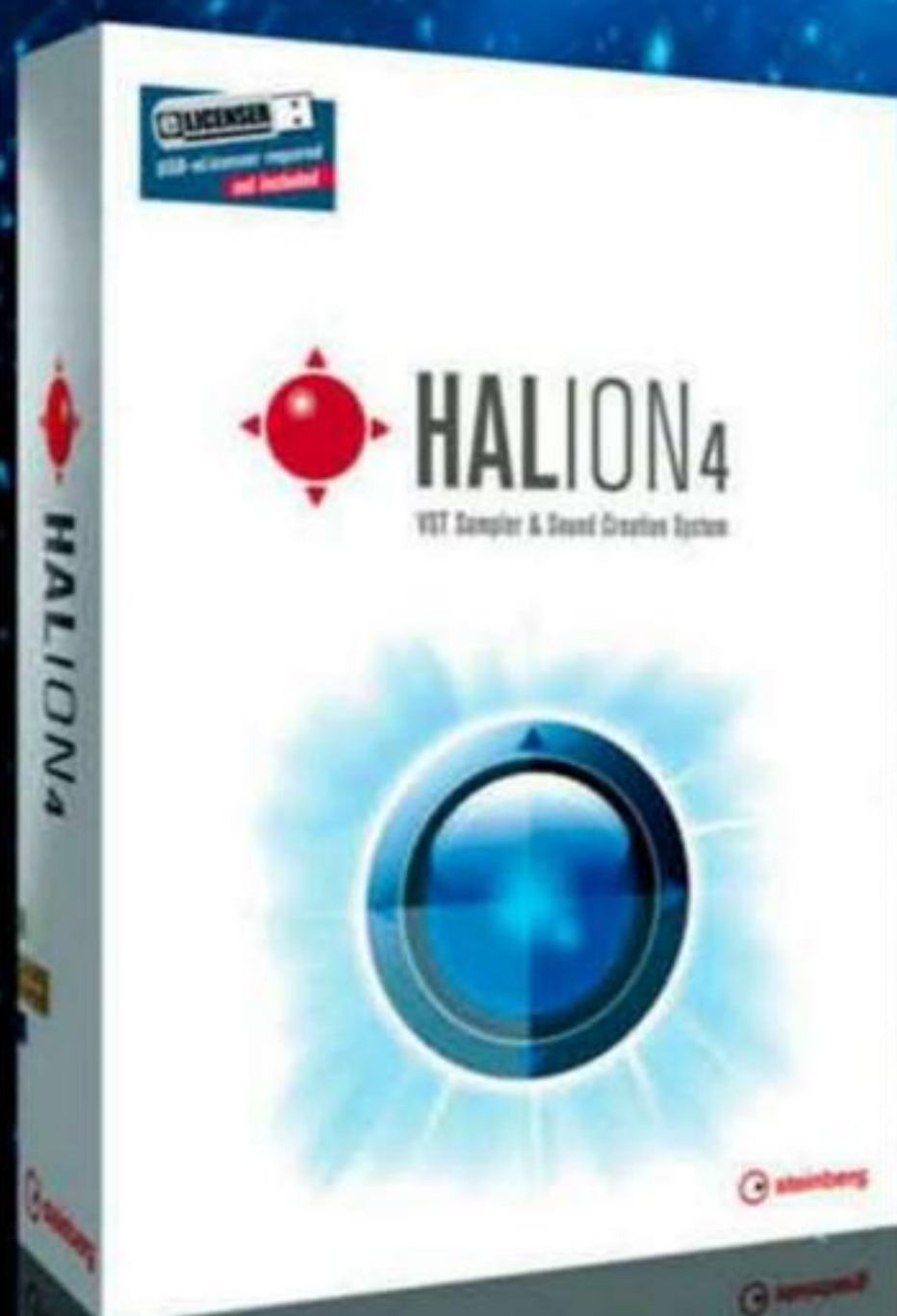
3 Now Rich is living in Wales, Ali is out in Dalston, and David resides in Dublin.

4 Today, Rich favours a G5 and Logic, a really nice 12-channel Amek desk, and Ridge Farm's Boiler.

5 Red Snapper split up in 2002 to focus on solo projects. They reformed in 2007.

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ALL YOU NEED TO KNOW

A few essential bits of information about...

Plantain Studios, Manhattan, NY



ADDRESS

West Village,
Lower Manhattan,
New York

WHO RUNS IT?

Gunnar Bjerk, Studio Manager
James Murphy, Studio Owner

EMAIL

dfastudios.gb@gmail.com

WEBSITE

facebook.com/DFAstudios

Deep in the heart of Manhattan lies Plantain – a studio formed on the back of an eviction from a

Brooklyn facility and one that has gone on to craft some of the most revered and respected Electronic records of the past decade.

Plantain, designed and built in part by LCD Soundsystem's James Murphy, is the hub of DFA Records, the label responsible for bringing LCD, Hercules & Love Affair, The Juan MacLean, Holy Ghost!, Hot Chip, Shit Robot, The Rapture and countless remixes to the speakers of your favourite club.

While most labels develop close working relationships with studios over the years, DFA took the Hitsville USA approach, creating an exclusive facility honed to their artists' needs; a "producer's paradise", says Murphy. "I had a studio in Brooklyn in the '90s where I stored some of my friend Tyler [Pope]'s gear. I was evicted from there in '96 and needed to give Tyler his equipment back, so I

brought it to his place – what is now DFA." In the early days, records were made from start to finish within the walls of Plantain, including LCD's entire catalogue. Now, work is done all over the country, before being taken to Plantain for the DFA stamp.

"We encourage our artists to build miniature versions of this place for themselves, so, often songs start there. But a lot of the time drums are done here, or records come to DFA to be mixed."

Sound of silver

Gear-wise, Plantain is laced with select pieces of kit, collected over the years from a variety of sources, "I'm pretty much always looking for something. eBay, friends, Craigslist, and so on. Between the studio and the gear that LCD took out on tour – in storage, waiting to be re-absorbed – there's about four studio's worth of gear."

Highlights include the custom-fitted Oram console, custom-built monitors with matched control room,

The Room

"We built the room to spec with John Klett and Bob Alach when we installed the SA monitors."



Custom Monitors

"We designed and built a set of mid-fields with two eight-inch drivers and a ribbon, powered by a Bryston 4B. I love them — there's another prototype with one ten-inch woofer and the same ribbon in Shit Robot's studio outside Stuttgart."

Oram Console

"When we ripped out the ground buss, the power distribution, power supply, the master section and a good portion of the wiring, replacing it with solid engineering courtesy of Purple Audio, it sounded great. There's two of virtually everything in the studio — sometimes more. So about half of it gets packed up to travel, while the console, computer and the other half stays behind. It's the way we do it."

INTRODUCING...



Gunnar Bjerk
Studio Manager



Purple Audio MC77s

"These are really awesome. Great crunch – the best new 1176 out there."



Roland System 100M

"All over *This Is Happening* – the bassline on *I Can Change and Dance Yrself Clean*. The thing rules, there's nothing not to love."



Yamaha EX2

"Just look at it! The entirety of *Gentle Giant* (Tiga collaboration) – including drums, but not including strings – was recorded using it. Possibly the most powerful, yet the softest machine I've ever heard."



The Sound of Plantain

One of the benefits of a label running their own studio – aside from the lack of hiring costs or time restrictions – is that it's built to specific requirements of the artists. Everything they need for their sound is at hand, and everything they don't isn't in the way. Not only does this save time when recording and producing, it also leads to a consistent sound across the label's releases. Eagle-eared producers will instantly recognise DFA's tight drums and claps, sync'd basslines and brash synths from their first *Rapture 12* to their latest release. "Most of the early DFA releases were all mixed and/or recorded here. Many artists that release on DFA still record and mix here too such as Juan Maclean, Gavin Russom, Shit Robot, and Holy Ghost!"



racks of high-quality gear and the collection of rare and classic synths.

"The console was, initially, a total piece of shit. Oram half-assed the design and construction – we were kind of stupid to buy it. That said, the channel strips had nice EQs on them, so once we ripped out the ground buss, the power distributor, the power supply, the master section and a good portion of the wiring and replaced it with solid engineering courtesy of Purple Audio, it sounded great and we love it now.

"We've been tweaking it in various ways over the years and have grown very used to it."

Speakers corner

The monitoring setup is equally as bespoke; "I like the SAs we use because I like ribbon tweeters. We've had them since the room was designed, and in fact, we designed

them too. They're the best 'new' [UA] 1176 out there."

Watch the tape

The synth collection is where Plantain really comes into its own. At every turn, there are both rare and classic keyboards, be it the SCI Prophet 600, EML ElectroComp Model 101, Yamaha DX7, CS-30 and CS-60, EMS Synthi and Polysynthi, Wurlitzer, Roland MKS-80, Juno-60 or the gigantic and rare Yamaha EX2 organ synth. All of the synths, outboard and instruments are tracked to Logic or Pro Tools, but recording to tape is also an option.

"I own two 3M M79s – 16 and 24 tracks – but after no-one wanted to use them for 10 years, they went into storage. I like mixing to the same Otari MX-5050 B2 as well, which I've had since 1993. The thing just sounds better than most half-inch

30IPS machines I've tried."

Plantain mic favourites include the Neumann TLM 193, Altec 633A, Beyer-dynamic M160 and Stevie Nicks' favourite the Sennheiser MD-441.

Though Plantain has been set up and operated for DFA Records and their signed artists and contributors, there is a limited amount of availability for non-label artists and producers when the studio operates as a commercial facility. "It's still our house, but it's limitedly commercial... It's a way to let people in to see what we do, and work with new people." Don't start planning your trip to Lower Manhattan just yet though, even when Plantain does open its doors to the uninitiated, its books are quickly filled and with such a consistently impressive export and gear collection, it's no surprise.

With LCD Soundsystem hanging up their patch cables earlier this year, James Murphy's studio is no doubt about to kick up its outgoings a notch. DFA Records continues to impress and the beating heart of their sound is no different. **FM**

YOUR STUDIO IN HERE?

Want to show us your studio? Drop us a line at futuremusic@futurenet.co.uk, and we'll pop round for a Cadenhead's Old Raj.

We built mid-fields with two eight-inch drivers and a ribbon tweeter

the room around them with John Klett [TechMecca] and Bob Alach [Alachtronics]. There are the ubiquitous [Yamaha] NS10s, because they serve a certain purpose when mixing, but I actually really love the Realistic Optimus 7 and Minimus 7 speakers from Radio Shack – really great with the old Crown DC 300 amp for kick drum and vocal placement. I could literally make albums on just those.

"Recently though, we just wanted something else, so we designed and built a set of mid-fields with two eight-inch drivers and a ribbon, powered by a Bryston 4B. I love them, and am trying to find the time to finish the prototypes and make them available to people – mainly our artists on the label."

Rack gear is treated with the same consistent mantra, evident in the two UA LA-610 pres, two UA 6176s and four Purple Audio MC77s, a favourite of Murphy's; "The '77s are awesome – great on percussion, which we do a lot of and nice on bass. You can stereo link

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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



Little Dragon Ritual Union

Peacefrog



Having spent the latter part of 2010 touring with the likes of Gorillaz and De La Soul and then the beginning of 2011 working on music for DJ Shadow, Big Boi and Raphael

Saadiq, Gothenburg's Little Dragon now unveil their highly impressive third studio album on Peacefrog. *Ritual Union* sees the quartet pick up from where they left off on 2009's critically-acclaimed *Machine Dreams* with plenty of analogue drum machines and vintage synthesizers providing the backbone for the unique exploration of experimental Pop. The album is addictively diverse, ranging from the digital funk of the title track to Club-friendly sounds of *Brush The Heat*, the percussive jam of *Summertearz* and the Garage-Soul of *Crystallfilm*. As with their previous two LPs, Little Dragon recorded and produced *Ritual Union* in their own space in Gothenburg, refusing to work in a fancy studio and instead opting for what singer Yukimi Nagano describes as their own junkyard – a move which is perhaps responsible for their seemingly loose and improvisational style on the record.

Tracks like *When I Go Out In Oktober* and *Seconds* highlight their psychedelic tendencies while *Nightlight* shows off their astute Pop sensibilities. For such a stylistically varied album, the tracks hold together perfectly on account of Nagano's deeply seductive vocals.

ADD THESE TO YOUR PLAYLIST:

Ritual Union, *Brush The Heat*, *Crystallfilm*

9/10



Alex Metric Open Your Eyes – Remixes & Productions

Virgin Records



If you've ever heard Alex Metric DJ, seen his live show or watched our exclusive *In The Studio* video with him, you'll know he's a producer constantly thriving to do something different. His seamless fusion of Indie with an Electronic '80s and dancefloor influence have created some incredible productions and remixes.

In this compilation package, we're treated to 14 of Metric's finest with his take on Phoenix, Gorillaz,

Bloc Party, Beastie Boys, Depeche Mode and more. Plus, there's his own productions such as *Open Your Eyes* with Steve Angello and *End Of The World* featuring Charli XCX.

It's a nice way to scoop up all Metric's finest moments and quenches our thirst for a full artist album, for now, anyway. Even the older remixes have aged pretty well and Metric's style never becomes formulaic from mix to mix. Cracking stuff – we're off to dance!

Chris Barker

ADD THESE TO YOUR PLAYLIST:

Phoenix - Lisztomania (Alex Metric Remix), N.E.R.D. - Hypnotize U (Alex Metric Remix)

8/10

Cosmin TRG Simulat

Domino



Romania's Cosmin TRG has amassed a healthy reputation as an innovative producer over the past few years with his inimitable strain of ghostly Techno that forever shifts in mood, tempo and style.

It's no surprise then that his debut, released via Modeselektor's boutique imprint *Fifty Weapons*, is somewhat off-centre and challenges the boundaries of the genre as we know it. The twelve tracks on *Simulat* form one cohesive and coherent statement on just what the Bucharest-born but

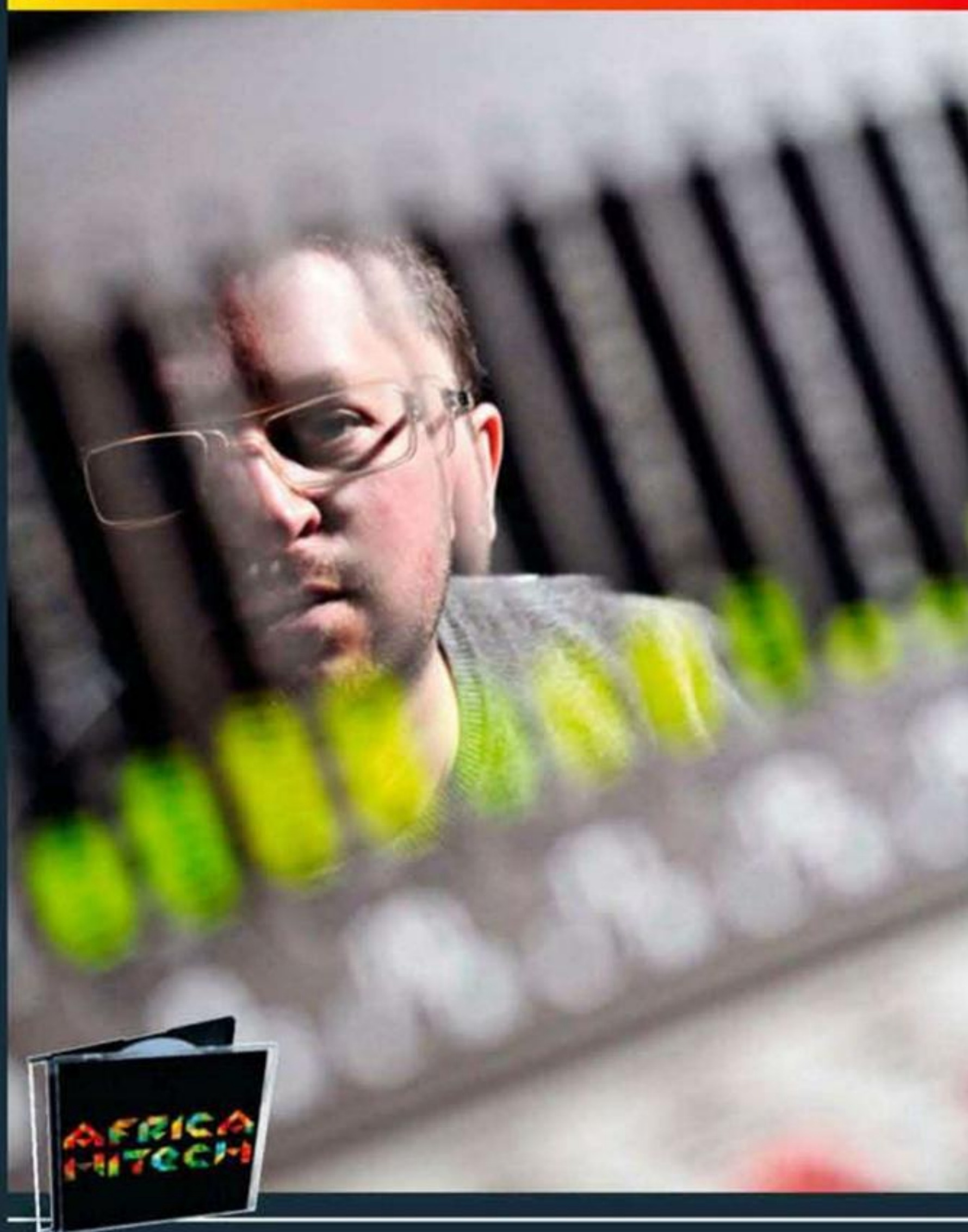
now Berlin-based producer is about. *Simulat* meanders through Cosmin's various forms of Techno, often spooky and always atmospheric. It's Cosmin's ability to take appropriate detours into deeper pockets, cracks of warm analogue ambience and crannies of abstract alien sounds that makes *Simulat* such an absorbing record. Each track was hand-crafted especially for this project, something that is perhaps the reason why Cosmin TRG has managed so perfectly to create a Techno album that is both experimental and yet wholly engaging. **Tom Jones**

ADD THESE TO YOUR PLAYLIST:

Amor Y Otros, Fizz, Less Of Me, More Of You

8/10

It's On Our iPods



Africa Hitech 93 Million Miles

Warp Records

Launching a well-aimed salvo of futuristic bass heavy Electro-Dancehall Funk the production partnership of Mark Pritchard and Steve Spacek aka Africa Hitech announced the arrival of their debut album. *93 Million Miles* is not the kind of album that you would expect, especially if you have been following the paths of either party. Even Pritchard's recent outing as Harmonic 313 that saw him embrace current UK Bass sounds will not prepare you for this experience.

It's a contrasting affair that signifies a wide pallet of sounds rather than any notion of a disparate sound. Tracks such as *Out in The Streets* take you truly by the short 'n' curlies with its relentless kick and bass pattern that rolls over and over with a

mesmerising vocal loop. In contrast, *Light Your Way* has a much more sedative vibe with its Gil-Scott Heren-esque vocal sample set against a more melodic backdrop and lighter stepping rhythm.

The album is not particularly forgiving, expecting the listener to deal with the leap forward in tempos, structure and sounds that it throws at you. This is a heavyweight and challenging listen of Electro, Digital Dub, Dancehall and Soca mixed together with some melodic vocal driven tracks in an auditory whirl that is exactly what makes it such a fresh and exciting album.

Will Seelig

ADD THESE TO YOUR PLAYLIST:

Out in The Streets, Light The Way, Future Moves

9/10

Digitalism I Love You, Dude

V2

The German duo has simmered down over the last few years but they've returned with a new slice of Indie dancefloor fun. Initially sounding a little more restrained than usual, it's probably true that Digitalism have been influenced by the retro vibes that have been pushed into everyone else's productions recently.

Overall, it still feels like the duo are playing easy with what they know and by track five, *Forrest Gump* we have fully returned to a sound that was exhausted four years ago.

If that's your thing, then Digitalism have nailed it and no doubt you'll like the album, but for most people I think they've probably got enough Indie music drowning in the saturation of distortion and bitcrushers. It's the middle ground of not-really-heavy, not really groovy where it sits flat for me. Luckily amazing tracks like the Electro Metal *Reeperbahn* and the oddly-beautiful *Just Gazin'* are in the majority and this album is an overall return to form. **Chris Barker**

ADD THESE TO YOUR PLAYLIST:

Strotosphere, Reeperbahn, Just Gazin' Blitz

7/10

Ras G Down 2 Earth

RAMP Recordings

South Central's Ras G has been an important player on LA's underground Hip Hop scene since the early '90s but leaves his most impressive mark to date with *Down 2 Earth* on UK-based imprint, RAMP Recordings. In a style that the experimental producer dubs 'Ghetto Sci-Fi', he displays an instrumental approach to making eclectic Hip Hop that resonates with beat lovers and experimentalists alike.

Effortlessly combining gritty beats, deep rolling basslines and an expansive grid of sound bites, Ras G creates an analogue beat-tape styled journey through post-Dilla instrumental Hip Hop. His unique and often complex beat programming merges with an array of early Soul samples to erect the central spine of the record, but it's with its innovative arrangement that *Down 2 Earth* truly stands out. More like a collage of off-kilter beats, far-flung influences and cosmic ideas than a traditional album, *Down 2 Earth* is Ras G at his multi-dimensional best. His belief in Rastafari, which is also referenced in the name Ras G (the G being the first initial of his real name, Gregory

Shorter Jr) is abundant as he explores sounds from dub soundsystem culture while modernising them into raw and contemporary Hip Hop like no other.

Tom Jones

ADD THESE TO YOUR PLAYLIST:

Crenshaw Bus, Leave!!!, Crush On An Earthling

7/10

Agnès presents Cavalier A Million Horses

DrumPoet Community



In addition to a hectic DJ schedule and running Sthlmaudio Recordings, Agnès is best known for producing spacey Deep House with dubby grooves. He has made music under several pseudonyms including Ray Valioso and Modeste and although *A Million Horses* is his third studio album overall, it is the first under his Cavalier moniker. The Swizz producer has used this alias twice before on records for DrumPoet Community, the Zurich-based label who upon hearing the music he sent over requested that an album was made under the same name. Killer grooves and '90s US House are the main focus of the record with plenty of loop-friendly jams that stretch on in spell-binding fashion. *Napoletano's* chiming keys are an obvious highlight, as is the low-slung charm of *Yonaguni*.

Palomino takes on wonky dub while *Brumby* builds with patience and an old-skool intensity not to mention a cheeky sound clip of an infamous rant by Charles Manson.

There's something here for just about anyone with an interest in history of House music from the UK, Europe and across the pond so simply dive in and take a listen. **Tom Jones**

ADD THESE TO YOUR PLAYLIST:

Uzunyayla (Hallucinatory Narcosis) Napoletano, Brumby (Low Pembina)

8/10

Klartraum Evolution

Lucidflow



'Klartraum' is the German word for the stage of a lucid dream when you become aware that you are dreaming and are able to manipulate your surroundings. Perhaps never has a name been as apt than for the Berlin-based duo comprised of Helmut Ebrietsch and Nadja Lind. Having been working together since 2006, the pair have mastered a sound that is organic as it is electronic, as displayed perfectly by their debut album, *Evolution*, which is out on their own Lucidflow imprint.

The record is full of warmth and atmosphere, sewn together by tracks that flow naturally with wave-like pulses until you are completely hypnotised. It is a collection of deep, Techno-infused tracks that lay bare emotions across a raw sounding yet ultimately controlled soundscape.

Tracks twist and tease as they lead the listener through lush instrumentals and challenging atmospherics. Bumping and grooving with an inescapable hypnotism, *Evolution* unravels with strange, understated sounds that make perfect

sense in Klartraum's cohesive musical environment. There is melancholy, haze, darkness, rhythm, emotion, light, melodies and earthy textures cramming every single bar. A totally balanced yet immaculately-produced LP, *Evolution* is a timeless exploration of the humanness of Electronic music. **Tom Jones**

ADD THESE TO YOUR PLAYLIST:

Pain Relief, Growth, All Dimensions

9/10

Hyetal Broadcast

Black Acre



There are two phrases that are common place in music at this moment in time:

'Bristol Dubstep producer' and '80s influences'. *Broadcast* is the debut album from yes you guessed it, Bristol-based (former) Dubstep producer Hyetal that manages to combine both these factors into a surprisingly comfortable fit.

The Carpenter-esque synths and atmospheres drive this album combined with more contemporary Dubstep-style rhythms makes this for a very interesting listen. One thing this album has that the Eighties never did is bass and *Broadcast* wears its geographic location for all to see. Tracks such as *Dime Piece* and *Black Black Black* make sure you know that you're listening to a track from 2011. Excellent. **Will Seelig**

ADD THESE TO YOUR PLAYLIST:

Dime Piece, Phoenix, Diamond Islands

9/10

Compilations

PICK OF THE MONTH

Get Lost 4 Mixed By Damian Lazarus

Crosstown Rebels

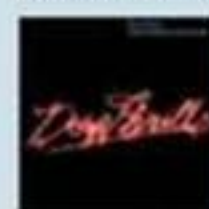


Top-notch late-night tunes. Lazarus introduces once again, the finest underground club music. So many amazing tracks here, it's gently eclectic and consistently brilliant. Hipster Techno meets laid-back Indie Electro. A must buy.

Chris Barker

Hervé presents Deep Thrills Volume 1

Cheap Thrills Records



This new label compilation delivers a whopping 14 brand new, unreleased tracks of UK House, Garage, 2 Step and Dubstep. It's fresh, original and comes with a second CD in the mix courtesy of C.R.S.T. Sweet! **Chris Barker**

Hed Kandi A Taste Of Kandi Summer 2011

Hed Kandi



Featuring the groovy House sounds of Gramophonedzie, Patrick Hagenaar, Olav Basooski and more, this is classic Hed Kandi: pianos, funky basslines and positive vibes.

Chris Barker

Amnesia Ibiza Anthems

New State Music



A whopping four CDs containing practically every single Dance record to ever make a crowd throw their hands in the air. Modern hits, future anthems and '90s bangers. A great resource for DJs. Excellent!

Chris Barker

Superclub Ibiza Cream / Pacha / Gatecrasher

EMI



Each of these aptly-titled Superclubs brings you their version of what's hot in the clubs, from Deadmau5 to Afrojack via Sharam and Armin van Buuren, it's all here. Great tracks glued together in an obvious but acceptable way.

Chris Barker

Retro Respect



Various Crydamoure presents: Waves

Crydamoure

Fans of Bangalter's Roulé label will be right at home with Guy-man De Homem-Christo and Eric Chedeville's Crydamoure compilations. Released in 2000 and 2003, this is French House at its best, with plenty of subtle and not-so-subtle sampling and 3630-pumping. *Mirage*, *Cherie D'Amoure* and *Hysteria* are all excellent – do yourself a favour and dig it out. **Declan McGlynn**



THE PRO PRODUCER'S GUIDE TO



If music is all about evoking emotion through sound then we need powerful tools to sculpt that sound. Welcome to the world of EQ where mix magic really happens...

EQ, or 'equalisation', is a powerful tool that lets you literally shape the sound of your music, balancing and enhancing the tone of every instrument for maximum impact.

In this article you'll find out how to clarify a muddy mix by removing unwanted frequencies, plus suggestions of which ones you can use to add 'air', 'warmth' or 'thump' and so on, where needed.

We'll look at techniques that enable you to sculpt an instrument's frequency-response to sit well within a mix, and which EQ shape is the best way to achieve it – plus, how to find exactly the right frequency to cut or boost for any instrument.

We'll look at different types of EQ, both analogue and digital, and the advantages and disadvantages of each. First though, it'll be helpful to understand a little about what

EQ is, and how it works. We constantly talk about sound using words borrowed from things we can see. We talk about things being 'bright' or 'dull', about being 'muddy' or 'clear', 'sharp' or 'smooth' sounding.

EQ is like colour for sound

People with a condition called Synesthesia actually see specific colours when they hear certain sounds, and most of us associate colours with sound at least to some extent. There is a fundamental link between the colours we see, and the 'colours' we hear.

The colours we see are determined by the frequency content of the light waves that reach our eyes, whereas the colours we hear are determined by the frequency content of the sound waves that reach our ears. So, low-frequency light waves are brown, red or orange in colour, and these 'sepia' tones are

THE EXPERT

Ian Shepherd
Mastering Engineer



Ian is a professional mastering engineer, Blu-ray/DVD author and musician. He runs Mastering Media and the Production Advice website. He is passionately opposed to the so-called CD 'Loudness Wars', and in 2010 founded Dynamic Range Day to help raise awareness of the issue. productionadvice.co.uk

often colours we associate with lower-pitched notes and 'warm', 'analogue' sounds, whereas higher-frequency 'brighter' and more 'metallic' notes and sounds are often connected in our minds with colours like blue or cyan.

Coincidence? Probably not. At the end of the day, all this stuff is just our brains trying to make sense of the world around us, and the association of blue with cold water or red and orange with the dying embers of a fire goes back a long, long way.

Luckily for us, this instinctive connection means that controlling the frequency content of your music using EQ – its colour, if you like – gives us a powerful way to control the affect it has on anyone listening – which is exactly what music is about, after all! Read on to learn how to maximise this effect and let your music sing.

The facts:

What is EQ?

EQ is equalisation – but equalisation of what?

We can control the frequency content of our music using EQ or equalisation, but what does that name mean? It comes from the earliest use of equalisers – correcting the uneven frequency response of telephone lines. Using the 'phone, you want a person's voice to sound as close as possible to the real thing – so it needs flat, or linear frequency response. The very first telephone electronics were very far from ideal, so the frequency response of the signals

needed to be 'equalised', so that what you got out was roughly the same as what went in.

Nowadays, digital audio systems are designed from the ground up to have a very linear frequency response and more often than not we use EQ to stop things having an even frequency response, by adding colour – but more on that later.

Natural EQ

Thinking about the original meaning of equalisation, it's interesting that the natural frequency response of much acoustic music is often already quite flat – meaning roughly equal at

all frequencies. If you look at the frequencies produced by a piano, symphony orchestra or even a Rock band recorded without much processing, you'll see most frequencies are represented fairly equally, sloping gently down in the high frequencies.

This makes sense – if all the instruments made sounds at the same frequency, it would be much harder to tell them apart. This natural EQ is determined by the fact that low-frequency sounds have a lower pitch, and high-frequency sounds

you put them all together, they cover the whole range.

EQ without an equaliser

Using these ideas can give us a powerful way to control the 'EQ' of a mix, without ever touching an EQ unit. If a guitar line is fighting with the vocals in the mix – try a different chord inversion, or moving one of them up or down an octave to make space for the other.

Even if changing the arrangement isn't an option, it's possible to get a very different sound for each part.

Moving a microphone can capture a very different sound – close-micing an acoustic guitar will often get a warmer, richer sound. With synths, editing a patch (or choosing a

If a guitar is fighting with the vocals, try using a different chord inversion

different one in the first place) is often a better way to achieve clarity and separation than trying to EQ the sounds afterwards. You can also use EQ to achieve the same effect though, of course. This technique is known as 'frequency carving' and is covered over the page...

have a higher pitch. For some rules of thumb about different frequency ranges and how they work with instruments, see *Using EQ*. Writers naturally choose instruments with different frequency characteristics to balance and contrast against each other, and when

EMI's TG EQs have helped craft thousands of classic recordings



In practice:

Using EQ

Practical and creative EQ techniques

As with any audio processing, the key to great results is to know what you want to achieve. There are many reasons you might want to use EQ, for example:

- To balance a sound within the mix – e.g. more edge on the vocals to help them cut through, or more thump on a kick drum or bass.
- To fix a recording problem, for example too much boom on a bass sound, mic pops on a vocal.
- To balance the overall sound of a mix – to add more bass, for example
- To create an entirely new or unique sound – for example transform

something into a bassline by cutting all the high frequencies. Whatever the goal, having a clear idea of what you want to achieve is essential. First, you need to know how frequencies are measured and labelled.

Measuring frequency
The frequency of a sound is measured by how many times its wave oscillates per second. It's measured in 'cycles per second', or Hertz (Hz).

The lowest note on a piano has a fundamental frequency of 27Hz, and the highest of 4186Hz, or roughly 4kHz (kilohertz). Our ears can hear much higher, though – right up to 20kHz for some young children – and

there is plenty of important information in this area.

EQ bands
Learning what different frequencies sound like, and the effect they have on the sound of different instruments is an invaluable skill. These are the names I use to think of the bands, and the frequencies are only approximate – others may disagree, so use your ears!

20-60Hz – Sub-bass: Gives boom, depth and richness – too much sounds flabby and out of control. Small speakers don't reproduce this

60-150Hz – Bass: 'Thump' and punch in drums, especially kick and snare, richness in bass and guitars. Too much sounds thick and woolly

150Hz-1kHz – Lower mid: Important for warmth but too much sounds thick and congested. 500Hz-1kHz region especially is crucial for a natural vocal tone, but too much sounds boxy and nasal

1-3kHz – Upper mid: The most sensitive area of the ear, important for edge, clarity and bite, but too much will sound harsh and tinny

3-8kHz – Low top: Fizz and sizzle, edge and aggression in guitars – too much sounds thin and brittle

8-12kHz – Top: Gives openness, air and clarity – too much sounds over-bright and glassy

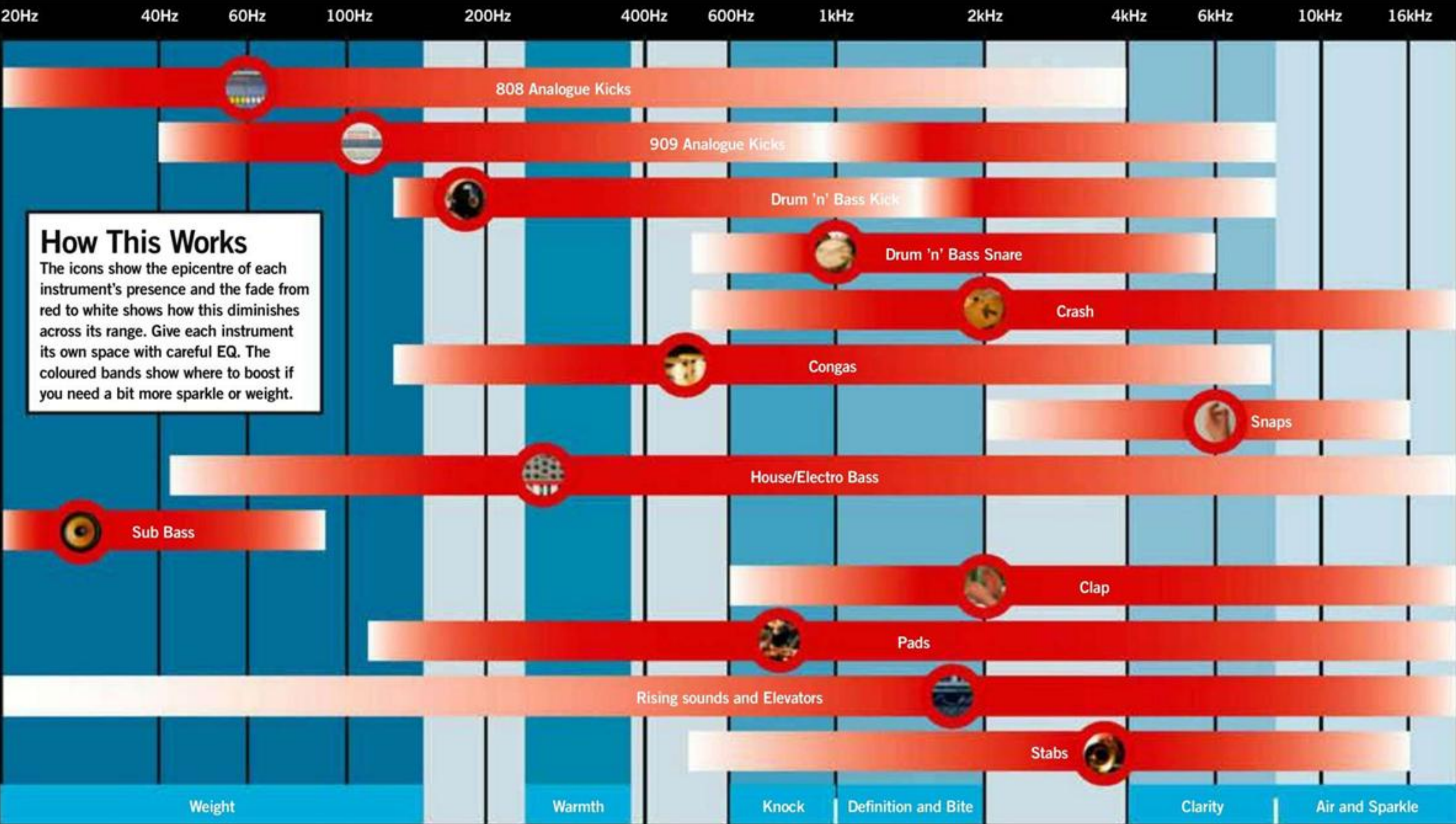
12-18kHz – Very high top: These frequencies can add sheen and sparkle and sweeten things up, but too much sounds unnatural, gritty and forced

For more really in-depth information about the different frequency bands and how they relate to different instruments, check out the chart below.

It's all about balance – or is it?
As you may have gathered from the rules of thumb above, every frequency has an important role to play, but too much of any one area will sound unnatural – so, having the right balance of each is essential for a natural sound.

But actually, that's not quite true. The sound of the overall EQ needs to be balanced, but individual sounds on their own don't need to be, provided they work within the mix. In fact, if all the instruments in a mix sound perfectly balanced by themselves, this can often lead a muddled, cluttered mix.

A great example is acoustic guitar – when close mic'd, there's a lot of warm, boomy bass information in the sound. This may sound great on its own, but will often just clutter things up and make them sound muddy within a mix. The solution can often



be to reduce the low-mid and bass boom to help the guitar cut through the mix and sit right.

This technique of restricting the frequency range of instruments to create a space for them to sit in the mix is an extension of the idea of choosing sounds that complement each other sonically, and is known as 'frequency carving'.

If there are two parts that are fighting in the mix because they occupy the same frequency range, it can sometimes help to boost EQ on one of them, and cut the other at the same frequency. Then, reverse the strategy and boost the second sound in a different place, while cutting the other. This emphasises the contrast between the two parts, with gentler boosts, and helps avoid things sounding unnatural.

Finding the frequency

This is probably the most useful EQ technique you can ever learn. Let's say there's a honky mid-range resonance in the vocal for the song you're working on. You know it's somewhere in the lower mid, but you're not sure exactly where. To pinpoint it exactly:

Solo the channel you want to EQ

Listen carefully and remember what the frequency you're trying to find sounds like

Using a parametric EQ, add a large boost with a fairly narrow Q

Slowly sweep the frequency of the boost up and down

Listen for an extreme version of the frequency region you want to find

When the boost hits it, you'll hear it 'sing out', or 'ring'

Now use the EQ to make a big cut instead, and double-check by rocking the frequency up and down again

Now reduce the cut until you start to hear the problem frequency again

Tweak the Q. Too broad will cut out too much around the problem frequency, but too narrow will sound 'pinched' and unnatural

Finally, un-solo the track and listen carefully again in context – experiment with more or less cut on the selected frequency to find the perfect amount.



ON THE DVD

> On the DVD you'll find a step-by-step example. First the source audio, then sweeping for the right frequency, and finally with the cut in place.

EQ Parameters

Equalisers come in different varieties, each with different parameters and control. Choosing the right type for the effect you need is essential

All EQ boosts or cuts certain frequencies, but exactly how it does this varies. The simplest type is the high or low cut – these do exactly what they say on the tin, removing everything above or below a particular frequency.

Shelving EQs allow broad boosts or cuts above or below the chosen frequency, and parametric EQ centres around the chosen frequency. The 'Q' control decides how broad or narrow the band is – lower values give a broad boost and a high Q creates a narrow 'notch' EQ.



ON THE DVD

> On the DVD you'll find examples of each EQ type in use. First the flat audio then Hi-Lo Cut, Shelving and Parametric EQ.



Hi and low-cut: Cutting out-of-control low frequencies can help clean up a muddy mix. Take care not to make everything too thin, though! More advanced EQ types allow you to control the steepness of the cutoff.



Shelving: Great for making smooth, gentle alterations to a whole mix. A high-shelf boost can be a nice way to add 'air' to sweeten a vocal or dull mix without making anything in particular stand out.



Parametric: The most powerful form of EQ, allows 'surgical' changes and fixes at any frequency. Very narrow boosts create a resonant sound that can make a great musical effect swept up and down through a broadband sound like a synth pad.

Pro production:

Advanced EQ Techniques

Taking your use of EQ to the next level

The engineers and producers who worked on many of the classic albums of all time could only have dreamed of the power and flexibility of modern digital EQ, where three or four fully parametric equalisers on every channel is taken as standard.

And yet, some of the most expensive and highly-regarded digital EQ plug-ins available today are emulations of the classic analogue hardware that was used on those same albums. Why is this? Were they better, in some way – able to do something that digital EQ can't?

Not on paper. In fact, the first thing you'll notice using one of those

emulated Pultec or Neve EQs is actually how limited they are. They restrict the choices of frequency, the number of different filters and their types, and they sometimes change the sound of the signal even when all the dials are set to zero.

They sound great, though! And the reason is the choices that led to those restrictions. You'll often hear people say how much easier it is to get a great sound using a classic EQ. That's because choices the designers made – which frequencies to make available, what shape the curves should be and so on – effectively guide our hand to make great decisions. So even though your choice of frequency may be limited,

it's limited to creative, musical-sounding options. And even though the technical specs can't match digital EQ in simple numeric terms, the ways that they don't match up more often than not make things sound better, not worse!

Another factor is the way they work – with a 'vanilla' digital EQ, you get exactly what it says on the tin – numerical, mathematical performance. Whereas classic analogue EQs were often designed 'by ear', and the results you get can vary depending on how extreme the settings are. Once you're used to it, this can be very creatively inspiring, adding to the art and pleasure of using them.

Luckily, modern emulations by companies like Universal Audio and Waves work hard to get very close to the ergonomics and original sound of those classic analogue originals in a digital world, allowing us to (almost) have the best of both worlds.

Minimum phase Vs phase-linear EQ

Even in the world of digital EQ there are choices to be made. Most standard digital parametric EQs sound very similar to each other, despite the fancy interface differences – you pay extra to get the 'imperfections' built back in, as we've seen. But digital technology allows one trick that really is worth looking at – phase-linear EQ.

Traditional EQ not only changes the frequency response of the input

Essential Advice

DOs & DON'Ts

DO: Use high-pass filters to remove 'wild', out-of-control or unnecessary bass. For example, a hi-hat seldom needs anything below 1kHz

DON'T: High pass everything. This can be a great way to clean up a muddy mix, but if you take it too far, it can sound thin

DO: Experiment with 'unnatural' EQ – this can be a great way to add interest and character, without overusing effects

DON'T: Add the same EQ to everything. Build-up of EQ in this way is a sure way to clutter and confuse a mix

DO: Use extreme EQ if you need it! I once added 24dB at 40Hz to get the warmth I needed. This could have been a recipe for disaster, but it worked – if it sounds right, it is right!

DON'T: Boost what's not there. Adding loads of top to get clarity when there isn't any in the signal will add noise and distortion



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signal, it also changes the phase, near your chosen frequency.

Roughly speaking, this means that some parts of the original wave get delayed, compared to others. This can have a subtle but noticeable effect on the sound. Often that's exactly what we want, especially when emulating an older model EQ, but if you want to make very deep cuts or boosts in the audio signal, or use very narrow notches, these phase-shifts can start to sound quite unpleasant.

By contrast, linear-phase filters don't do this, meaning you can make much more dramatic changes, if you need, without the side-effects of a 'normal' EQ. Linear-phase EQs are often used in mastering, for this reason. Phase-linear EQ requires a lot of CPU power and always involves a delay, so it's less suited to tracking.

Using EQ on effects

So far we've only talked about using EQ on different parts in a mix – meaning, instruments, vocals and so on. You can use EQ on anything in a

mix, though – and one particularly useful technique is to use it on effects, separate from the source.

So, for example, if you add lots of nice top end to a vocal to get a nice airy, breathy quality, that could end up causing a problem with the reverb. Digital reverb is notorious for catching and emphasising 'S' and 'T' sounds especially – and the extra high frequencies from the EQ will only make this worse.

EQing the reverb return can fix this – use a high shelf to reduce the effect, or even a high-cut filter to remove it completely. Even better, EQ the reverb send – that way you can tailor the sound for individual sources separately, before it gets to the EQ. This enables a range of different effects using the same EQ.

Another example could be radically EQing an effects return – for example, a rich resonant filter sweeping up and down over a chorus or delay return in a Dance track. This can be as subtle or as dramatic as you need it to be.

HANDS-ON TIPS

Boost or Cut?

Cutting or boosting can have a dramatic effect and the answer isn't always obvious

You'll often hear it's better to cut EQ than boost. This is because boosting the level of an EQ band has a much bigger impact on the apparent level than cutting somewhere else.

Since louder often sounds better to begin with, this means the temptation is to keep boosting EQ on a part and thinking it sounds great, but then realising it's no longer balanced in

the context of the whole mix. You also run the risk of pushing things too hard – in general it's better to leave yourself some headroom, and maxing out all the EQ isn't a great way to achieve that.

All this is good advice – but personally I don't follow it! If I hear a problem area in a sound that I don't like, the quickest way to fix it is with a cut, but more

often than not I just want more edge, more thump, more sparkle – so boosting feels the obvious thing to do.

You then need to tweak the level afterwards to compensate, but that's OK! I recommend you boost or cut at will – whatever gets you to the sound you want quickest – but bear in mind that if you do nothing but boost, you may end up going round in circles.

In practice:

Tips & Tricks

Here are some tried and tested tips for EQ

Although there are plenty of rules (that are made to be broken), there are some things you can only learn through practice. Here are some less textbook methods for carving and crafting your mix and some choice tips for everyday production issues.



EQ before or after compression?

Deciding where to use EQ in the chain can have a huge impact on the results you get. Generally speaking, you need far less EQ once a sound has been compressed.

EQ applied before a compressor will need bigger changes made to hear a result, because the compressor will reduce those changes. For example, if you have a mix with a compressor over the stereo buss and a bass-heavy kick drum is causing heavy pumping, removing the bass after the compression will even out the frequency balance, but won't stop the pumping.

Whereas EQing the kick drum before it hits the compressor will both balance the sound and reduce the pumping. Personally I usually use EQ before compression, unless I'm going for a particular effect. The best practice is simply to ask yourself the question: do I want to EQ my compressed signal, or compress my EQ'd signal? This applies to all chained effect decisions but if you don't know the answer, experiment!



Using harmonics

You probably already know that musical sounds are made up of much more than just one frequency, even though we only hear one pitch – many different harmonics combine to give each instrument its unique timbre.

Bear this in mind when EQing, and use it to your advantage. A narrow notch to modify just a single harmonic can have a powerful effect on the tone of an instrument.

Understanding harmonics can be useful when trying to remove mains hum or amp noise, too – if you use a narrow notch to take out some hum at 50Hz and find you're still hearing buzz, try taking some out at 100, 150, 200Hz and so on.



Dynamic EQ

Dynamic EQ only works when you tell it to – a de-esser is a very specific example, but you could also use a notch to smooth out a clicky bass sound – but only when the level is high, for example.

Some dynamic EQs can be sidechained too, allowing different bands to control each other – for example, a top-end frequency lift that only comes into play when the bass signal is very loud.

As is the case with multi-band compression, dynamic EQ offers the potential to make a huge mess of your mix, as well as big improvements – use it in moderation.

Essential Advice

EQ Ideas
to Try

Adding punch to drums

On the kick drum, boost at 50-60Hz, using a parametric EQ and a narrow Q. Watch out for the kick sounding too boomy, though – you may need a high-pass filter at 45Hz to clean it up.

On the snare, try another narrow boost, this time at around 100Hz – this is often where the weight of the snare is. Tune the frequency for maximum impact, but watch out for making the toms boomy if there is spill.

Deep, rich bass

For a deep, rich bass sound, try boosting at 60Hz, with a fairly narrow Q. Again, a high-pass filter at 45Hz can clean things up if it starts to sound 'flabby'. 100Hz is also important for bass, adding warmth and weight. These frequencies work well when the part uses the bottom string of the instruments. To help bass cut through the mix, try boosting the upper mid-range – 2.5kHz, say – but you need to watch out for guitars and vocals in this frequency range.

If you use both these suggestions, watch out for a 'scooped mids' feeling if you overdo it. The 'tight', 'muscular' part of a bass sound is around 200-500Hz. Too much of these will start to sound thin, or 'honky' though.

Warm, airy vocals

'Air' in vocals is almost always at 10kHz. If your vocal sound feels a little 'closed-in' or dull, a broad parametric EQ boost in this area will often open the sound out nicely, without adding sibilance or making it sound harsh.

Avoid adding too much, as it can make things sound brittle. To keep the vocal sound warm, you can lift between 200-500Hz, but this needs caution since too much will sound muddy.

Control monster synths

Synth presets are designed to sell synths – meaning, they sound awesome right out of the box, played on their own. But their very broad frequency content, coupled with all the effects, can often mean they overwhelm a mix.

Anywhere that the synth is fighting or masking something else in the mix, use EQ to reduce it. Bass can sometimes be sliced right out with a high-pass filter, but often a low-shelf is better. For high-frequency control, I would almost always use a shelf.



ON THE DVD

> You'll find an example for each of the four scenarios above. Each is played three times: EQ on, EQ off then EQ on again. Vocal samples from Vocal Factory available at TimeSpace.com

5 Affordable
Software Alternatives

What You Have Already

Any modern DAW will have very competent built-in EQ. Don't expect much analogue flavour, but for simple, precise control, a few bands of parametric EQ is all you need. In fact, it'll get you a long, long way



DDMF LP10

Not only is this a highly affordable 10-band phase-linear EQ with built-in analyser, you can actually choose to vary the phase of each band, to emulate 'traditional' EQ too, if you like. Available for only \$29.



Stillwell Vibe-EQ

From the Stillwell site: "One of those plug-ins that makes things sound better just by plugging it in. Really... Vibe-EQ is all about colour. The more boost or cut you dial in, the more colour and funk you get". Stillwell also make a much cleaner EQ called 1973, a 'tribute' to the Neve 1073. Both are free to try and great value for money at \$39.

Waves
Renaissance EQ

The REQ is found in a great many people's plug-in collections, and for good reason – it's an intuitive, powerful EQ with analogue flavour thrown in. Not free, and perhaps a little long in the tooth, but some nice Pultec-style resonant shelf options. Available at \$49 for a limited time – usually priced at \$150.



Acustica Nebula 3

Nebula is far more than just an EQ – this sampling convolution plug-in can also emulate microphones, reverbs, tape saturation and many other analogue effects. You don't get a fancy GUI emulation of the original units, but the results can be stunning. 139 euros for the Pro bundle.

5 Hardware EQ Greats

Pultec EQP-1A

A warm, open sound and the unique option to boost and cut the same frequency simultaneously – the so-called ‘Pultec shelf’ – allowed a lift to the bass while reducing the mid-range – great for kick drums



Neve 1073

A true industry legend. I remember the first time I used a Neve desk – I was sceptical if I would get the control I needed without multiple parametric EQs on every channel. Of course I needn't have worried!



Trident A-Range

Originally available as part of the Trident A-Range mixing console, of which only 13 were ever made. Some were taken apart, making module versions available, and there have been various clones. Instantly recognisable from the faders and its multiple high- and low-pass filters, which can be enabled simultaneously.



Massenburg 8200

George Massenburg first coined the name parametric to describe a “sweep-tunable EQ” in his 1972 AES paper, and the audio industry never looked back. The 8200 really can be regarded as an industry standard, with good reason.



Manley Massive Passive

A modern unit taking the subtractive principles of the Pultec EQs to a whole new level. There are no active components at all, hence the ‘passive’ in the name – it's different in usage and sound from every other EQ.

5 Ways to Automate EQ

EQ is often used in a ‘set it and forget it’ way, but it doesn't have to be used in such a static manner. An automated resonant filter sweep as mentioned earlier is one idea, but here are some more:

A classic Dance technique is to automate a low-pass filter – initially it cuts out everything except the very low bass throb of all (or most) of the mix, then it gradually sweeps higher and higher, revealing more and more of the sound – arriving at a musical high-point for maximum impact

Try using automation to switch rapidly between very different EQ sounds on a vocal

Fix problems – if a de-esser is chopping too much of the high-end life out of a vocal, switch a hand-tuned notch filter in and out as needed using automation

Or, switch a high-pass filter swiftly in and out to remove unwanted microphone pops.

If a different guitar effects pedal in the chorus messes up your carefully chosen sound for the verse, simply automate EQ changes to fix it.





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**PHANTOM
of the
PARADISE**

This bass-fingering Frenchman has become one of the most reliable remixers in Pop. With his unique blend of French Touch and Indie, he's created floorfillers for diverse artists from Erlend Øye to Katy Perry

Cool, casual and modest, Fred Falke began his career as a bass player until collaboration with Alan Braxe resulted in the club smash *Intro/Running*. Further releases followed and Fred's interest in production spiralled into a large collection of classic synthesizers, outboard and an impressive studio. Now he's a solo producer, remixer and writer in his own right, occasionally working alongside UK hit makers Xenomania and the biggest Pop acts in the world. Based in Toulouse, France, Fred's studio is a sixth-floor apartment, with a balcony and one of the sunniest studio settings we've seen.

Previously his home as well as his studio, Falke's success has enabled him to move his accommodation up to another apartment on the 10th floor of the same building, leaving plenty of

room for a kick-ass synth collection. Walking in to the studio the first thing you see is the mint condition Yamaha CS-80, Falke's pride and joy.

To the left, more synths are stacked alongside a small collection of bass guitars, while at the front of the studio Falke has begun to amass some serious bits of outboard. After a quick cold drink and a play on the CS-80 we get to the serious business and find out just how Falke's career has grown, and what the future holds for him.

FM: You started in this business as a bass player?

Fred Falke: "I started as a bass player and I was aiming my career at being a first-call session player really. I started here in Toulouse playing in Jazz bands. I met a friend who was a saxophone player and he told me he was going to move to Hong Kong to work. While he was there he wrote me a letter – there was no internet then, God I'm old [laughs]. Anyway, he wrote me a letter to tell me there was a lot of opportunities for session work over in Hong

VIDEO ON THE DVD

IN THE STUDIO WITH...

Free Fake

Kong. So I moved to Hong Kong and over there I was playing all the time. I mean, I'd just left school and as a bass player I was at the top of my technical ability. Jazz artists from the US would tour without their band, and just use the local musicians in Hong Kong, so I really got the opportunity to play with some amazing people.

"Then, I started to record some demos and such for singers in Hong Kong. This was really the first time I was in the studio and I really wanted to learn the process and became really interested in recording, the console, outboard etc. Before that, my knowledge of recording really ended at the end of the lead from my bass guitar.

"When I moved back to France I bought myself a Tascam Portastudio, Roland [TR-]606 drum machine and the Micromoog synth. I loved all of the *Thriller* sounds so I really wanted a Moog, but the

Micromoog was the only one I could afford at the time. This was really how I started to understand production as I made my own demos. Then I began to meet other people in the area such as Alan Braxe.”

When you met Alan, was he already producing?

“When I met him it was probably just after he did *Music Sounds Better With You* with Thomas Bangalter and Benjamin Diamond. He was living here in Toulouse at the time, I bumped into him and he said I should come over to his place. I think he was looking for people that played instruments because he had all these machines and equipment.”

When did it feel like you were programming more?

“The change came really naturally for me – I didn’t really notice it. I just began to do more and more programming and recording.”

Were you still doing session work?

“No, not really. The schedule became too crazy. I’d love to do it more but it’s finding the time.”

How did the collaboration work with you and Alan?

“It was different because he had the sequencers and drum machines where I could play and had keyboards and instruments. So it was a true collaboration at that time.”

Most Jazz players don’t end up producing and remixing cool, hip acts on the indie club scene...

“Yes, but I’m very open-minded when it comes to music. I don’t listen to Jazz any more, and I haven’t really for a long time. But Jazz is a one of those things you have to do when you’re learning your instruments, because you learn techniques and lessons about harmony beyond everything else.”

When you do it, you get the keys to the door that opens to many more things in music – suddenly you are able to do anything with your instrument.

“It was Disco House that really caught my attention because they were sampling Funk and they had these Jazz chords and melodies. The modern Jazz world is very narrow-minded and for me it became so boring because music is endless.”

At first you didn’t have a computer?

“Yes, my first sequencer was the MPC60. I actually went to the bank and got a loan to buy the next set of equipment. I got the MPC, a Minimoog, because I wanted one for so long, the Roland S-760 samplers and the [E-mu] SP-1200 that I still have now.

“That was roughly the core stuff and I was recording them to cassette. I actually still have all those cassettes – maybe they’ll sound cool again

now? The system just evolved then, it was just a case of experience and money. At that time, you had to know so many machines and learn them. You had to learn how to sequence on different machines, learn how to sync them and get everything working together. Now, if you

learn Logic, you can use so many synths and effects all from within Logic.”

It was Disco House that really caught my attention because they were sampling Funk and had these Jazz chords and melodies



How did it change things when you got a computer?

“Everything became more accessible with the computer. It’s a bit like when I finished my school of music and I was a bit of a monster Jazz freak, but I really didn’t know what to do with all my skills. You end up playing fast and using every technique you know all at the same time. It took me time to learn how to use these skills properly and really make some nice music. I think the computer was the same, because now with the computer you can layer millions of kick drums and millions of effects and tracks. But I think somehow limitations can inspire creativity. Step-by-step, I reintroduced the outboard, because initially I only wanted the computer as a multi-track tape machine. I got Logic for that reason and it was amazing and another step for me.”

Did you find yourself programming more once you had the computer.

“Yes of course, and the way of making music has evolved that way. Now I think it’s the perfect balance. I’m in Ableton now and I handle the software very fast so I’m sticking with it. Ideas are so quick to get down. I think at the beginning I was into only Logic, then I got Ableton and used that alongside Logic, but now I’m mainly Ableton.

“They are just tools and toys though, not something you have to commit to. You can make a great track with a guitar and a drum machine.”

How was remixing without a computer?

“I did one remix without the computer for Kris Menace’s label called *Missile Test*. He sent me the stems on CD and I had to sample them and chop them in the MPC. It felt easy at the time, but after



The Yamaha CS-80

Fred Falke on everyone's favourite poly synth...

"As people know, this model of synth is the holy grail of synthesizers. I only saw one before this in my life, but it was in a shop for refurbishment, not for sale. I had this big fantasy about the CS-80 and its sound but I had never played one. There was a few that came up on eBay but for silly amounts of money. Especially when you take in to account the shipping because the synth is well over 100kg in weight. I actually ended up finding this one for sale on a non-music classifieds site, like Gumtree.

"I think I was searching for synths or something but not the CS-80. When I saw it I just thought it was definitely a scam, but I sent the guy an email expecting a reply asking me to send money through Western Union or something. But no, the guy replied saying it was in perfect condition and he was the second guy to own it. So it went on with me

asking for more pictures and a video and he kept sending what I asked for, so I began to think 'hmmm'. He wanted 8,000 euros for it but I negotiated to 6,000, but still it's so much money. I'd never played one, and I was so worried that I was going to be disappointed. But, I drove to Marseille and got it and when I finally played it I had a smile like a kid. It was really a feeling that I've never had before and I've used it on every single record that I've done in 2011. Not because I'm obsessed by it, but the sound is so flexible. The Nicole Scherzinger remix I did of *Don't Hold Your Breath*, has the CS-80 on the bassline and the pads, for instance.

"The controls and sound are so inspiring and the synth almost talks to you and just gives you the sound you want. I'll sometimes stand in front of it for an hour just recording ideas to a backing track."

getting the computer, you suddenly think ‘Oh my God, how did I do it that other way?’

“You went from the ability to have a six-second sample in hardware to the computer with full sampling and editing.”

What was the breakthrough for your solo remixes?

“The *Golden Cage* remix was probably when the phone started ringing and I started to get known for remixing more. I was really happy because the brief for the remix was really open and it came really naturally, so it gave me confidence. I’m not naturally confident and I always worry about it being the best that it can be.”

How was the DJing and live show when it started?

“The DJing was hard because I didn’t have any booking agent or management. Then I got this email through MySpace from a guy in Australia asking me to come out and play. I had no idea, but he was really nice and sorted some clubs to play at and I thought, ‘OK, let’s try it.’”

Did you know how to DJ at this point?

“No I had to learn. I didn’t want to DJ really, I wanted to get the feeling back of performing and being on that edge where you can miss notes and not just play records. So I met with a friend who was really good at coming up with these live solutions with Ableton Live. We came up with a system with a controller for Live and playing bass live.”

Are you running the bass through the club mixer or through Ableton?

“I plug the bass into a Radial D.I. then the Duet. I have a record channel open in live for this with EQ, filters and compression. Some tracks I have all the stems so I just mute the bass stem and play, but I have to be aware that the stems have been produced so I’ll sidechain my bass input live and add a bit of EQ and compression.”

Do you record bass loops and re-trigger them?

“No, I would need a foot pedal for that to start and stop recording. I’d like to do all that and even start bringing synths too, but it means a bigger suitcase when travelling, which isn’t always possible.”

You’re obviously happy with everything right now...

“The beauty of being at work in the music business that I can get up every day and it never really feels like real work. I could spend days locked up here in my studio.”

How do you choose which remixes to do?

“With remixes the first filter is my management, because they are really clever at deciding what might suit me, then I listen to everything that comes through the filter. I always choose based on the record, not on the artist.”

Why do you think people come to you?

“I suppose it’s for the Disco, bassline thing with the big synths. I never wanted to ever compromise with my music and spoil it. But, on the other hand you

The Headphone Test

Fred’s unorthodox mix-check system

“Some people tune off their screen or have methods to stop them looking at the music rather than listening. This is my way of listening to a track I’m making and seeing if I believe it could be a finished record. It really works! I play the track in Ableton, but listen on headphones while I watch the record go round and round. If I can imagine that the sound is coming straight from that vinyl, then I know it’s good enough to be a finished record!”



have the labels that know me for a certain sound, and even the fans that expect a certain sound. I might try and move direction slightly, but you have to be sure that you still fulfil what people want.”

You’ve been working with Xenomania and doing a lot more mainstream remixes...

“Yes, I went to the Xenomania base in Kent in the UK to meet Brian Higgins and it was amazing. There were all these amazing producers and writers all working together. I think when you’re making Electronic music you can often be working alone most of the time so to have this sort of environment was amazing. I’m an open guy and I love to share experiences and work with other people, because I think this is how you achieve the next level. But, I think this is because of my history as a player in bands and you have to work as a team.”

What was your role there?

“I might be writing backing tracks, working with backing tracks that need changing or adapting, or even mixing exciting tracks like I did recently for Florrie. It’s really interesting because you get to be involved in all parts of the production. It properly makes you see the bigger picture and offers you

much more humility working this way. You learn so much from other people, older and younger.

“The young guys are fantastic because with experience comes routine in the way you do things, the rules whereas the young guys will just say ‘Why don’t we just turn the bass up into the red if it sounds good?’ But then the older guys will be able to go into detail about mic techniques, using classic gear and recording to tape, so everyone is bringing some of their knowledge. I go there for a week and work from time to time and I’ll send Brian tracks occasionally too.”

What did you first work on?

“Probably the first track I worked on there was for Mini Viva, the track *I Left My Heart In Tokyo*. They gave me the vocal and I went from there.”

How does that work? Where did the vocal come from? Was there a backing track that was scrapped?

“Maybe, I don’t know. It might not have been scrapped, just they were searching for a new idea. Maybe they wrote the vocal on a pre-existing track and then when they get the vocal, they think that that track could be better, or different. When you’re working on tracks it’s always worth changing when

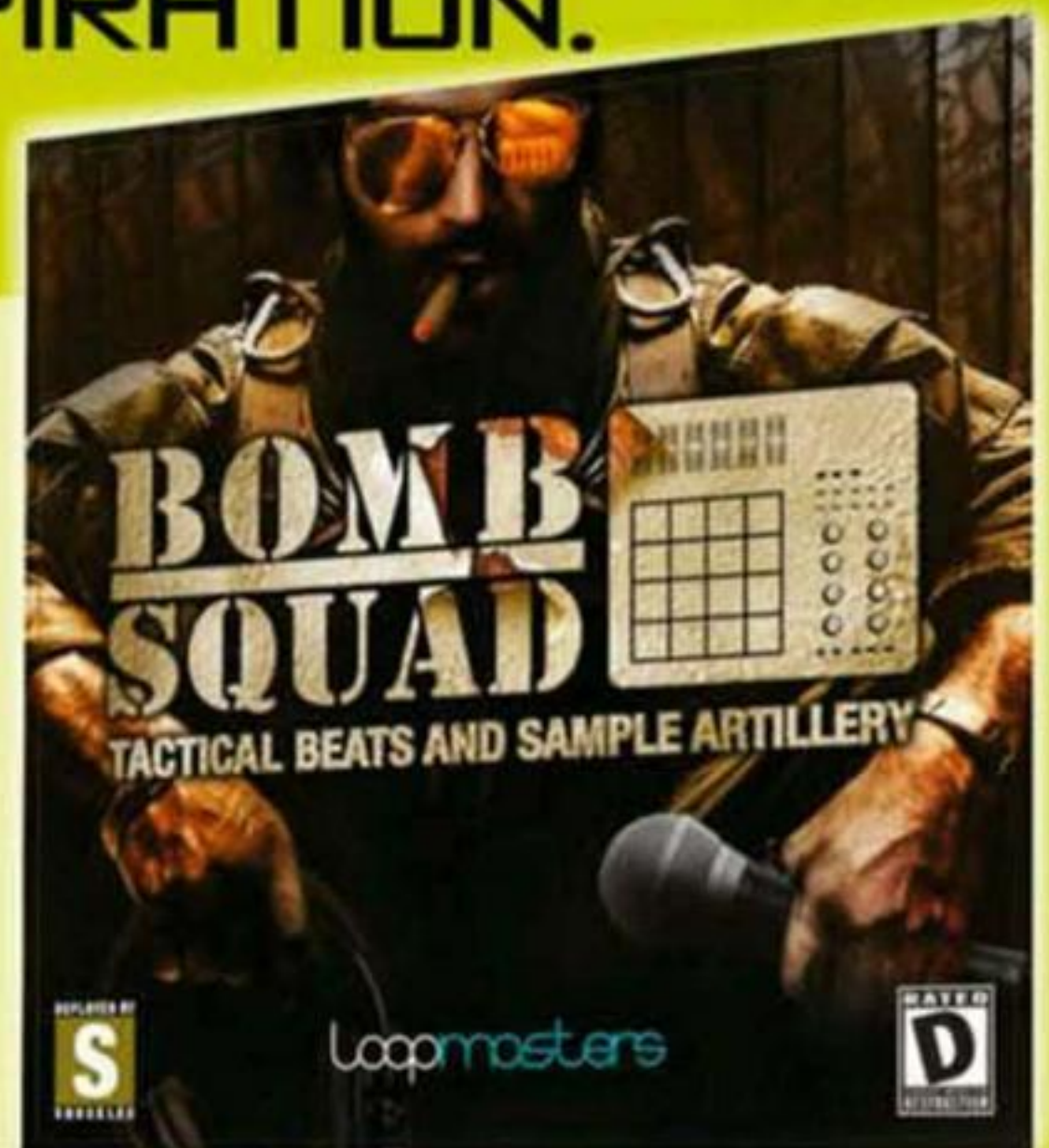
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In The Studio With | Fred Falke

you discover a new part. For instance I might start with some chords and build a track, then as you start layering other musical elements, you might scrap those chords and start again, but the other parts spark other tracks and even better ideas. You can get stuck like this when you are working alone, because you just don't have that second opinion. Working with Xenomania has made me spot these moments even faster and taught me not to over-think things.

"When it gets to the eleventh or twelfth take they are thinking about previous mistakes and how to correct them and you lose all the soul of the vocal. It's the same with writing, it's so much better to just get ideas down when they're fresh. Usually with a remix, I'll take two or three days but the first day is finding the music, the second is getting the sounds and the third day is mixing. I have to be happy and excited when I'm making the tracks, otherwise something isn't right."

How do you find mixing in your room, because it's not really a treated studio...

"Yeah, I mean I've been here so long and used the NS10s for so long that it's OK. I never really paid much attention to all this stuff really, I used to mix on an old ghetto blaster ten years ago. It's only when I tried something better that I realised that there was a difference. It's the same with outboard, I used to have an Alesis 3630 and I thought it was fantastic, now I have the SSL and it's amazing, but then I try the Alan Smart and that's amazing, but different. So I keep both and it goes on and on!"

What's next!?

"[laughs] Ha! Well sometimes I buy things because I feel like I'm missing a certain sound and sometimes it's because I just love to switch up what I'm using. For instance I bought the ARP Solina because I was working on a project that used a Solina sample in it, I heard it and thought that sounded really cool. I love to switch equipment up too because I have the room here to store things too. I think I'll probably buy the new Dave Smith and Roger Linn drum machine but mainly it's about the combination of old and new. I love the CS-80 but I think if I use it too much it's going to sound too retro. I actually use the Access Virus a lot. I'm just after the sound I love and it doesn't always have to be this retro thing. I'm really not bothered if things have MIDI, are software, hardware or anything like that they are just ways to create the music I like to make."

Plans for the rest of the year?

"I'm doing an American tour which should be good because I've done a lot of American Pop remixes. Hopefully it'll help build a profile there. Also in September there's a compilation of my remixes coming out which is really cool because I've done so many different tracks from Indie artists like Annie and Lykke Li to Ke\$ha and Nicole Scherzinger." **FM**

WANT TO KNOW MORE?

Fred Falke's Best Of remix compilation is out in September. Visit myspace.com/fredfalkemusic for more.



SSL Buss Compressor

"I have a few different versions of this, like the Alan Smart and such. They just provide that classic radio glue."

Yamaha NS10s

"I have the Dynaudio speakers too for when I want that extra low end but I usually just work on the NS10s."

Neve VR rack

"These have been racked up really well, because all of the writing is actually the right way up. Usually with these racked channel strips you struggle to read settings. They have a really special sound and I love it!"

ARP Solina String Ensemble

"The Solina is a classic and as far as I remember I fell in love with the sound of it from Herbie Hancock records initially. I do wonder why there's an option to turn the modulation off though, because without it on it sounds like an awful trumpet sound."

Univox Minikorg

"I bought this one because I saw it on the cover of this Japanese record I own, but I really fell in love with it. I even bought another because I use it all the time for everything from effects and sweeps to bass and leads."

Moog Polymoog

"My friend has one of these and one night I tried it and the string sound alone sold it to me. The band Goblin had one and I remember just loving that sound."

Roland TR-909

"I bought the 606 as my first drum machine, but when I started to really get in to production I got the 909. It's just the sound of House music. I sold one before but bought another later on because of the ride cymbal alone, the tuning of the ride just makes it perfect."

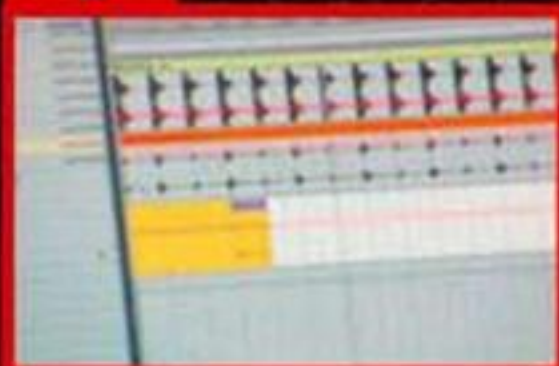
Korg Trident

"The French Touch classic. I bought it initially because it was a cheap, but really good synth. It always reminds me of the Scott Grooves, Mothership Reconnection, Daft Punk mix with the flanged, synth-string sound."



ON THE DVD: Fred Creates a Track from Scratch

1

**Drums**

Fred uses a selection of samples and loops in Ableton Live as a starting point for the rhythm of the track.

2

**Yamaha CS-80**

Firing up this legendary synth, Fred records ideas quickly into Ableton and edits them into some very catchy loops.

3

**Fender Rhodes**

Using the Scarbee sample pack several melody lines are quickly laid down in MIDI.

2

**Bass**

Time for some Falke magic as he lays down his trademark bass-lines that bring the track to life.

3

**Mixing**

Sending the stems from Ableton through a selection of outboard hardware rounds off the mixing of the track.

CUBASE ESSENTIALS



Drums, Beats and Loops

in Cubase 6

Bruce Aisher looks at some Dance-oriented drum programming, mixing and manipulation techniques within Cubase. We'll look at layering kicks, sampling and re-sampling, synthesised beats and creating a dedicated sidechain track

This month in Cubase tips, we're going to take Dance music as our stepping-off point, and explore how a wide range of the features in Cubase can be brought together to make the most of your rhythm tracks.

Though the focus is toward the more club-oriented end of the spectrum, you'll find a load of ideas here that will easily transfer to other styles and genres that you might be producing. Don't forget too that

some of the techniques employed aren't limited to drum and rhythm production.

Mixing kicks

1 In Dance music, the kick drum is king and, alongside the bassline, where many a budding club track can succeed or fail.

Of course, getting the right sound in the first place is more than a little helpful, and although it is easy for the purist to

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.

dismiss factory presets, these can be a solid source of inspiration.

Groove Agent ONE has a fine complement of kick drums up its sleeve, but the new HALion Sonic SE, is also capable of dishing out some decent sonics.

If you can't find the right sound, then layering is an option. Thankfully, when triggering two VSTi sources simultaneously in a modern DAW this is an exact science – they will play at the same time, every time. If you use external MIDI sources (as we all once had to do), then this cannot be guaranteed, and may lead to phasing issues, or even flammings.

Let's start by choosing a nice low-end kick in Groove Agent ONE, and complement it with something crunchier from HALion Sonic SE. In this case, I played a basic four-four drum pattern, and duplicated it. At this stage it's also worth setting the velocities and lengths to consistent values.



ON THE DVD

> Setting-up two MIDI tracks to trigger our layered kicks.



Groove Agent ONE has a fine complement of kick drums up its sleeve

Change Channels

When separating Groove Agent's outputs, switch the input phase to avoid any cancellation



Kick Layering

2 Having got two kicks playing at the same time, now is as good a time as any to allocate them to different outputs on the respective plug-ins. This is good practise for any multi-output capable instrument, as it frees the main

outputs for auditioning of additional sounds. To start with you will need to dip into the VST Instruments window (in the Devices menu), and click on the 'Activate outputs' icon next to each of the instruments, and tick a second set of outputs. This merely enables them for use in the Mixer. The next step is setting-up the sounds in each

instrument to route their sound to these new outputs.

In Groove Agent ONE this is simply a matter of turning the Output knob in Play mode, while HALion Sonic SE's Mix page has an Output drop-down for each of its 16 channels. Now we have our two independent mixer channels, we can start playing with the balance

of two kicks to make them work together. Remember to try switching the Input Phase of one of the channels, to see if that improves (or worsens) the overall combined tone.



ON THE DVD

> Using extra outputs in Groove Agent ONE and HALion Sonic SE.

EQing layered kicks

3 When layering sounds of any kind it is worth considering what each element brings to the whole. In the case of our two kicks mentioned earlier, one is providing the low-end power, the other some additional crunch. With this in mind, any problematic phase cancellation issues plaguing the bottom end of the frequency spectrum – where they are most noticeable – can be avoided by using the standard Cubase Channel EQ to remove the low frequencies of the 'crunch kick'. Setting the lowest band to a hi-pass configuration works best

here, and sometimes it is surprising how much one can remove before noticing much of an effect. This newly-tweaked kick, with little low-end now has a double use – it functions well in intro and outro sections to keep the drum track ticking over in a DJ-friendly manner before bringing in the main kick later. In fact, this versatile kick element also suits the addition of some ambience – maybe a short plate – without muddying the mix, although this is a matter of taste, and may vary with genre.



ON THE DVD

> Using EQ to combine two kicks.

Synthesising drums pt 1

4 While it's possible to create your own drum sounds from scratch using any synth, it can be time-consuming. However, there is a useful half-way house that can really help customise your existing sound without too much effort. For this we need to call on Prologue, Cubase's subtractive analogue-style synth. Despite its rather sombre appearance, Prologue is a very useful and fine-sounding synth. Here we are going to use it to add some additional noise content to a kick, but the technique works just as well with snares, claps or even hi-hats.

Using Prologue to Synthesise Drums Pt 2

5 Having got our basic white noise patch in the mix, we can explore various way in which it can be shaped dynamically. Using Envelope 2 and routing it to modulate the filter cutoff can work quite well. Try setting the filter to one of the hi-pass configurations first, with a fast attack and medium fast decay/release. This allows you to create a fast sweeping effect that

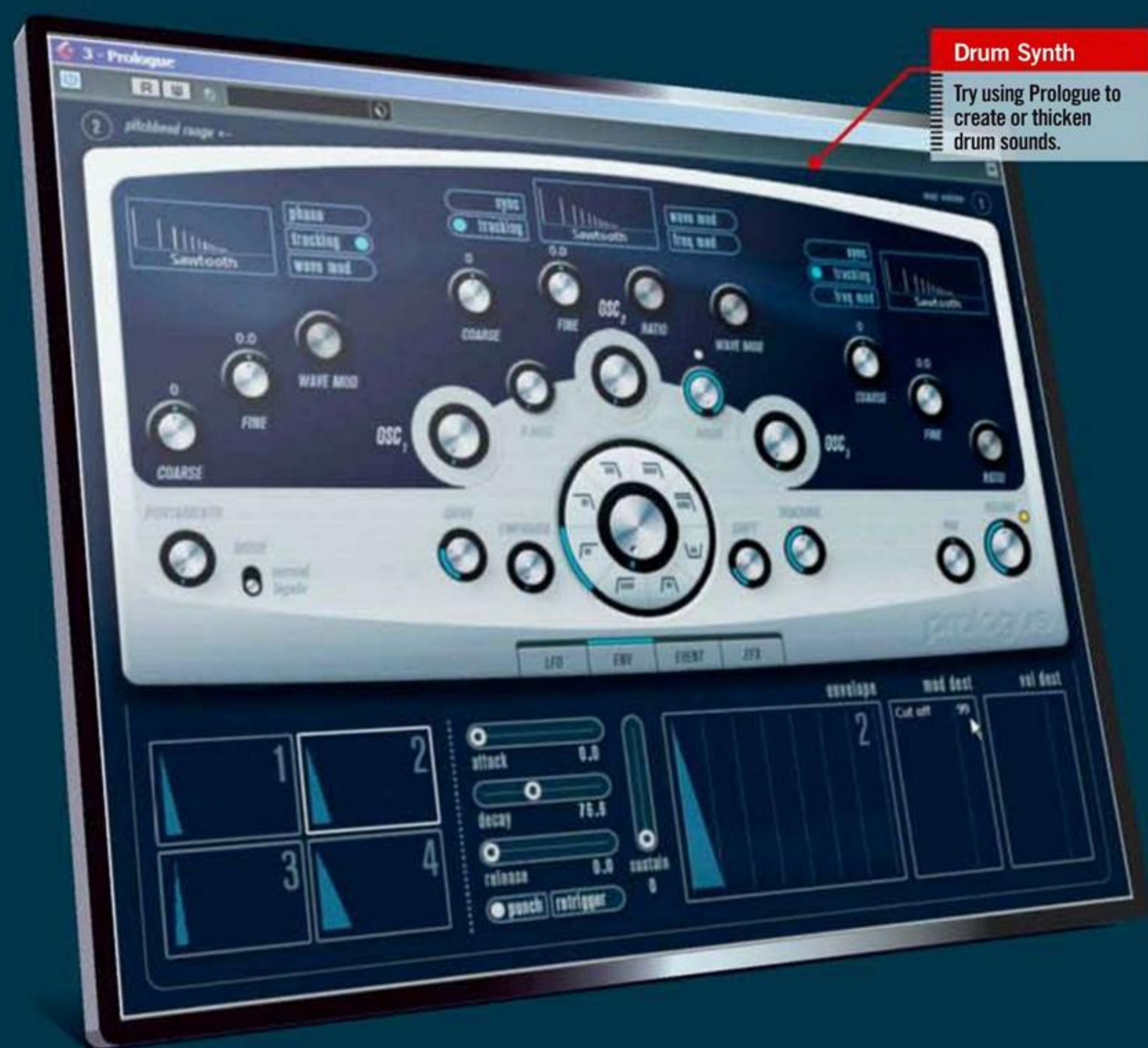
starts very thin and thickens out (with more low frequencies) toward the tail. Incidentally, the different filter types are represented by graphical icons in Prologue, with the number of 'ticks' on each indicating the number of poles. Each pole – the number of reactive elements in a traditional analogue filter – adds 6dB/octave to the filter slope, from gentle to severe cutoffs.

Getting this new noise element to work with an existing kick or snare

is really a matter of taste, but shorter envelope times are good for adding a crisper attack, and longer times are a useful way of extending short samples or filling out space without cluttering the mix. Experimenting with resonance values enhances filter sweeping, with extreme values adding pitched overtones.



> Adding dynamic filter shaping to a Prologue noise drum.



You need to ensure that Prologue is being triggered in the same place as the kick – this is usually just a matter of copying the MIDI part. Next, setup Prologue so that none of the main oscillators are on, and bring the Noise knob up to full.

It is preferable to remove all LFO, Envelope and Event modulation, and essentially start from scratch. To start with, all we need to do is to route Envelope 1 to 'Noise'. Start with a fast Attack, moderate Decay with no Sustain. Set the Release to

the same value as the Decay. Incidentally, clicking on the small indicator above the Noise control switches its output between Pink and White noise types, which have a different power spectrums and therefore varied timbres when unfiltered. Experiment with which sounds best.



> Creating a basic Prologue noise drum to use as a drum sound or to add depth and timbre to an existing sample.



Create a new MIDI track for each different MIDI note by choosing the 'Separate Pitches' option

Sampling your own beats in Groove Agent ONE

6 Groove Agent ONE is a simple, but very effective drum machine that comes with a decent range of factory kits. As mentioned earlier, it allows you to route the sounds from each pad to one of 16 stereo outputs for additional processing. However, if none of the factory sounds takes your fancy, it is worth importing your own samples.

Although I am a big fan of using audio tracks for drum programming (especially when chopping single hits out of drum loops), there are some limitations in terms of the immediacy of pitch and dynamics editing that can be frustrating at times.

A great alternative is to slice your audio loops in the sample editor and drag the slices you want to use into GA1. Although it is possible to drag a whole loop into GA1, and even generate a MIDI a playback file, I prefer to keep things simple by building up my own custom kit from ready-rolled single hits, and sliced loop material. It's a shame Cubase doesn't have a VSTi sampler that goes beyond preset sounds. If Steinberg added this functionality to HALion Sonic SE, they would be on to a winner (but this, I suppose would stop people buying the full version of HALion).



> Chopping a loop and exporting single slice to Groove Agent ONE.

Using and customising HALion Sonic SE

7 While HALion Sonic SE doesn't have the flexibility of Groove Agent ONE when it comes to using your own audio, it does offer a healthy range of effects options and there are some decent-sounding kits in there alongside the normal workstation material. However, although you gain in terms of effects, there is no easy way to send the output from different keys in a kit to alternative outputs. There is a workaround though, which might not be elegant, but is simple.

Assuming you have a programmed a simple two-part snare and clap part, you will

first need to split the part into its two constituent elements. Luckily for us, Cubase comes to the rescue with the 'Dissolve Part' function from the MIDI menu. Using the 'Separate Pitches' option will create a new MIDI track (with populated part) for each MIDI note of a different pitch (and then mutes the original multi-note part).

Once this is done you should set two slots in HALion Sonic SE for the same Program (i.e. similar kits), and configure them to play on different MIDI channels. Your separate MIDI tracks should play their respective HS SE slots. Finally, set the two slots to use different outputs.



ON THE DVD

> **Separating MIDI drum parts for use with HALion Sonic SE.**

Élastique audio pt 1

8 Cubase has always handled audio loops quite well. Any well-trimmed and named commercial sample loops imported into the programme would normally have their tempo correctly recognised. This meant that checking the 'Musical Mode' box allowed you to then drag the loop into a Project and have it stretched to fit the current tempo (if different from the original). Combined with the Mediabay's ability to audition audio loops at the project tempo, made for a quick and easy system.

Cubase brought with it some new, and truly excellent stretching algorithms, which makes this process even more powerful, but one of these changes the way loops sound when played back at a different tempo – 'Tape' mode. The 'élastique' algorithms (selected in the Pool's algorithm column) offer different quality levels (Pro and Efficient), but each of these comes with three variants. 'Time' and 'Pitch' determine the accuracy for different types of material, but 'Tape' actually speeds-up or slows-down the audio (with a respective change in pitch), just like a tape machine. This means that the tonality of a loop will change when played at a different tempo.



ON THE DVD

> **Setting an imported loop to Musical Mode in Pool and setting the playback algorithm.**

Élastique audio pt 2

9 The new 'Tape' mode also throws-up some interesting misuse options. In the Pool the default tempo of any audio used in the project is (naturally) shown in the tempo column. This is of little consequence until Musical Mode is enabled. It is possible to type in a new tempo if the one visible is known to be incorrect, but is also possible to



Experiment with Élastique audio's algorithms for interesting effects

purposely amend the tempo to something other than the 'true' value. If we take a loop that is using one of the 'Tape' modes, and change its Pool tempo to double its correct value, not only will it playback at half speed, but it will also be an octave lower in pitch. A

hi-pass filter/EQ on the loop will avoid it muddying the low-end.

Although not always successful, it is sometimes a great way to conjure-up some inspiration and it is likely that it will still broadly fit within the rhythmic structure of the track – some interesting things can happen if you try moving the start point of the loop back or forward in eighth note increments relative to the main beat.



ON THE DVD

> **Using and abusing the pool's different timestretch algorithms.**

NEXT ISSUE

Make sure you pick up *FM* next month for more unmissable Cubase tips. On sale 1st Sept

Setting Up a Dedicated Sidechain Trigger Track

10 One of the most obvious traits of some House tracks is their dynamic ebb and flow in conjunction with the kick drum.

The 'classic' sidechain compression effect is easily achieved in Cubase by routing everything you want 'pumped' to a Group track, inserting the Cubase Compressor, setting it to sidechain mode, and

sending the output of the kick drum to this sidechain input.

This all works smoothly until you hit a section where the kick drum isn't present. If you want the pumping effect to continue you then need to consider an alternative solution, and this is the setting-up of a dedicated trigger track.

This is ideally an audio track, with a sound that tracks the kick drum in terms of placement and is not routed to any of the main mixer outputs. Interestingly, it is worth

remembering that this now doesn't have to be a kick drum at all. In fact a short burst of noise with quick decay is perhaps most useful, as long sounds tend to limit your flexibility. Remember that most of the 'shape' of the compression is determined by the Attack and Release parameters of the compressor in question.



ON THE DVD

> **How to set up a dedicated sidechain trigger track. *FM***



A Short History of Low Fidelity

There's a lot more to lo-fi effects than just poor sound quality. **Greg Scarth** brings the noise...

Lo-fi is the process of deliberately making a poor quality recording, capturing the noise, distortion and inaccurate frequency response of inferior equipment. While they may be considered technically flawed by many, the character and vibe of lo-fi recordings make them a useful creative technique for any genre. In this month's *Knowledge Base* we'll look at the history of lo-fi music, check out the sonic characteristics of classic lo-fi sounds and then look at some of the ways they can be recreated using vintage gear, modern hardware and software plug-ins.

Roots

The idea of the lo-fi record is a relatively recent phenomenon. From 1920s Delta Blues to 1960s Garage Rock and 1970s Punk, lower quality recordings had often found their way to record shops. However, it's debatable whether many of these releases were deliberately poor quality.

Low-fidelity recordings have existed since Thomas Edison first started messing about with tin foil and wax cylinders, but the term lo-fi implies an active choice to record at lower quality, rather than simply making a poor quality recording due to technical restrictions or lack of knowledge.

A major turning point occurred with the release of Bruce Springsteen's 1982 album *Nebraska*. Having recorded demos at home using a cassette-based Teac portastudio and a couple of Shure SM57s, Springsteen went into the studio to re-record the tracks with the E Street Band.

After completing the recording sessions, it was decided that the studio versions lacked the energy and vitality of the demos. They were too clean, too perfect. The original demo recordings were judged to capture the spirit of the songs better than the studio versions, and Columbia records agreed to master and release the demos rather than the hi-fi versions.

Early digital samplers like E-mu's SP 1200 added grit through inaccurate conversion

Nebraska wasn't the first lo-fi album, but it marked the first time a major artist deliberately chose to release a lo-fi recording for the sake of vibe and character. Since then, countless artists have followed The Boss's lead, and entire genres have been built around deliberately sacrificing polished production values in order to focus on vibe and authentic DIY sound.

The Springsteen example perfectly demonstrates the appeal of lo-fi character and vibe, but these aesthetic characteristics reflect the measurable, definable sonic characteristics of lo-fi sounds: altered frequency response, reduced dynamic range, distortion and saturation, and the lo-fi characteristics associated with lower quality digital sampling and recording.

Lo-fi approaches

When it comes to practical techniques, there are two main approaches to making lo-fi recordings and creating lo-fi effects. Essentially, you can do it for real or you can fake it. We'll get round to the latter approach shortly, but first let's look at using real vintage gear to create the desired sound. The best way to achieve an exact recreation of the sound of vintage lo-fi gear is to go back to the source. Just because we're working in the context of a modern production environment and generally striving for clean, polished sounds doesn't mean we can't also use lower quality gear to add a touch of lo-fi. Genuine lo-fi effects are easily achieved using low-fidelity sources, recording devices and processing units. The list of equipment which can be used for the purpose is practically endless: vintage digital reverbs, tape recorders, preamps, samplers, distortion units and many more provide real lo-fi sounds just by running your signal through them on the way into your DAW.

Of course, it's possible to abuse the equipment as well as use it – overloading inputs and outputs or dialling in deliberately obscure settings can allow you to exaggerate the distortion and tone colouring effects of pieces of gear.

Re-recording sounds through old amps and speakers is one of the most effective approaches, capturing the sonic characteristics not only of the reproduction equipment but of the microphone and preamp used for recording. For ultimate lo-fi results, it's also possible to use a cheap old mic and preamp to colour the sound on the way back in. As with all of these techniques, faulty gear need not be a problem – as long as the sound passes through and gets changed, it can be used. Lo-fi options aren't restricted to signal processing effects. Synths and drum machines generally aren't considered to be lo-fi in and of themselves (although



Lo-fi Formats

Some of the best lo-fi effects make use of cheap or obsolete recording formats. Any cassette player with a line input can be used to process audio, simply by recording to a cassette and then back into your DAW. Likewise, cheap vintage reel-to-reel tape machines and even VCRs can be employed to similar effect. Record audio onto a used VHS tape then back to your mix and you'll add all the dropouts and frequency loss of an old video tape. Of course, digital recording techniques can work

equally as well. Vintage samplers and sampling drum machines might offer the most glamorous solution, but any device which records audio – from children's toys to cheap sampling keyboards and dictaphones – can be used to process sounds and take the clean, polished edge off your hi-fi audio recordings.

Record individual sounds to a device then re-sample them and play them as sampler instruments, or bounce entire audio tracks out to hardware before mixing them back

into your production. One of the most interesting lo-fi approaches was used heavily by mid-90s Trip Hop pioneers Portishead. With their sound being so reliant on samples of dusty old funk and soul records, the group had their own recordings pressed to vinyl, then scratched and played them back into their finished mixes in order to create a cohesive, integrated lo-fi sound.

With one-off dubplates costing around £30, it's a relatively cheap way to add a bit of genuine lo-fi grit and vibe to your work.



there are some exceptions, particularly in the case of very low-budget products originally aimed at home users and hobbyists), but sound generation can still be lo-fi. 1980s and 1990s sampling hardware provides one of the easiest routes into versatile lo-fi sound generation. With digital equipment, much of the lo-fi effect comes from low bit depths, slow sampling rates, aliasing and the sonic artefacts introduced

market. For a cheaper option, consider the limited but excellent sounding 8-bit Ensoniq Mirage, or widely available 16-bit Akai units such as the S1000.

Lo-fi effects

The second approach to creating lo-fi effects doesn't involve any vintage equipment or desirable retro gear whatsoever, but instead uses common effects to reproduce the

frequency, distortion and dynamic range characteristics of low-end gear. Mild overdrive plug-ins, subtle compressors which introduce distortion, saturation effects, EQs and filters, amp simulators and many more help to create analogue lo-fi sounds. For

a more digital sound, bitcrushers and sample rate reduction, clipping distortion and even bad algorithmic reverb plug-ins can be used to add some of that '80s digital vibe. For the spirit of older recording methods, emulation effects such as Massey's TapeHead and iZotope's Vinyl can be used to add the feel of analogue tape or vinyl records respectively.

One of the best techniques is slightly less obvious: convolution reverb effects can be used to emulate the sounds of a piece of hardware in exactly the same way they

emulate the acoustic characteristics of a space. Feed an impulse through a piece of lo-fi outboard, load the resulting sample back into the convolution effect and use it to add similar frequency response and harmonic characteristics to any signal. Many DAWs now include a convolution effect (such as Space Designer in Logic and REVerence in Cubase) but if you don't have one a plug-in like Audio Ease's Altiverb will do the same job.

Alternatively, some of the most convincing (and, conveniently, the easiest) methods of creating lo-fi sounds are to be found in the new crop of emulations and modelled effects aimed at recreating the sound of vintage gear. The Vintage Sampling Modes on Native Instruments' Maschine sampling workstation, for example, offer incredibly faithful recreations of the sound characteristics of the Akai MPC60 and E-mu SP 1200 (12-bit/40kHz and 12-bit/26.04kHz respectively).

Conclusion

The realisation that not everything has to be clean, perfectly recorded and expertly polished is a liberating moment. Working lo-fi elements into tracks allows us to take advantage of a range of different sounds without always striving for perfection and ultimate sound quality. Entire tracks can be created with lo-fi production values (and whole genres have been based on that approach), but the listener won't necessarily know that you're deliberately creating a lo-fi sound. Sometimes it's worth reinforcing the fact that you're capable of producing hi-fi tracks if you choose to do so, and the most effective results can often be achieved by creating a distinction between hi-fi and lo-fi elements in the same track.

For example, a well-produced track with a lo-fi drum loop or heavily processed sample repeating throughout a track can capture some of the spirit of the lo-fi sound while also achieving impact and energy. Alternatively, a lo-fi breakdown or bridge can help to build tension before hi-fi production values kick back in at the drop. Like so many other production techniques, the best effects often come from building and releasing tension between contrasting sounds. A combination of hi-fi and lo-fi techniques is a great way of incorporating contrast. With a few pieces of cheap vintage gear, a couple of well-chosen plug-ins or just a good emulation, you can embrace the appeal of variation. **FM**

KNOWLEDGE BASE NEXT ISSUE

Make sure you pick up *Future Music* next month for more studio science and industry insight. **FM244** is on sale **1st September**

The realisation that not everything has to be perfectly recorded is a liberating moment

by inaccurate AD and DA conversion.

Triggering samples from vintage sampling drum machines, keyboards and rack-mount samplers allows any source to be processed, adding a layer of digital noise and scuzz before any processing has taken place.

Unfortunately, the vintage sampling approach doesn't tend to be the cheapest. The more highly sought after vintage samplers such as E-mu Emulators and SP-1200s, early Akai rackmount units and even MPC60s are starting to command higher and higher prices on the second-hand

More and more plug-ins are focussing on 'degrading' sound

Interview | Adrian Utley & Will Gregory

Adrian Utley & Will Gregory

Goldfrapp meets Portishead via... Joan of Arc? ***Danny Scott*** gets in the studio with not one, but two of UK Electronic music's most influential contributors and secretive sonic architects

One of the joys of interviewing artists for *Future Music* is that you often get a chance to poke around their studio. And it's probably safe to say that few studios we've visited have ever been as relaxed, inspiring and jaw-droppingly beautiful as the space owned by Alison Goldfrapp and Will Gregory. Occupying most of an impressive, '70s-style holiday cottage a few miles outside Bath, it's a pant-wetting Aladdin's cave of vintage gear and top-notch software, with a view from the control

people... get away from it just being about sitting in front of a computer screen. Adrian has obviously done quite a lot of stuff with guitars and it was his work with his guitar ensemble that sort of first got me inspired. After that, I started to think about brass and choirs. This is a great film for choirs.

"Then, I suppose it was all about brewing up a decent cup of coffee and experimenting. One of the earliest things we did – and this really blew my mind – was getting a big 'klannng' from Adrian's guitar and have it echoed by the choir. We were working with a group of singers from Wells Cathedral School and the sound was just incredible. Yes, you can sort

find the studio can be really unproductive. Often, I just dig out a guitar, sit by the fire at my house and press record on my crappy old dictaphone. Basically, I just piss around for an afternoon. Try out a few 'themes'. Not exactly, high-tech, but it works for me.

"Mind you, Portishead have never been a particularly cutting edge 'high-tech' band – we've actually only just changed our main studio over from RADAR to a Mac and Geoff [Barrow] still uses his trusty Atari! Whenever I'm working on Portishead stuff, I'm always amazed at how little our methods have changed over the years. We all do little bits on our own and then we sit together in a room

and we write. Geoff gets a few beats going, Beth [Gibbons] sings, I play some stuff over the top and when it sounds good, we hit the record button."

Adrian has obviously done quite a lot of stuff with guitars and it was his work with his guitar ensemble that first got me inspired

room window – a broad sweep of green fields, trees, hills, flowers, blue sky and a faint whiff of English summer clouds – that literally takes your breath away. Gregory and Goldfrapp have been working here for the last five years – which goes some way to explaining the almost pastoral splendour of albums like 2008's *Seventh Tree* – and it was also where Gregory recently collaborated with fellow West Country muso, Portishead's Adrian Utley, on their soundtrack to the 1928 silent classic, *The Passion of Joan of Arc*. The pair never released their haunting opus as an album, but toured it earlier this year and invited *FM* round to talk about soundtracks, decent quality coffee and the imminent return of both Goldfrapp and Portishead.

FM: This isn't the first time you two have worked together, is it?

Adrian Utley: "God, no! We've known each other since the mid-80s and we've done loads together... played on each other's albums, TV soundtracks, films soundtracks, played in bands together. The *Joan of Arc* project came about through people we know at the Watershed Theatre in Bristol and as soon as I heard about it, it seemed like a no-brainer."

Is soundtrack work anything like making a Portishead or Goldfrapp album?

AU: "I guess it must be the same bits of your brain... The same aesthetic, the same ideas, the same judgements. But, it's also very different, because you are working to something that's already there. Do you try and make a soundtrack that's sync'd to every frame? Do you have the guitar twang right on the bit where his eyes turn to the left? Do you lock the beats to the person's footsteps? We both sort of decided that might be a bit dull, so we tried to give what you might call an overview of the film. We watched it, talked about it, then went away and wrote some music."

Will Gregory: "Right from the start, we tried to make this a 'real' thing. Real instruments, real

of mug that stuff up on the computer with some decent samples, but, when it comes to choirs, you can't beat the real thing."

AU: "Will's point about getting away from the computer is massively important... and I'm not just talking about this particular project. Sometimes, I

we do. At one point, I think we all went off and did other stuff, then came back and everybody was pleased to see us. Very humbling. Those big breaks aren't done on purpose... there's no big plan. It just happens. We only release an album when we feel we've got something that's worth putting out."



You said Geoff's still using the Atari? That's not a name you find on many kit lists in 2011!

AU: "But that's where we all started, isn't it! [Cue: dewy-eyed smiles from everyone in the room]."

WG: "I've still got mine somewhere. It's covered in paw prints from hundreds of hours in the studio."

AU: "What was the name you always saw on the cracked copy of Cubase? Mike Hunter? Even today, I still love the Atari. Geoff has stuck with it because he knows it's solid as a rock. Always in time."

"I remember the first time I used a Mac... I rang my mate up and said, 'Do you know how I can slave the Mac to the Atari?' At first, I hated the Mac. Even simple beat and loop programming was all over the place. It drove me mad."

WG: "The jump from Atari to Mac – from Cubase to Logic – was horrendous. For the first month, I did nothing but curse and moan. Everything seemed to take twice as long and never stayed in time. Then, all of a sudden, I got a glimpse of the future. I picked up a piece of audio, got it into the arrange window and thought, 'Hang on... I could be on to something here'."

"Having said that, I continue to drag my heels where Logic is concerned. I was on 7 for ages, but when we started work on the Joan Of Arc soundtrack, I finally got my arse into gear and upgraded to 9. Adrian was on 9 too, so it sort of made sense."

Obviously, you've got the Logic/Mac combination at the heart of this studio, but... well, let's just say there's a lot of vintage gear in here.

WG: "You could say that! I've got nothing against new stuff. Some of the soft synths are great. I really like Surge and the GForce Mellotron and strings are amazing. If I need a bit of quick compression or a quick reverb, I use plug-ins. If I want to tune up a bit of vocal, I use plug-ins. If I want to comp a good vocal, I do it in the computer. I'm not being self-consciously retro or anything like that. I do see



Will Gregory on Consoles

Will Gregory's slightly surprising choice of mixing desk is '90s favourite, the Yamaha O2R. But tucked in the corner is another rather tasty unit – an ex-BBC Audix console

"I know the O2R might seem out of place in a studio like this, but I have to admit that it's not actually being used as a mixing desk... its only job is as a digital interface. It's all wired to the patch bay and instantly lets me flick between the analogue and the digital world. I can buss out – bish-bash-wallop – and not have to worry about a thing."

"As an actual mixing desk, it's slightly obsolete and beginning to show its age. I never use any of the EQs or the reverbs, but if you just

use it for monitoring, it's perfect. The Audix is also showing its age... but in a very different way. Like a fine wine, it's just got better as the years have passed. This one is actually an ex-BBC model that was up at their famous Maida Vale studios."

"Apparently, the Audix desks were never used in their music studios. These were used by the drama department as far as I know. Was it used by any famous names? Who knows? Maybe John Gielgud was mixed on this desk!"

"It has been on quite a journey, though. After Maida Vale, it ended up in Los Angeles. Typical, it started life in this country and I come across it half way round the world. The shipping costs were substantial. Which, added to the cost of the desk itself, came to quite a few bob! Did I think about that when I was in the shop? Of course not. We don't, do we? We just see that bit of gear sitting in the corner, we twiddle a few knobs, we look at the graphics, we have a smell... yes, I want it!"

Maybe he was being precious, but it can be annoying if you find something distinct and suddenly the whole world is using it

the beauty of digital technology and I think I use it to its full potential.

"But I just like the sound of some of those old machines. Take something like the Siel Orchestra. Although, there are soft synths out there that will kind of do the job, they never quite sound the same."

AU: "Portishead used a Siel in the early days and we were so worried about other people nicking the sound, we used to cover it when we were on stage!"

But Adrian's not the only one with studio secrets, is he, Will? You very quietly asked our photographer to keep a couple of bits of gear out of the photos.

WG: "Damn... you know about that, do you? I'm not as bad as I used to be. When the first album

came out, I was bombarded with questions about our sound – especially how we got Alison's vocal. It was such a key part of Goldfrapp that we were bound to get a bit secretive."

"Someone once told me a wonderful story about the legendary Hammond organ player, Jimmy Smith. Apparently, if anyone tried to have a look at his settings when he was playing a song, he would immediately push all the draw bars up. He didn't want everyone else using those settings. You might argue that he was being a bit precious, but it can be annoying if you find something that's really distinct and suddenly the whole world is using it. We all know how quickly the music business works. One band can have a hit with a certain sound and, within

days, there are a dozen singles using that exact same loop or sample or bass sound."

"I'm only a bit nervous at the moment because we're just about to start work on an album and there are certain bits of kit that I know we'll use a lot. It's nice to be able to keep a few cards close to your chest."

How's the new stuff sounding?

WG: "We're not even that far into it, yet. We're just at the point where Alison comes round about 11 o'clock every morning and we start talking about ideas. Then, we make loads of cups of coffee and pretend we're working hard. There's no timeframe, really, but we know that as soon as we get the two of us in the same room, things start to happen."

How does a Goldfrapp song usually start? Words, beats, a couple of nice synth lines?

WG: "All of the above. Sometimes, it might be something as simple as switching on the Moog and



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being blown away by how rich and ferocious its sounds. And, ironically, that's where modern digital recording really comes into its own. In the past, if I wanted a really great, funky Moog bassline, I would have to get the tape running and hope to God that I managed to play a half-decent version of it before the Moog went out of tune.

"Now, I can noodle away for 20 minutes and put together my funky bassline from all the bits in the computer. When we all switched over to digital, I

WG: "Well... I suppose I might be able to limp on bravely." [Utley almost falls off his chair laughing!]

All right, we'll let you keep a couple of bits of your old studio kit.

WG: "Hmm, that's a tough one. I'd probably keep the ATC 20 monitors. I have got a pair of Focals and I know people are raving about them at the moment, but the ATCs are the ones that really do it for me. Yes, the Focals are nice and beefy at the

ATCs. What else would I keep? I suppose I'm very attached to the Roland SE-501 Chorus Echo – I've also got the 201 and 301, too.

"Some people might argue that a delay is a delay is a delay, but there is definitely something about the sound of the 501. You've got the tape warmth, of course, but you've also got noise reduction too, so you're not fighting with any hiss.

"The funny thing is that I'm desperately trying not to use the 501 on this album. You see, I love the sound so much that I'm worried I'm starting to rely on it. I'm sure everybody's been in the same position. You've got your favourite bit of kit and you start to fall into a pattern. If I need a bit of delay, I turn on the Roland. It becomes a habit and habits aren't always the best thing to get you inspired. If you do that,

you're just turning the handle... churning out another Goldfrapp track."

AU: "Where's the fun in knowing exactly what's going to happen everytime you turn on your equipment? I am always, always on the lookout for accidents. Sometimes, it can be something as simple as attaching the wrong instrument to the wrong MIDI track... or time-stretching the wrong thing.

"I can remember working with Geoff on some Portishead stuff many years ago and we'd got a few loops running on the Akai S950. Neither of us really knew much about time-stretching, but I had a go at it. We played the loop back and it sounded totally fucking weird, but brilliant. I'd actually only time-stretched one bit of the loop, so it kind of went along as normal, suddenly went all out of time and then went back to normal.

"I was working with [producer and PJ Harvey collaborator] John Parish a few years ago and he played me one track that just freaked me out. I listened to it and said, 'Christ, John. How on earth did you mix that?' It just sounded out of this world. Mashed-up, but utterly surprising and brilliant. He told me that he'd actually been mixing a different track and left the tape running by mistake.

"There was another track on the tape that he was using and that suddenly came blasting out of the speakers. All the wrong things were muted, the EQs were all over the place, the levels were just crazy... but it sounded amazing!

"If there is one drawback with Logic and the digital workspace in general, it's that it makes things too easy. It's all so wonderfully intuitive that you don't make as many mistakes."

WG: "I suppose it's been said countless times in *Future Music* and I guess it'll be said many more times in the future... maybe that's exactly why people are still buying analogue gear and why it remains so popular. I love it, because it doesn't always do what you want it to do – it occasionally gets things wrong." **FM**

All the wrong things were muted, the EQs were all over the place, the levels were just crazy... but it sounded amazing

thought it was going to kill the analogue market, but I actually think it's opened the analogue world up even more. Now, I can actually make full use of all these wonderful bits of gear I've collected."

Would you be able to still make music if FM loaded all of this lot in to a van and replaced it with a massive laptop, full to the brim with all that the plug-in world had to offer?

bottom end, but I think that also colours the sound a bit. Put it this way... if I ever mix something on the Focals and then listen to it on the ATCs, I always end up making changes.

"But, if I mix on the ATCs and then listen to it on the Focals, I never have to make changes. If I'm working at somebody else's studio, the ATCs are always the ones I take with me. And if I had to work exclusively with plug-ins, I'd still want to mix on the



WANT TO KNOW MORE?

The Passion of Joan of Arc is being shown at select festivals throughout the summer watershed.co.uk

Adrian Utley on Getting That Famous Portishead Vintage Guitar Sound

"When you talk about getting a vintage sound, most people probably think about tape machines... y'know, the warmth of analogue tape. Yes, I do have an old eight-track tape machine in my studio, but it never gets used any more. Sadly, it's knackered, so all the recording gets done on a very fast, Quad-Core Mac. I turned the eight-track on a couple of years ago and nothing happened. I thought about having it repaired, but you know what it's like when you're in the studio... you want things happening immediately. If you're working on a new album, you can't really sit there twiddling your thumbs for a couple of months while you wait for your crusty old tape machine to come back from the repair shop.

"And, as I'm sure anyone reading this magazine will know, there's loads of classic outboard that will give you that analogue warmth, even if you aren't recording to tape. I've got vintage guitars, some nice old amps, some interesting pedals, some lovely-sounding mics – like a classic [Neumann] U87. My favourite setup at the moment is probably the Vox AC30 and Fender Jazzmaster, with a choice of FuzzFace, Cry Baby and Echoplex pedals.

"I've been lucky enough to pick up some amazing bit of kit over the years. A great Trident desk, Pye compressors, some Teletronix goodies, Ureis – I always use an 1176 compressor – some Audix stuff. There are also a couple of Great British Spring Reverbs in the studio. One permanently connected to whatever guitar I'm using and one with a bit of old school pre-delay. Oh, and here's my top tip for getting a vintage guitar sound... never change your strings. And I mean NEVER! That will instantly put 30 years on your twangs!

"Obviously, the digital world is very keen to emulate what happens in the analogue world. I guess that's the Holy Grail of digital sound designers – recreating analogue warmth. The new [UAD-2] Studer A800 simulator certainly sounds interesting. Tape simulation is something that I'd quite like to investigate, but I guess I'm not that keen on trying too hard to 'vintage-up' my sound in the computer. Basically, what I try and do is get the guitar sound as perfect and as warm and as analogue sounding as I possibly can and then simply record it. If your sound is right at the source, you'll save yourself a hell of a lot of work later on. All you need to do is stick an SM57 in front of the cab and away you go."



ON THE DVD



Gear Talk

The guys discuss with FM their favourite studio gear, what new gear is exciting them and what they would love to purchase next.

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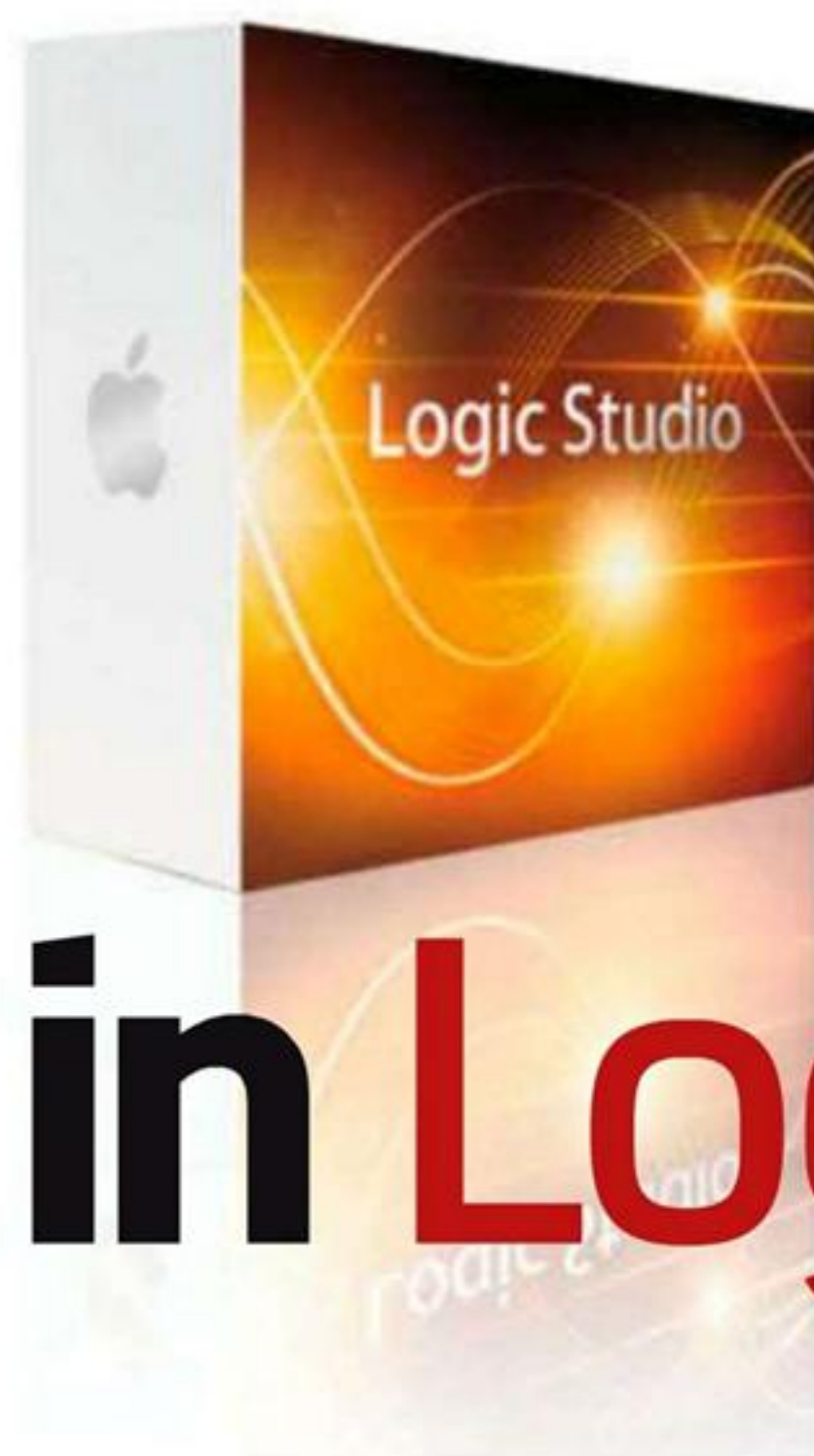
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Reverb for the Masses in Logic 9

It's frequently the case that reverb, when allied to other effects, produces the bespoke spatial treatments your track needs and deserves. This month, **Jono Buchanan** is providing some ideas for beginners and experienced Logic users alike

This month, we're going to have a look inside the wonderful world of reverb. Logic's awash with reverb plug-ins and while the seasoned pros among you might think you've done and heard it all, I'm going to look at some creative reverb approaches that might prompt further creative ideas.

For those a little nearer the beginning of their Logic lives, I'll explain a little more about reverb types, inserts, auxiliaries and

provide explanations of some other things that might currently be causing bafflement.

Choices, choices

Logic's Reverb choices offer artificial reverb and convolution options, with Space Designer providing the latter and Averb, EnVerb, Goldverb, SilverVerb and PlatinumVerb offering the former. Convolution Reverbs use an Impulse Response – a real audio recording – as their

THE EXPERT

Jono Buchanan
composer,
producer



Jono is a composer and producer whose myriad projects all feature Logic at their sticky, warm, gooey centre.

reverb algorithm, meaning that true reverbs can be applied to sounds, while Artificial models simulate the characteristics of a space, offering a 'false' environment, albeit one that is often more flexible, as its parameters aren't tied to a specific audio file. Don't confuse 'true' and 'false' with quality – Logic's artificial reverbs are capable of phenomenal results and as Space Designer draws more heavily on the CPU, varying which plug-ins you set up often leads to richer mix results.

I could spend my entire word-count simply describing parameters but as this month's tips are devoted to creative use of these plug-ins, I'll let you explore parameters in your own time. Instead, let's get down to some creative uses of the plug-ins listed above. Firstly, let's look at EnVerb, which can be a phenomenal plug-in for adding duration to sounds which are limited in length. Let's suppose you've found a snare sample you really like but, in its rawest form, it triggers a short blast of sound that's getting a little lost in the mix. Plug-ins like



Use EnVerb to extend the sound of shorter samples

Flanged Reverbs

Flangers, when combined with reverb treatments, can be hugely effective plug-ins. On the DVD you can hear a drum loop programmed using FXpansion's BFD. Initially you can hear the dry loop with the plug-in's own Ambience slider dropped to zero, leaving a dry sound.

In the second clip, reverb is applied via Auxiliary 1 with Space Designer's 'Hansa Studios' preset. This provides space but there's no real power or dynamism. In the third clip, Logic's Flanger is added to the auxiliary chain and, accordingly, only the reverb is affected. The Mix slider can be used to set how much flanging you will hear, while the other parameters allow you to create a super-hyped flanging effect or something subtler, to match your track. Suddenly, the whole part comes alive. You can apply the same trick to other doubling effects such as Chorus and Phasing.

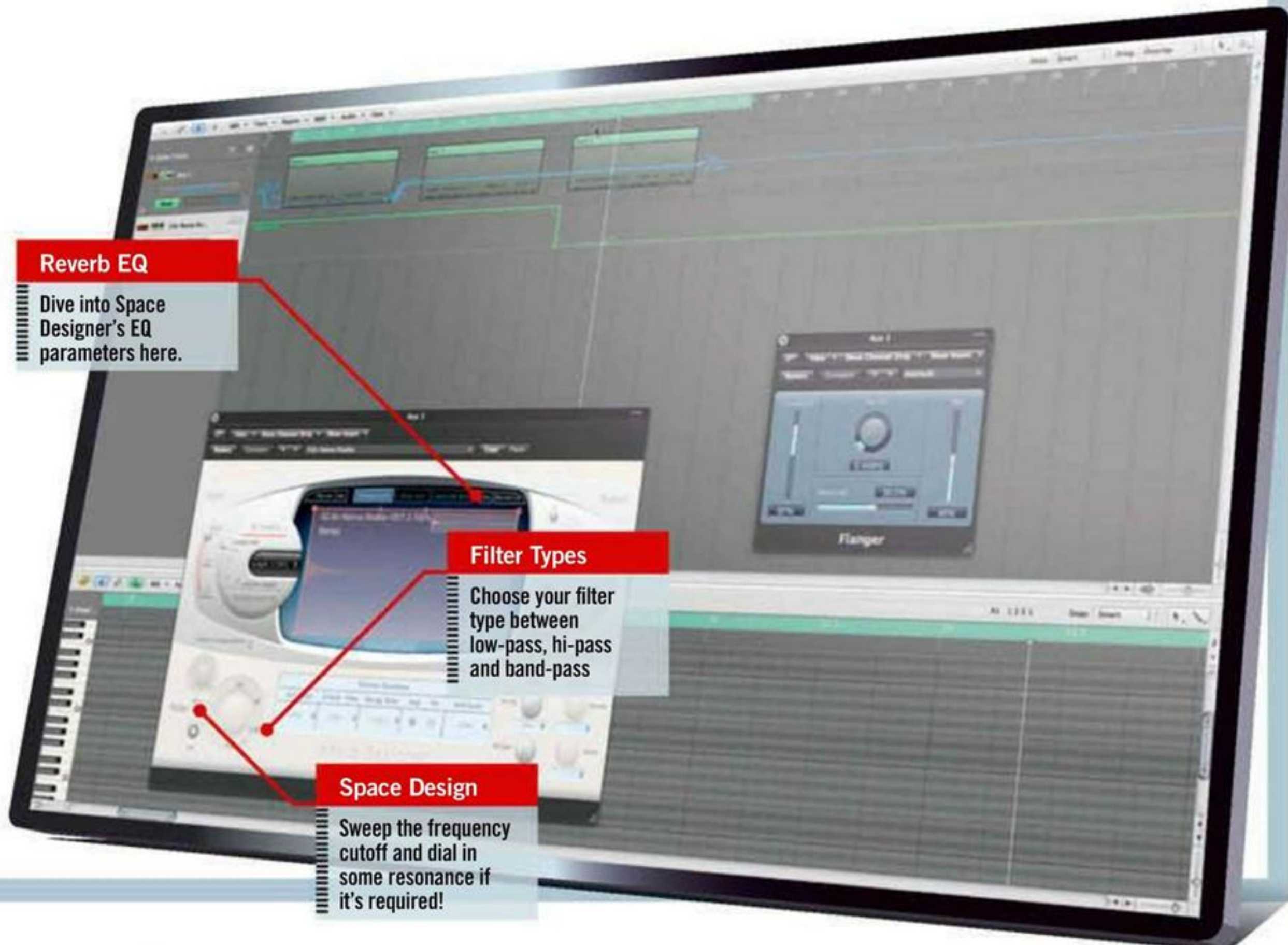
Chorus thickens sounds but often it's possible to thicken reverbs using EQ more accurately so while you can experiment here, you might not

find it the most powerful plug-in for reverb enhancement. Like flanging, however, phasing produces a sweeping sound that

is particularly effective on electronic drum treatments. Remember, if you want to dial the phasing, flanging or chorus

levels in and out, simply select Latch mode on the Auxiliary channel and then dial in some movement to the 'Mix' slider.

A setting of zero will effectively switch this plug-in off, whereas a setting of 100% will mean the entire reverb is processed.



Reverb EQ

Dive into Space Designer's EQ parameters here.

Filter Types

Choose your filter type between low-pass, hi-pass and band-pass

Space Design

Sweep the frequency cutoff and dial in some resonance if it's required!

SPL's Transient Designer are designed to allow you to add 'sustain' to these sounds, almost as if you're applying a real-time stretch to the sound to elongate its duration and EnVerb can provide something similar. In the first clip on the DVD, you can hear this in action, whereby a snare has been assigned its own track and, second time around, EnVerb has been applied to 'Hold' the reverb level with a Sustain level of 27% with the settings shown in the grab.

This adds a grittiness and weight to the snare and this trick can be applied nicely to mix elements such as percussion or claps, blended in subtly to provide depth.

Reverb plus...

One of the most flexible ways of creating a bespoke reverb treatment to match your track comes when you combine auxiliary reverb treatments with other plug-ins. For instance, suppose you set up a thick long reverb to which you want to send several tracks. Upon doing this, you suddenly discover that the bass end of this reverb treatment is too much but the tone parameters of your reverb don't allow you to address the issue.

Simply inserting a Channel EQ before or after the reverb to scoop out these bass



ON THE DVD

1. EnVerb: Thicken snares and other mix elements with 'held' reverb treatments.

2. EQ'd Reverb: Notice how much clearer the reverb treatment is second time, once bass frequencies have been scooped out.

3. Compressed Reverb: Using the vocal as a sidechain trigger allows the compressor to affect the level.

4. Filtered Reverb: Here a simple sequence sound is heard dry, then with a Plate Space Designer Reverb. Finally, this reverb is passed through a resonant high-pass

frequencies can be hugely successful, as the frequencies you drop will simply be reduced from the sound of the reverb, leaving you with a clearer result. You can hear before and after treatments on the DVD.

Another hugely effective plug-in to insert after an auxiliary reverb is compression, particularly if you're working on a vocal part whose reverb treatment is overwhelming the mix. On the DVD, you can hear a vocal with

Duck and cover

Instead, simply insert a compressor after the reverb on your auxiliary channel and route the dry vocal track to the compressor as a sidechain signal. In this way, rather than using the reverb output as the trigger source, the compressor will respond to the contours of the lead vocal instead, so that dynamic drops will occur when the vocal sings and no level drops will be applied to 'empty spaces' between phrases.

As the compressor is inserted after the reverb, of course, these dynamic shapes will be applied to the reverb itself, leaving much more space in the mix without an automated parameter in sight. You can hear all of this on the DVD and see how it's set up above.

Elsewhere in the boxes, you can hear and see how other reverb-sensitive tricks can be set up to ensure that the spatial treatments you create can be tailored to the specific requirements of your track. Remember, these are bound to be individualistic, so I'd urge you to steer clear of the presets and really get used to

Compression is a hugely effective plug-in to insert after an auxiliary reverb

a heavy vocal treatment. While the long decay length works nicely in the gaps between phrases, it's getting in the way of the vocal part. A process whereby the reverb level 'ducks' whenever the vocal is being performed but comes up in volume between phrases would work nicely and this doesn't require automation of the reverb's volume.

Instant Reversed Reverb

Next to Space Designer's EQ button, you'll find one labelled 'Reverse' which does what you might expect – reverses the Impulse Response to provide instantaneous reverse reverb effects. However, these aren't quite like the famous reverse reverb tricks as featured on Depeche Mode's *Personal Jesus* as they don't come in 'before' the dry sound – remember, any reverb can only be triggered once its source signal is 'heard' and so this can't happen before your source signal has made a noise.

That's not to say that Space Designer's Reverse button can't do interesting things and as you can hear on the DVD, its 'sucky' nature is particularly effective when allied to a tempo-locked Impulse Response (listen to: 6 Reverse IR). To create true reversed reverb effects, however, you'll need to bounce the reverb down as an audio file before reversing it. The trick is to keep the dry signal out of the bounce, so here's a step-by-step guide.

Firstly, find a sound whose reverb you want to reverse – I'm using a low grand piano. Then, send it to an auxiliary and set up the reverb of your choice. When you've found a reverb sound you like, solo the auxiliary channel so that the dry signal is excluded from your bounce. Then, bounce the file down and import it onto a new audio track. Use the Sample Editor to reverse the reverb's audio file and place it before the dry sound so that it 'peaks' at the point where the dry sound starts. Finally, unsolo the auxiliary channel!



Depeche Mode used reverse reverb processing to great effect in *Personal Jesus*



Try using the dry vocal as the trigger for the reverb's compression

tweaking the parameters at your disposal, as well as considering whether those treatments can be enhanced through use of additional plug-ins.

Tonal reverb

The tone of your reverb is as likely to affect its success in your mix as the space you choose itself. This is perhaps particularly true of convolution reverbs such as Space Designer which capture the 'warts and all' nature of any acoustic space, complete with variations in tone offered by the environment being recorded, the source material used to capture it and the microphones used as well. Simply firing up a preset and hoping it will do a job is unlikely to yield the right result and, knowing this, Space Designer features its own EQ controls to allow you to tweak tonal shape. The 'EQ' button resides in the top-right corner of the waveform display and it features a four-band approach, allowing you to choose central frequency, cut/boost amount and bandwidth for each. To activate a band, simply click on the bell or shelf icon above each set of numbers.

Further tonal treatment can be provided by the optional resonant filter which lies in the bottom left-hand corner of the GUI, where you can choose low, high or band-pass filter options with the first options providing 6 or 12dB per octave slopes. The hugely important thing is to tweak these EQ options 'in context'. If an auxiliary reverb is being fed a wide range of signals from a number of sources, there's little point soloing one of these, tweaking the EQ to suit and then re-introducing the other elements, as you're likely to find these are too rich or thin as a result. As with any EQing process, be careful not to re-introduce problem frequencies. For instance, if you've carefully removed harsh 1-3kHz frequencies from your lead vocal using Channel EQ on a track, be careful not to bring them back in via your reverb as the elongated nature of the space will make frequency problems much worse. If more radical timbral change is your desire, you could insert Logic's Autofilter after the auxiliary reverb to allow you to change its tone statically, or through use of the



ON THE DVD

filter with Autofilter's LFO making the tone move in the mix.

5. Flanged Drums:

Dry drums first, then drums with Space Designer's Reverb, then finally with Flanger applied to the aux reverb channel.

6. Reverse IR: By clicking the Reverse button, tempo-locked impulse responses shuffle in and provide backwards effects.

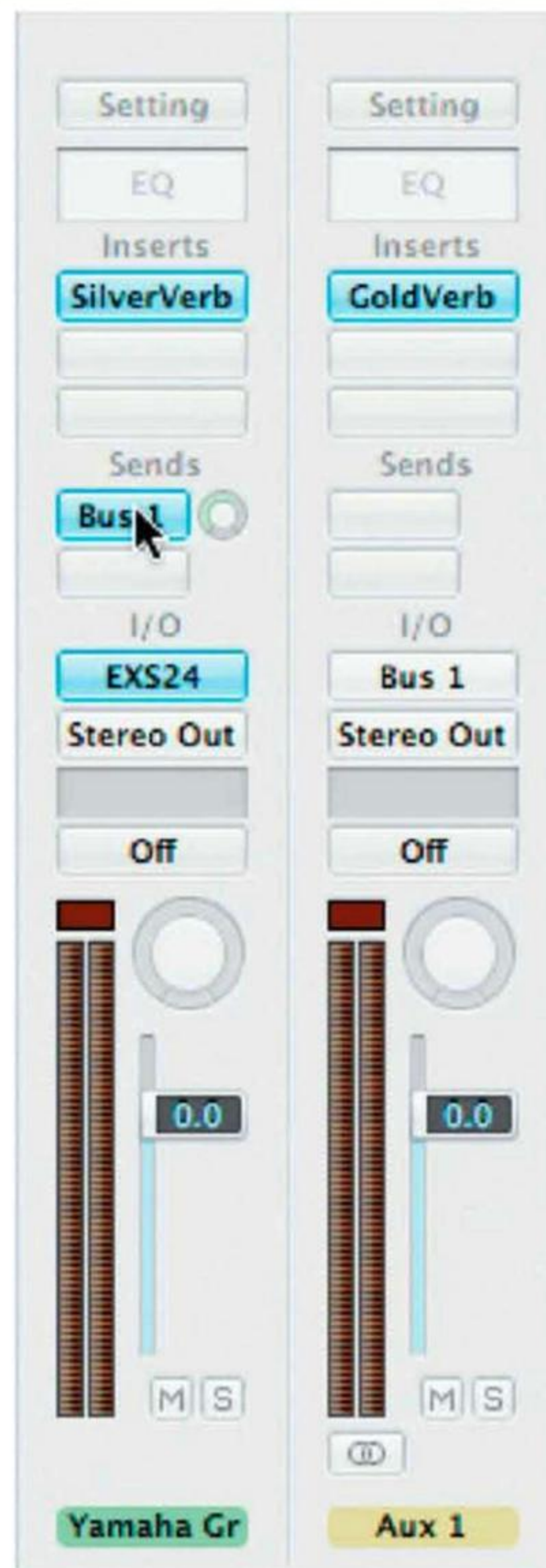
7. Reverse Reverb: A reversed piano reverb solution.

Map Making

Reverb can be applied in two ways within Logic. You can either add a reverb plug-in to a specific track, as an 'Insert', or set it up via an 'Auxiliary'. Whereas Insert plug-ins can only affect the track to which they're applied, Auxiliary effects can be shared by many tracks and Reverb is perhaps the best plug-in example of this being useful. With a single auxiliary reverb set up, you can route every single one of your sounds (if you like) to the same virtual space, to give the impression that everything making a noise in your mix is doing so in the same simulated environment.

This doesn't mean that you have to apply the same amount of this reverb to each sound – each auxiliary send features its own level dial, so if you want to set up a little reverb on bass sounds, a little more on a snare and plenty more on your vocal part, you'd simply set auxiliary send levels to match. Insert reverbs are better employed when you want a specific treatment that only a single sound will utilise, though one word of warning here. The 'Mix' dial allows you to blend the 'dry' signal with the 'wet' reverberant one.

If you've balanced your mix and then apply an Insert reverb to a specific track, its level will drop as some of its louder, dry signal will be replaced by a more distant, and therefore quieter, wet signal. In such circumstances, either set up this new reverb on an auxiliary channel, or be ready to bring up the level of your track to ensure it doesn't get lost in the overall mix.



Envelope and LFO options, dynamically. The Envelope will work well if you're processing one-shot sounds to which you want to add a filtered reverb effect. For static sounds, the LFO option is hugely successful, as it'll get the cutoff point moving and, with a range of filter types, it shouldn't prove difficult to provide the specific dynamic effect your track requires. On the DVD, I've started with a basic synth sequence over which I've set up a reverb and then added Autofilter. By choosing the high-pass filter, I've ensured

that the reverb is always light and airy but sometimes the filter scoops down into the sound to pick out mid-frequency content, whereas at other times it remains so thin it's almost unheard. This creates some drama and even with a single repeating sound, my track in progress has some vibe. **FM**

LOGIC TIPS NEXT ISSUE

More videos! Jono flips Logic's hood and goes in with spanners, screwdrivers, video and audio. Planning to miss it? No, didn't think so... **FM244** on sale 1st September

The History of the Roland Jupiter-8

This month we turn our attention to one of the most highly-rated synths ever made. **Greg Scarth** blasts off to Jupiter with a Roland classic

Ask any group of producers to name the best polyphonic synth ever made and a few names keep cropping up. Roland's Jupiter-8 consistently ranks as one of the most sought-after synths on the second-hand market despite only selling in limited numbers and now commanding hugely-inflated prices as a result.

Released in the early '80s heyday of the fully analogue poly synth, the Jupiter is widely hailed as one of the best products Roland have ever made. Its enduring appeal is testament to its sound, but bad luck with timing meant the JP-8 didn't stay commercially competitive for long.

Context

To understand the appeal of the Jupiter-8, it's necessary to consider the synth market at the time of its announcement in 1980. Yamaha had set the standard for top-of-the-range poly synths in 1977 with the release of the CS-80, an eight-voice synth with velocity control, polyphonic aftertouch and even a basic patch storage system. The gargantuan CS-80 was the king of late-70s poly synths, but its high price meant that it was only within reach of the wealthiest keyboard players. The likes of Oberheim and Sequential Circuits followed suit shortly

afterwards with the OB-X and Prophet-5 respectively, bringing polyphony to a slightly more affordable price point.

Roland's flagship model during the late 1970s was the Jupiter-4 CompuPhonic, released in 1978 with the claim that it would 'make possible the fascinating pursuit of keyboard dreams'. With one oscillator per voice, four-voice polyphony, eight memory slots and a built-in arpeggiator, the JP-4's competitive price of £1,800 made Roland a player in the poly synth market but the synth itself didn't blow Yamaha, Oberheim or Sequential out of the water.

Roland's other polyphonic synths of the era were curiously half-hearted attempts. The SA-09 Saturn and RS-09 Organ/Strings, both released in 1979, bear a passing resemblance to the Jupiter-4 but offered very few editing options in comparison.

Silky

The breakthrough for Roland came at the summer NAMM show in 1980 with the announcement of the eight-voice Jupiter-8. Taking the concept of the Jupiter-4 and upgrading it in almost every area, the JP-8 was quite clearly part of the new breed of all-purpose synthesizers, aimed squarely at taking on the OB-X and Prophet 5. The 1981 retail price of £3,995 (around

£15,000 in today's money) was more than twice the price of the JP-4 but still on a par with the American competition.

The JP-8's synth architecture provided huge versatility. VCO1 offered triangle, sawtooth, pulse or square waves, while VCO2 swapped the triangle and square for sine and noise. VCO1 could be cross-modulated by the second oscillator, while VCO2 offered a sync option, low frequency mode and fine-tuning control. A single LFO and two ADSR envelope generators provided sources for the JP-8's modulation options. The only backward step from the JP-4's spec was the omission of chorus, presumably since the dual oscillator design was deemed to be sufficient for creating similar effects. Elsewhere, a range of performance options such as an excellent arpeggiator, keyboard split modes and unison provided versatile options for live use.

The JP-8 was immediately praised for its wide range of sonic options and all-round ability. Whereas the likes of the Prophet 5 and CS-80 were all about fat lead sounds and thick pads, the JP-8 was capable of a much broader range of sounds: silky smooth strings, delicate pads and subtle effects which could fit into a mix much easier than the big, brash American synths of the era. For an idea of some of the range of sounds the JP-8 could create, check out Frankie Goes to Hollywood's *Relax*, A-Ha's *The Sun Always Shines on TV* and Michael Jackson's *Thriller*. Over the course of the '80s, the JP-8 featured on so many records that it helped to define the sound of modern synth-driven Pop and Dance music as we know it. The 'Lo Strings' preset, for example – 'designed to recreate the basses and cellos in an orchestra' – is about as close to the definitive synth string sound as you'll find on any synthesizer.

Over the course of the Jupiter's product lifespan, various minor revisions were made to firmware and hardware. The first run of around 500 was based on a central processing unit with 12-bit AD and DA

The JP-8's coloured preset buttons are an iconic design in synth enthusiast circles



converters for sampling and recalling front panel settings. This was upgraded to a 14-bit resolution in 1982, improving the speed of the automatic tuning routine.

An updated model, referred to as the JP-8A, was released in 1983 and added a DCB (Digital Communication Bus) port to provide compatibility with other Roland hardware including the MC-4 and MC-8 sequencers. Sonically, the 12-bit and 14-bit units were virtually identical, while earlier units could be retro-fitted with the Roland OC-8 card in order to provide DCB features.

Connections

At a time when most synths offered very limited external control options, the Jupiter-8's array of CV connections provided reasonable versatility, allowing the VCF, VCA, arpeggiator speed, hold and portamento functions to be controlled by other equipment. However, at the time the Jupiter-8 was designed Roland couldn't have predicted the imminent arrival of one of the most important musical developments of the 1980s – the JP-8 went on sale just two years before the introduction of the MIDI protocol. The Jupiter's lack of MIDI support immediately made it seem outdated in comparison with new products, most notably the Yamaha DX7, released in 1983.

Roland released the MD-8 MIDI to DCB converter, while third-party manufacturers soon started to offer MIDI upgrade kits, but the DX7 and the new breed of MIDI synths would ultimately prove much too popular for

“The JP-8 went on sale just two years before the introduction of the MIDI protocol”

the Jupiter range to compete. In retrospect, the one major weakness of the Jupiter-8 was the timing of its release. The synth was by no means a commercial failure – around 2,000 units were sold over the course of the product's lifetime – but if it weren't for the arrival of MIDI and DX7 then Roland may have had a much bigger hit on their hands.

The company quickly jumped on board the MIDI bandwagon with the release of the Jupiter-6 in 1983, but it could never compete against the £1,500 DX7. At £2,250, the JP-6 was cheaper than the JP-8 but still significantly more expensive than Yamaha's offering. Even more importantly, with only six voices of polyphony it was quite obviously not a new flagship.

Planet of Sound

Part of what makes the JP-8 so highly sought after is the fact that its sound is unique even among Roland synths of the same era. On the surface, the three Jupiter keyboards may appear to be similar, but there are substantial differences between the signal paths of all three. The JP-4 and -8 both use discrete oscillators, whereas the JP-6 uses Curtis CEM chips.

All three use slightly different implementations of Roland's IR3109 chip for the VCF, but note that early JP-4s used a different filter circuit

entirely. As such, the Jupiter-8's combination of discrete oscillators, super-fast envelopes (similar to those found in the Juno-6 and -60) and versatile VCF give it a unique appeal. No other synth sounds exactly the same. The MKS-80 Super Jupiter module is often erroneously described as a rack-mounted Jupiter-8 but a quick side-by-side comparison or examination of the schematics reveals it's nothing of the sort. Earlier (so-called 'revision 4') units are closer in design to an eight-voice version of

the Jupiter 6, whereas the later revision 5 is a separate synth altogether, using completely different VCO, VCF and VCA circuits to every other model in the Jupiter range.

Roland resurrected the JP name in the mid-1990s with the analogue modelling JP-8000 keyboard and JP-8080 rack module, then announced the Jupiter-80 digital synth at this year's NAMM.

Names aside, these synths have practically nothing in common with the analogue classics.



Given the choice of Yamaha's revolutionary digital synthesis or paying an additional £750 for a cut-down version of the JP-8, consumers flocked to the DX7 in their droves. Nevertheless, the Jupiter-6 and its rack-mounted 'brother module' the MKS-80 Super Jupiter (released in 1984) were

popular with a select group. Most notably, Madonna's mid-80s output is full of the sound of songwriter and producer Patrick Leonard's MKS-80. Check out *Get Into The Groove* and *La Isla Bonita* for classic Super Jupiter bass sounds.

When viewed with the benefit of hindsight, the Roland poly synth range of the mid-80s is the story of a company struggling to keep up with advances in technology and consumer expectations. As soon as Roland caught up with the Prophet 5, MIDI came along and made the Jupiter-8 look outdated.

As soon as they launched the MIDI-equipped Jupiter-6, the DX7 blew it away with futuristic FM synthesis, vastly superior polyphony, velocity and aftertouch control. The JP-6 and JP-8 were phased out around 1984-5 to be replaced by the JX-8P and JX-10 at the top of the Roland range, but it wouldn't be until the release of the D-50 in 1987 that Roland could really compete with the new breed of digital synths.

The legacy

Like most analogue synthesizers at the time, Roland's Jupiter range briefly fell out of widespread favour in the late 1980s and early 1990s, with second-hand prices dropping accordingly. More recently, the synths have rightfully regained their reputation as some of the best products Roland ever made. Given how special the Jupiter-8 is, does it make sense as a second-hand purchase? Unfortunately, you may already be too late to find one at an affordable price.

As recently as the late 1990s, JP-8s changed hands for less than £500. Just a couple of years ago, you could have picked up a Jupiter-8 for around £1,000 without too much trouble. More recently, prices have skyrocketed. Current prices start at around £2,500 for a working JP-8 but we've heard of them selling for as much as £5,000 in mint, fully-serviced condition.

It's not impossible that their value may continue to rise going forwards, but the JP-8 is in danger of being priced out of the hands of passionate musicians and into the hands of affluent investors and collectors. For most of us, a software clone such as Arturia's Jupiter-8V (229 euros, arturia.com) may be the only realistic option. **FM**

KNOWLEDGE BASE NEXT ISSUE

Make sure you pick up *Future Music* next month for more studio science and industry insight. *FM244* is on sale 1st September

TECHNIQUE

GET THAT SYNTH SOUND

Welcome to our *Get That Sound* feature! Each month, we'll be explaining step-by-step how to recreate famous sounds: Synths, basslines, drums and more...

VIDEO ON
THE DVD

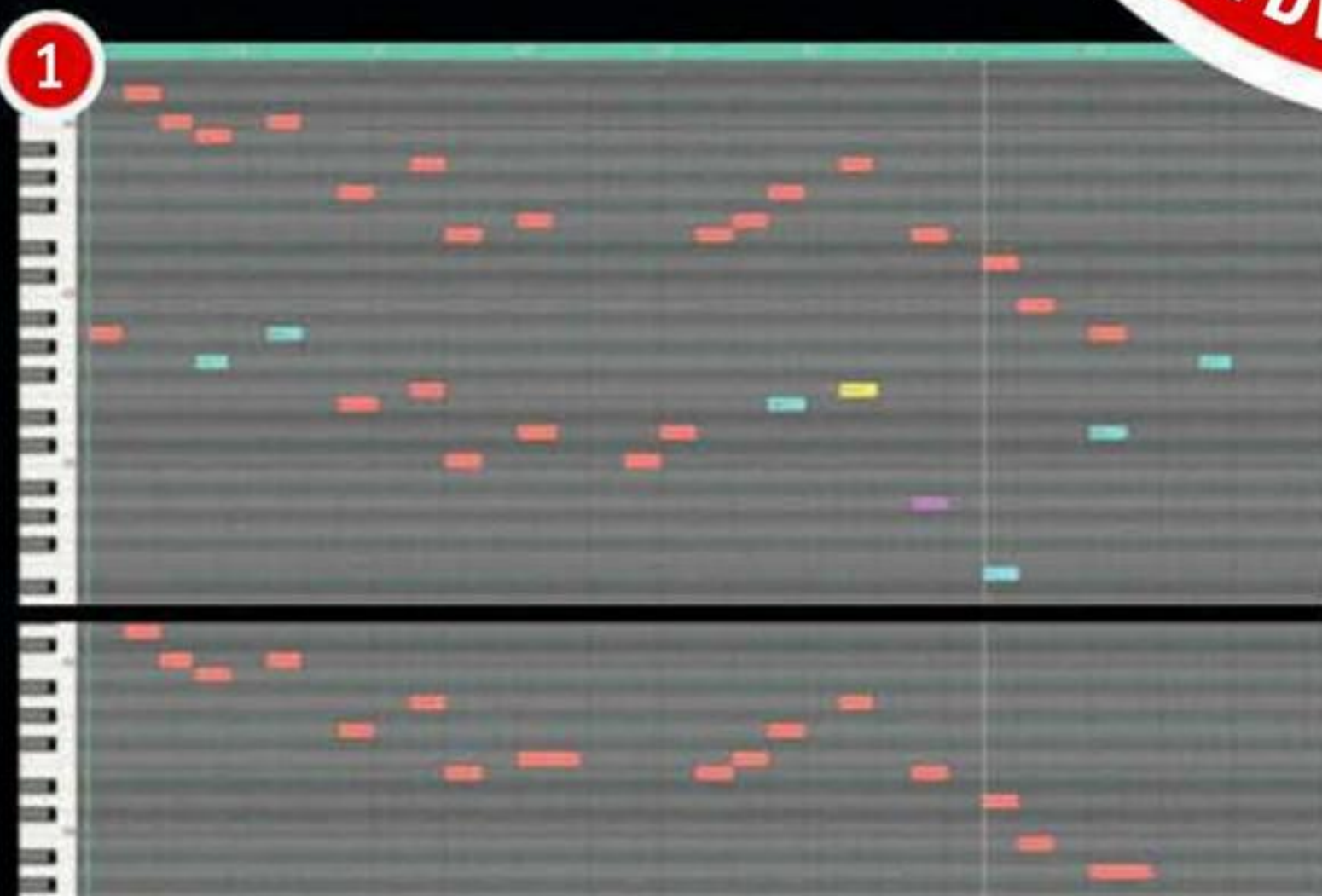
Don't miss the movie on our DVD! Each of our star sounds has a full movie and voiceover showing you exactly how they were made!

Calvin Harris Bounce

It's not all about high-fidelity when it comes to designing sounds for a chart-topping tune, as Calvin Harris has proved with the cute-sounding lo-fi opening melody to his 128bpm dancefloor smash *Bounce*. Mr Harris is emulating the legendary 4.19MHz processing Nintendo Game Boy's 8-bit tones, first released in 1989 and running on four AA batteries.

Later in *Bounce*, the same lead melody completely contrasts that intro and transforms the track rolling into a fat, deep, rich, searing sawtooth lead. It's these elements of light and shade that keep the listener interested and it is these ideas that you can borrow to a great deal of success for your own beats. With this kind of sound, we are using two opposing factors: a monophonic pulse-width lead that's drenched in reverb and a completely dry square wave polyphonic lo-fi sound.

From scratch, and using Logic's built-ins, we'll create these very usable patches for this month's *Get That Sound* tutorial.



1 Notes: The melody works in two sections, the high notes and the harmonising low notes, and there's almost a baroque feel here. The low end fills out the audio spectrum and gels with the high lead licks to make a full sound.

Lead: The mono lead is a call-and-answer and at the end of each two-bar phrase there is a slightly longer note than the rest of the phrase that allows for the synths modulated wobble to ring out and fill out the compressed reverb.

These notes were pretty much copied and pasted from the lo-fi parts with the lower notes removed and the phrase's end notes lengthened.

2 Lo-fi synth programming: The ES2 fits the bill perfectly here. The fat square waves blended with a noise oscillator recreates that lo-fi Game Boy signature sound. The ES2 has a warm and fatness, and massive tweak-ability...

Don't just use this example, tweak further to get your own Game Boy

recreations! For more details watch our featured DVD.

3 Lead synth programming: On lead duties we have used the very capable ES1 synth. We've chosen the ES1 as the nasal pulse wave is perfect for this searing lead perfect to cut through the rolling beats and complimentary to the lo-fi ES2. On its own, it sounds pretty innocent, but add some plug-ins and the sound really opens out.

4 Post FX-Lo-fi Synth: There are two main reasons why this synth patch has a 'lo-fi' sound.

The first one is that there is a lot of noise created by one of the oscillators, the other reason is that the sound is deliberately dry, which brings the sound to the front of the mix – the compressor brings the sound even nearer.

Compressor: We used the compressor to fully bring out all the elements of the lo-fi sound. We really wanted to hear the 'noise' in the mix but wanted to blend and flatten the square wave components too.

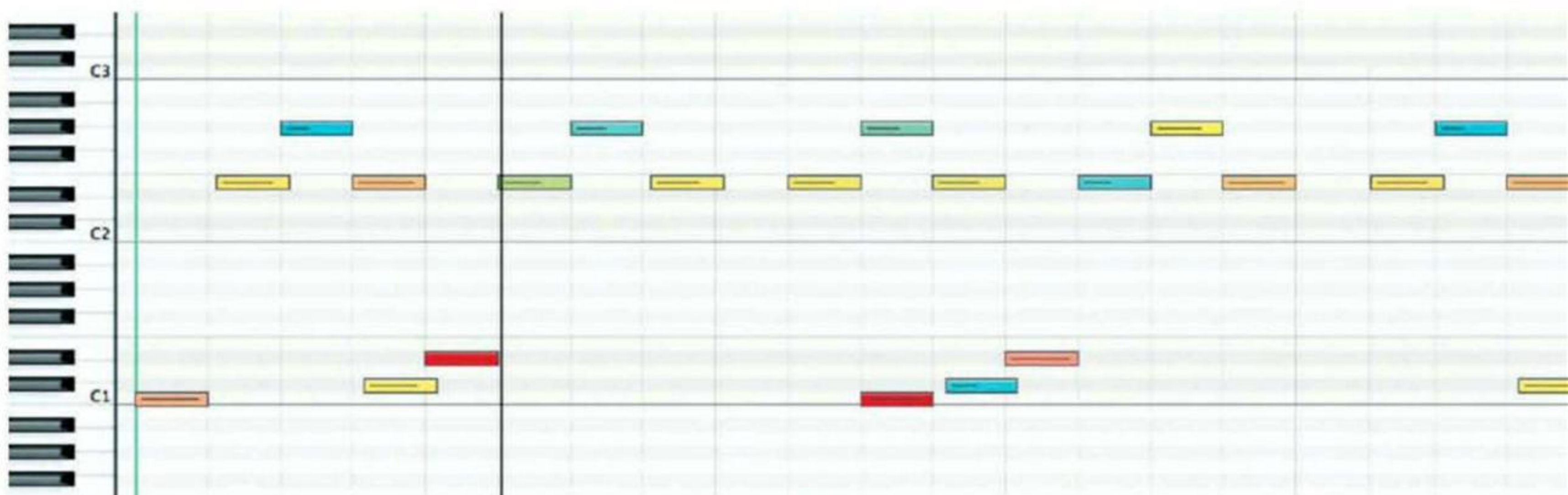
Fat EQ: The Fat EQ has been employed to round off and fill out the low end of the sound with +10dB at 20Hz sloping off to 500Hz.

5 Post FX-Lead synth verb: During the creation of the Lead Synth sound on the DVD, you'll notice that the sound is dry. We did this to make sure the process was clear and exact, but it's the reverb that really gives it life. The combination of these juxtaposed elements really creates a massive wall of sound.

Reverb: The pre-delay gives the listener time to hear the note before the lush reverb wash comes in behind the note giving it that euphoric Ibiza hugeness.

Compressor: The compressor squeezes the living daylight out of the synth and reverb combined, we've selected the kick drum as a side chain to give the reverb that classic pumped vibe. Messing with the release, attack, ratio and knee however you get a variety of rhythmic changes which you should take time with and experiment with as again the cross rhythms of the reverb pump really changes the tracks rhythmic and dynamic feel.





PRODUCTION ESSENTIALS

Groove and Movement

Keeping repetitive drum tracks interesting can be tricky, but with our guide to groove you'll be creating exciting beats in no time. We demonstrate a variety of techniques for creating infectious grooves and subtle variations

One of the biggest misconceptions about Electronic music is that the beats, riffs and loops are all robotic, repetitive and rigid.

Ignorant critics would have you believe that Dance music is all about repeating a monotonous drum loop for five or six minutes then adding a few beeps and bleeps over the top. If only it were that easy!

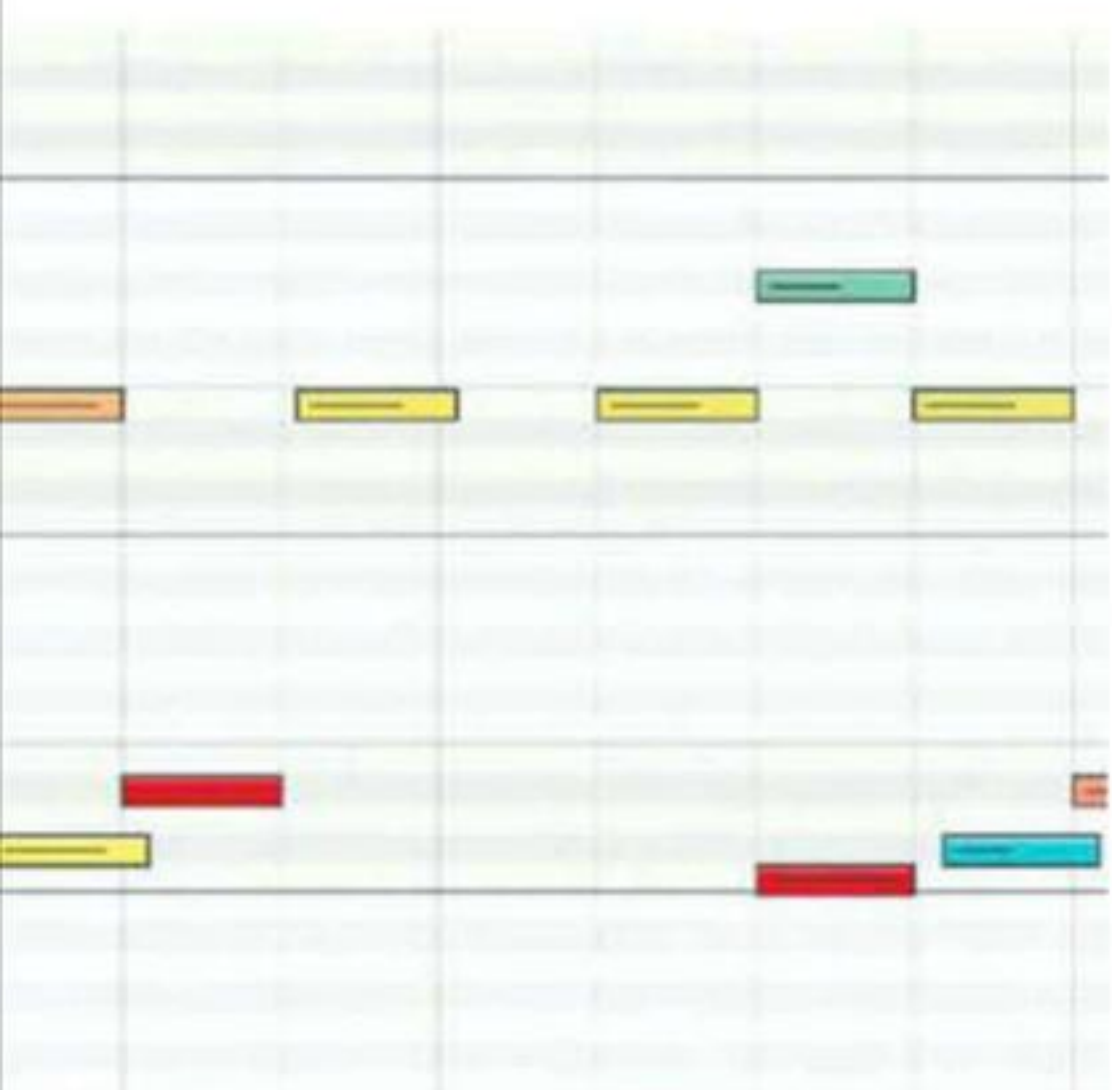
Future Music readers wouldn't be so closed-minded, but sometimes it can be

difficult to add just the right level of groove, movement and variation to a track.

Variations

There may be times when a perfectly straight beat is just what a track needs, but most of the time a groove is just as important in Electronic music as it is in any other genre. The more minimal a track becomes, the more important it is to keep the listener interested – if you're just

dealing with drums, bass and a couple of synths, it's vital to create an infectious groove. Likewise, subtle variations are often essential to keep things fresh and interesting over the course of an entire track. Small changes to the timbre, volume and pitch of rhythm parts can be almost impossible to notice in a full mix but add just enough movement to keep things interesting. It goes without saying that you can add groove and movement effects to



your tracks by recording audio and MIDI sequences live and carefully adding subtle nuances as you go, but that approach isn't always possible.

If you're programming drums rather than playing them live, it would take a huge amount of effort to build in every little variation you'd get from a live performance. If you're using loops rather than MIDI, you can't easily control the timing and dynamics of each and every note.

Bounce

In this tutorial we're going to examine some of the ways you can add a bit of life to your rhythm parts. Whether you call it groove, bounce, movement or just plain old funk, we'll take a look at some of the best ways to break out of the trap of rigid timing. Rather than reaching for the quantise button and aligning all your beats to the grid, a few basic techniques allow you to create interesting rhythms and variations. But we're not going to resort to the usual groove templates and swing settings. This tutorial is all about something a bit less predictable, more esoteric...

There are two major areas of technique to focus on. First, we're going to take a rigid rhythm track with straight timing and then automatically generate groove and movement by introducing variations in timing, sample start points and dynamics.

Secondly, we're going to think of the bigger picture. You might have the funkiest drum loop ever, but if it just loops over and over again for five or six minutes people are going to get tired of it. Introduce small variations to keep things interesting, either by using modulation or automated effects, and your tracks will hold the listener's attention for much longer. **FM**

NEXT ISSUE

Pick up *Future Music* next month for more unmissable production tips and tricks. **FM244** on sale 1st September

Random Factor

Any repetitive drum loop can be made much more interesting by randomising some of the variables

One of the easiest ways to start adding interest to your rhythm tracks is by randomising drum timing and pitch. Varying the start point of a sample is directly linked to timing. Cutting off the first few milliseconds of a sample effectively reduces its attack time, bringing the peak of the transient further forward in the groove. Most sampler plug-ins allow the start point of a sample to be randomised or linked to velocity.

Likewise, subtle changes in the pitch of drum hits can change the feel of a groove. In the same way as a live drummer introduces variation by hitting drums in different ways, pitch changes can add bounce and movement to your groove. If you're working with a drum loop you might think that dynamics are out of your hands, but plug-ins such as Sugar Bytes Effectrix can be used to create similar effects on audio sources.



> Our examples demonstrate the effects of randomising the pitch and start times. Note how subtle randomisation can be used to add a feeling of movement to percussion elements and hi hats.



1 Notes can be randomised in MIDI using automation, but most samplers offer randomisation features. Here in Logic's EXS24 sampler we can simply turn the Random knob to automatically randomise each sample's pitch. Alternatively, route a random LFO to control sample pitch.



2 For a randomised sample start point, look to modulation routing. Select Sample Start for the mod destination, then choose a random wave LFO as the source. If you want even more control, choose velocity or a MIDI CC as the source so you can take charge using a controller.



3 Here, Sugar Bytes Effectrix is being used to sequence effects onto a straight loop. The sequencer means that everything stays in time, but parameters can also be controlled by MIDI for cool variations on the fly. Record the controller automation to get complete hands-on control.

Psychoacoustics

When you think of groove, syncopation and swing, it's natural to focus on the timing of beats. However, the psychoacoustics of human hearing also suggest another approach. Variations in loudness and frequency don't actually affect the timing of your groove, but they can trick the human ear into thinking the timing of a beat is changing. Quieter notes or beats are perceived to occur later since quieter sounds in nature typically come from further away.

Consider the way the frequency content of a sound changes as it travels through a space. The further a sound travels, the more the high frequencies are diffused and damped. Our brains are wired to believe that sounds with less high frequency content have come from further away.

Since distance is directly linked to timing, it stands to reason that our brains also inherently link frequency to timing. Like volume, frequency content is one of the most basic tools in our production arsenal. Subtle changes in EQ settings can alter the perceived timing of sounds, but the real fun comes when we automate changes to create movement and interest.

Automatic filters, with the cutoff frequency controlled by an LFO, create constantly shifting frequency responses. Modulation effects such as flangers and phasers create a similar result – by altering the frequency content of a repetitive sound, we can keep things interesting but also trick the brain into believing it's hearing small timing changes. Timing, frequency and volume are inherently linked by psychoacoustics. With this knowledge, we can use filters, modulation effects and dynamic variations to create incredibly subtle grooves and movement. They might not be as obvious as big riffs and FX, but these small adjustments can make all the difference when it comes to maintaining the listener's attention.



Understanding how the brain interprets sound can lead to more effective drum programming

Gate Groove Tricks

A noise gate is a very basic effect, but with a bit of creativity it can be used to create rhythmic variations

One of the coolest old-school approaches to generating subtle grooves involves nothing more than a noise gate. Gates are simple dynamic effects used to block unwanted noise – incoming signals are attenuated until their level passes a set threshold. The gate then opens, increasing the signal level to maximum over the course of a set attack time. If the signal level drops back below the threshold, the gate closes over a set release time.

Typically, attack time is set as low as possible to avoid altering the transient shape of incoming sounds. For the purpose of creating a groove, we can deliberately set a long attack time. With the gate closed, the attack of an incoming hit will be cut off as the gate slowly opens, adding syncopation to the entire drum mix or individual parts.

Your swing or shuffle options might be limited by the hardware, but with a couple of gates you'll be able to create all sorts of groove variations.



ON THE DVD

> Examples of a gated effect. The second example splits the drums into two sections, with just the hi-hats running through the gate and the rest triggering the sidechain.



1 As the attack time increases, the gate will chop off more of each transient, making the hit appear further behind. Longer release times will mean that any given drum hit will effectively hold the gate open after the sound drops below the threshold again.



2 A gate's sidechain is typically controlled by the input signal, but can also be connected to an external signal. Some of the best effects come from gating a hi-hat or percussion part, then feeding the gate's sidechain input with another part of the drum mix.



3 Experiment with the reduction setting to change the intensity of the effect. Use one rhythmic element to control the volume of another, similar to sidechain compression but with a more dramatic on/off effect.

Manual Movement Techniques

The possibilities are endless when it comes to groove and movement. Try out some of these less common techniques

While there are plenty of automatic modulation and routing options to keep your beats moving, getting hands-on with MIDI and audio is sometimes the most effective method.



ON THE DVD

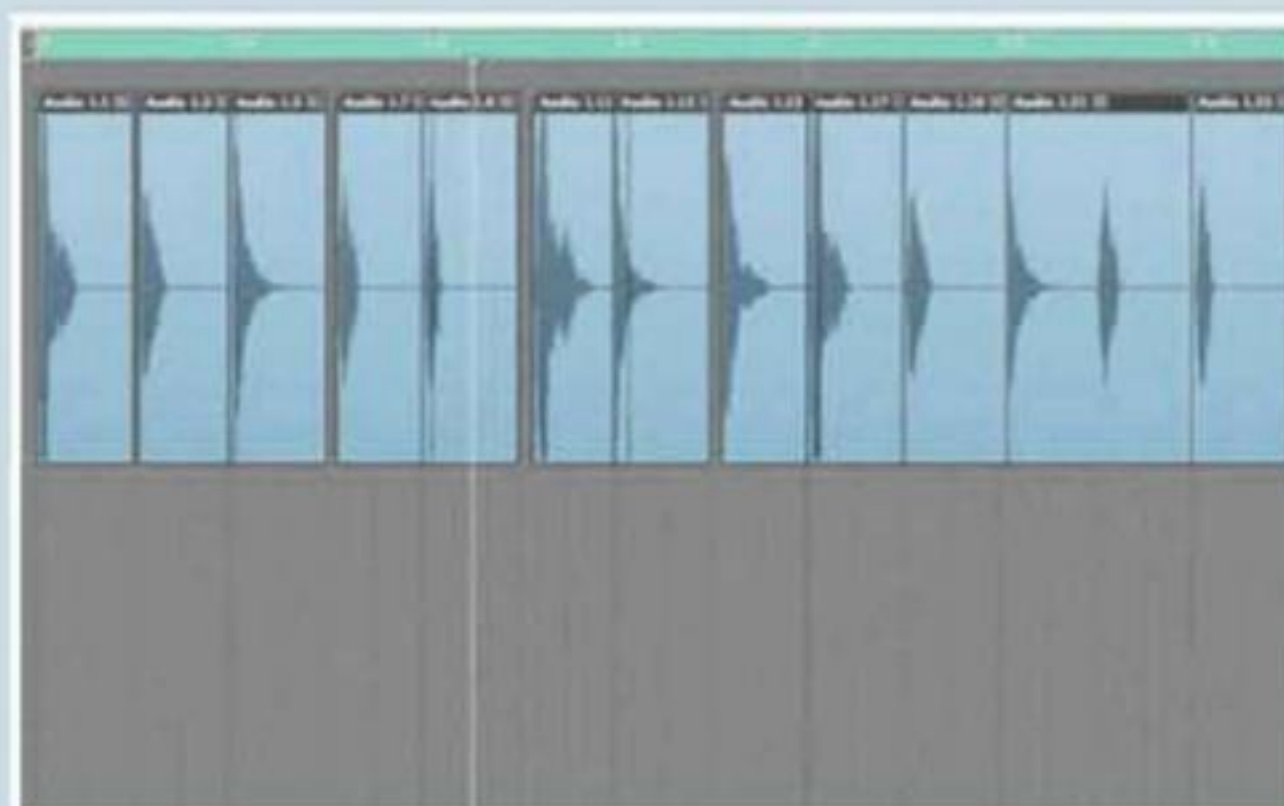
> Check out our examples of a sidechained filter – using a drum signal to control a filter's envelope follower – and a completely unquantised rhythm which skips and skitters around but starts to find a groove as it repeats.



1 MIDI effects such as those found in Ableton Live are great for adding variation to rhythm parts. The Random and Velocity effects are particularly useful, randomising the pitch and velocity of incoming MIDI notes respectively. Choose subtle settings and the effects can create modulation on sampler tracks.



3 Good old sidechain compression isn't just for making kick drums and bass work together. Subtly compressing a drum part with another element of your track is a great way to add dynamic variation. Here we're using a gated synth part to compress hi hats, squashing the drums so they work around the synth.



5 Just because you're not working with MIDI doesn't mean the rhythm and groove of your loops is out of your hands. If you're working with audio loops, try chopping them into sections and nudging the smaller regions backwards and forwards in the arrange window to alter their timing.



2 Arpeggiators are also surprisingly useful for percussion. Use a sampler device with a series of slightly different percussion samples, then hold down a bunch of keys and let the arpeggiator pick samples at random for each beat. The groove feature can also come in handy.

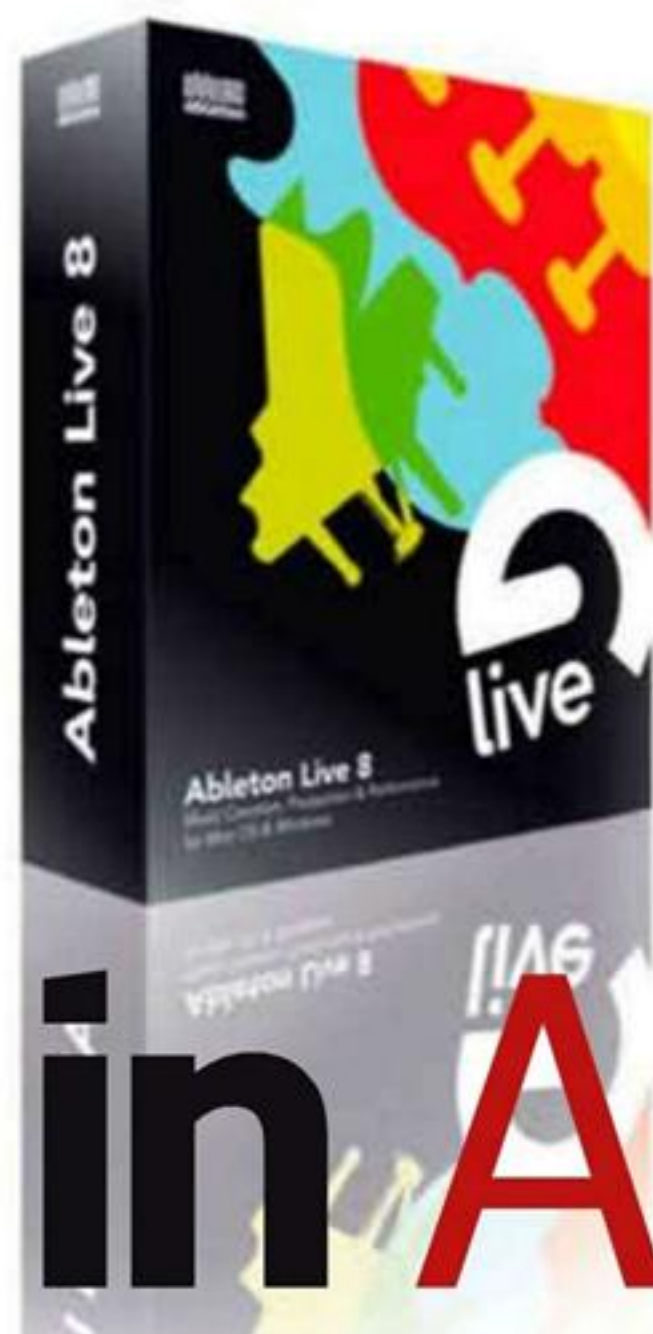


4 A similar approach can be taken with other effects. Here we're using FabFilter's Volcano 2 filter plug-in with an external sidechain input triggering an envelope follower in order to modulate the filter cutoff frequency. Using this technique you can create great modulation effects with the filter opening and closing in time with the sidechain signal.



6 Finally, try turning off quantisation and forgetting about rigid timing altogether. Even if you can't play a beat to save your life, you can always drag and drop MIDI notes until they sound good. Repetition is your friend here – loop a chaotic rhythm for a few bars and it'll soon miraculously start to make sense as the groove repeats.

ABLETON LIVE BACK TO BASICS 3



Audio Effect Device Basics

in Ableton Live 8

Last time round, we looked at Live's free Devices – Simplifier and Impulse. This time we're moving further down the signal chain, to the Audio Effect Devices, also included with all versions of Live.

Martin Delaney makes some connections

Live's audio effects combine with the instruments to build a complete system, with a consistent interface and deep integration into the rest of the program – and no, I haven't forgotten about the MIDI effect devices, we'll get to those soon! Pretty much everything I told you about instruments last time, also applies to the effects. I believe in

keeping things simple, in working with what you've got, and in giving yourself limitations and restrictions, and this applies to the audio effects as much as it does to anything else in Live. I don't particularly like Ableton's presets (and sometimes I wonder if they care about them either), but the devices themselves are great, and it's so easy to edit and create sounds that the

THE EXPERT

Martin Delaney
performer,
producer



Martin, aka mindlobster, has produced Live training material and was one of the UK's first certified Ableton Live trainers.



ON THE DVD

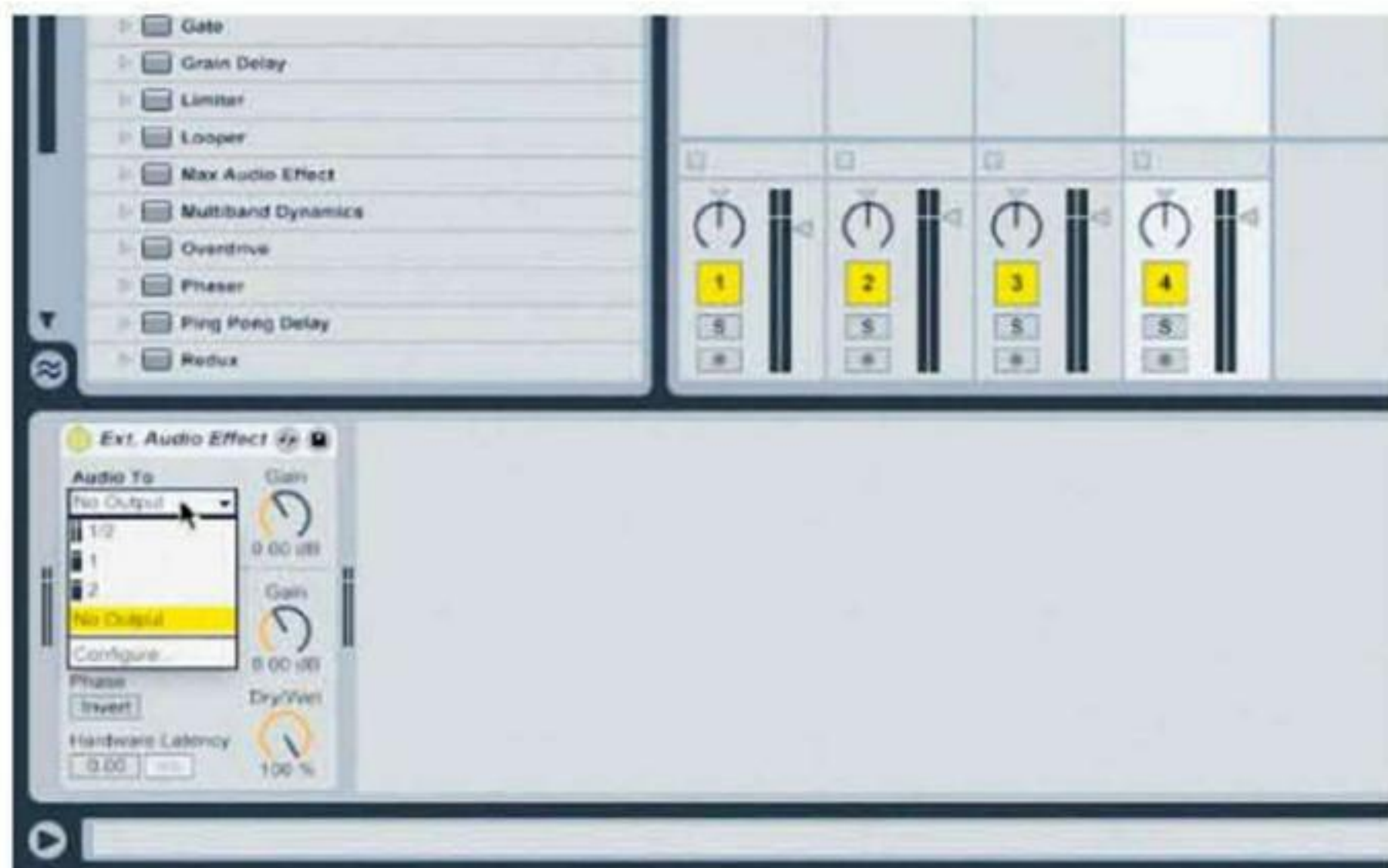
The DVD has an Ableton Live set containing the material you'll need for this month's tutorial – Ableton Live 8 is required. There's also a QuickTime movie showing the techniques in action!

presets don't matter. As well as using the Live-bundled effects, you can of course add more, just like with the instruments. You can also integrate hardware effects devices into your Live setup – use the External Effect Device to route audio to and from your favourite hardware effects unit. I've used this device to include guitar effect pedals and synths in my Live tracks. This enables you to create and recall Live audio effect racks that include your hardware effects processors. Very useful, and again, Live proves itself as the best possible application to act as the hub of more complex setups.

Return effects are much easier to deal with in Live than in some other DAWs. Don't forget you can route return effects to each other as well, though this is a 'great' way to create feedback situations that you might not want! There are even return tracks built into drum racks, and these can be routed between nested racks or out to the return tracks in the main Live set. **FM**

LIVE ESSENTIALS NEXT ISSUE

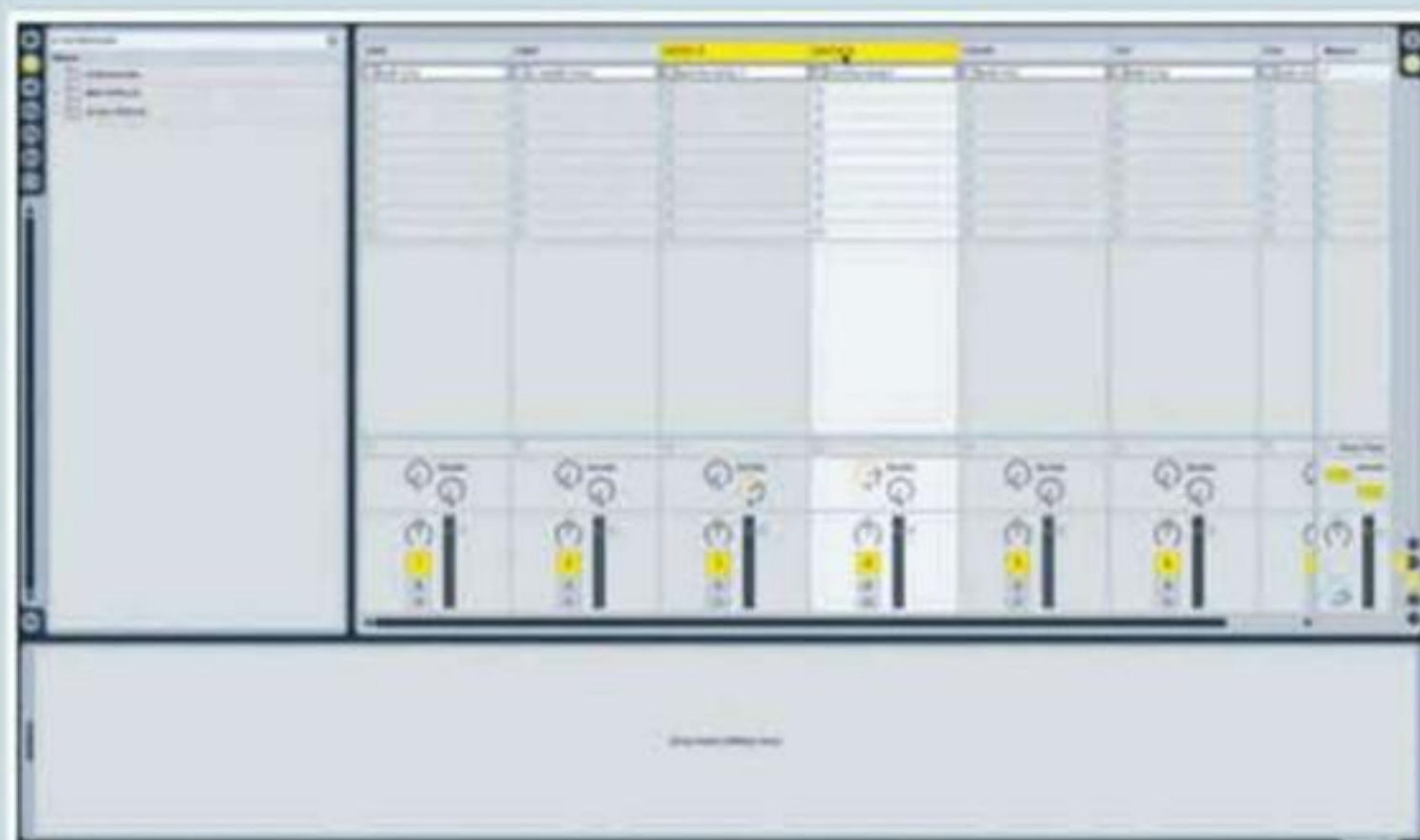
Make sure you pick up *Future Music* next month for more vital Ableton Live techniques. **FM244** on sale 1st September



Use Live's External Audio Effect device to embed externally-routed hardware signal processors into your Live sets

DJ-Friendly Effects

Live has become a laptop DJ standard. Here's a typical and fairly basic DJ setup using some of Live's standard audio effects



1 Audio effects are everywhere in music, sometimes obvious, sometimes not-so-obvious, no record is made without them. DJing's a field where less-subtle sounds can be useful – I'd encourage you to develop your own DJ setups, but there are obvious effects that make a good starting point.



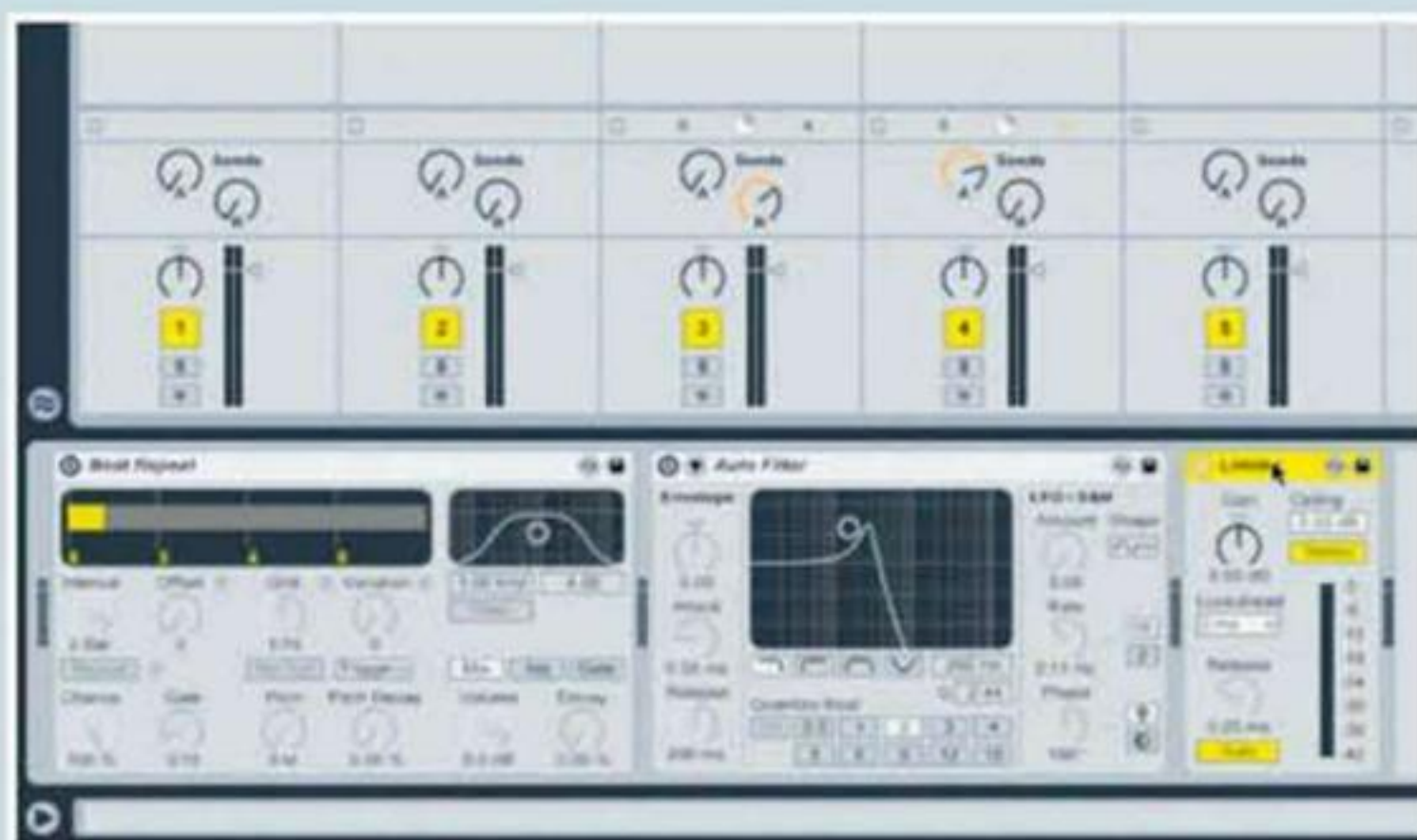
2 Create two tracks, labelled Deck A and Deck B, with a sample in each. Let's use these for our virtual DJ setup. We need to use track, return, and master, effects to gain DJ-style control. From the Devices Browser, add EQ Three and Auto Filter to Deck A, same thing with Deck B.



3 Create two Return Tracks – use alt-cmd/ctrl-T, if you can't see them, use alt-cmd/ctrl-R. Drag Redux into Return A, and Ping Pong Delay into B. Set Redux's Downsample to 200, and Ping Pong's Dry/Wet to 100%. Use alt-cmd/ctrl-S to view the Send knobs for each track.



4 Launch the clip in each of those decks, they're set to play as short loops. I like the way it sounds with Send B up on Deck A, and Send A up on Deck B – it's up to you though. Remember to play around with the EQ Three and Auto Filter in each track, too.



5 For the Master track, you could try adding a Beat Repeat, another Auto Filter, and the Upper Ceiling preset from Limiter. If you have it, PSP Audiware's Vintage Warmer 2 is a great plug-in for fattening up and warming your master output – it's one of the few plug-ins I'd recommend to everybody!



6 You can use a MIDI hardware controller to manipulate your effects parameters, and your send knobs – something like the Akai APC40 will make this very easy, because it's designed to integrate closely with Live. Don't forget you can assign characters on your computer keyboard to turn effects or EQ kill switches on and off.

Up Close with Audio Effect Device

Let's take a look at some of Live's audio effects in more depth. Beat Repeat is one of Live's most used – and abused – effect devices



1 Beat Repeat is definitely a bit of a love/hate thing for Live users. It has a really characteristic sound, and it's also very easy to get a quick result with. This means that it tends to get overused, and some folks understandably get tired of hearing it.



2 Add the Beat Repeat effect to a track, and launch a clip. You'll hear Beat Repeat working straight away, because by default it repeats in every bar. The Beat Repeat interface is typical of a Live device – Ableton are very consistent with their designs (compared to Logic, for example).



3 The first thing we're going to do is change the Interval – how often the repeat occurs – let's set it to 2 Bars – that'll give us time to think in between repeats. Now move the offset value to 4/16s, so it's not simply repeating the start of the loop. Change the Grid to 1/4.



4 At the moment you should be hearing the snare repeat. Let's change the Gate to 8/16. Now change Pitch to -12st, this transposes the repeats down one octave from the original sounds. Then set the Pitch Decay to 50% – this control lowers the pitch of each following repeated slice, and sounds really cool.



5 The Mix, Ins, and Gate, controls are my favourite part of Beat Repeat. Mix (the default), combines the original audio with the repeats, so you'll hear them both together. Ins mutes the original audio for the time when the repeat is playing, and Gate plays nothing but the repeats. These make a big difference to the sound.



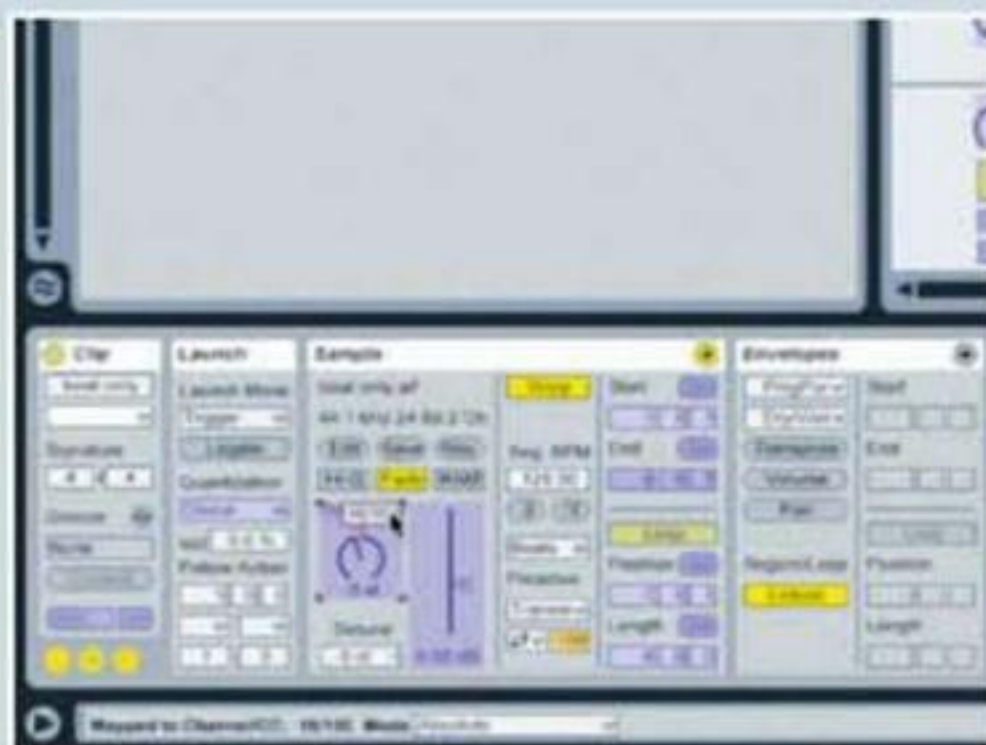
6 The most important thing with Beat Repeat is to judge your Interval setting, spacing out the repeats to fit the tune. It also sounds great if you assign a knob on a controller to the Grid value, because it sounds really nasty when you grab that one and move it while the repeats are happening.

Double Mapping Duty

There's no need to restrict yourself to changing one effect parameter at a time



1 Live has just about the easiest MIDI hardware mapping around – cmd/ctrl-M, click the object you're interested in, move your hardware knob or fader, cmd/ctrl-M again, that's it. We can take this further by assigning two or more elements to the same knob!



2 Open the example Live set on the DVD and connect your MIDI controller. Drag the Ping Pong Delay into track 'one'. Assign a knob on your controller to Ping Pong's Wet/Dry control. Assign the Transpose knob in the Sample box to the same knob.



3 Launch the clip, and turn that knob. The pitch changes, and the loop is swamped in delay. For extra fun, assign the clip gain also, so pitch, delay, and volume, change together. If you do this kind of thing with macros, the potential is limitless.

Effects That Aren't Effects

Live's Audio Effects Devices Browser also includes the Utility and Spectrum 'helper' devices



1 Open the example Live set, and browse to the Audio Effects Devices. Down near the bottom of the list, you'll see Spectrum and Utility. These are what you might call 'helper' devices, rather than being intended for sonic embellishment – most DAWs have similar tools.



2 Track 'TWO' contains a stereo sample, with different sounds on each channel. Launch it! Load Utility, and move the Panorama control around, fading between the channels, or set Width to 0% to go full mono. The sample's quiet, so boost the output with the Gain control.



3 Now add EQ Three and Spectrum after Utility. Spectrum merely shows the frequencies passing through the track – it doesn't modify them. Click the small button to view a larger display. Click the L (low) switch in EQ Three, and Spectrum's display will reflect the change.

Effects Chain Ordering

One thing that makes a big difference to your sound is the order you place the effects in a given track. When effects are chained together in sequence with a track, each one processes the effect before it, so there's a build-up of processing as the signal moves from left-to-right across Live's screen.

Try creating two versions of the same track, with the same effects, but applied in different ways. This will give you an idea of how the end result can vary. As a starting point, I usually put EQs at the

start of the chain, then any bit crushers or distortions, then a limiter if necessary, then delays, then reverb. Compression usually goes at the end, but that changes from track to track.

I really like to over-compress drums, as you can hear – I especially like to add heavy limiting after distortion, it sounds nasty. Although it's not a standard Ableton effect, I normally use PSP Audioware's Vintage Warmer AU/VST plug-in for over-cooked compression and limiting effects, because no matter how



far you push it, it always sounds organic and analogue instead of harsh and digital. I'd put distortion after pitch effects, because otherwise the distortion

can have a negative effect on the quality of the pitch shifting. This also relates to chains in a rack. By using EQ to split the frequencies of a track into separate chains, you can not only choose the order in which effects are applied to a track, but you can also have fun deciding which effects go on which frequencies.

This is great for applying a delay or any distortion to the high frequencies of a part, or using another EQ to boost the bass. It's usually the highs that I process, and the lows that stay dry.

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Guitarist

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★★★★
FIRST

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On sale in all good newsagents

Reviews

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



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Nord Stage 2
86 Nord's award-winning keyboard returns with a fresh update. We find out if it's still got the Stage presence.

FL Studio Mobile App
90 Image-Line step outside of the PC world for an iOS music maker.

RND Portico 5042
94 "True Tape" in a half-rack box? We check the legendary designer's bold claims.

Pioneer DJM-900 Nexus
98 The latest Pioneer mixer aims to takeover from their industry-standard. How does it shape-up?

TC-Helicon VoiceLive 2
102 TC-Helicon deliver a vocal-specific effects board. Vocal performers begin to get excited...

Roland Jupiter-80 | £2,939

The Jupiter-80 is Roland's first Jupiter-badged synth since the '80s, but is it really worthy of wearing the legendary name? **Dan 'JD73' Goldman** investigates



WHAT IS IT?

Roland's new 'supernatural' supersynth, featuring acoustic tones, virtual analogue synth and 76-note keyboard

CONTACT

Who: Roland UK
Tel: +44 (0)1792 702701
Web: roland.co.uk

HIGHLIGHTS

- 1 Sonically punchy and versatile synth section
- 2 Acoustic tones are superb
- 3 Extremely expressive/responsive to play

OK. Let's get the obvious bit out of the way first. If you came here looking for a 2011 remake of the Jupiter

8 – the classic '80s Roland synth – then you're about to leave disappointed. This isn't the synth you're looking for. Despite the retro paint job, despite the name (how dare they!) even a casual glimpse at the surface will reveal a disappointing lack of physical controllers and – if you look even closer – yes, that is a button marked 'Pipe Organ'... Alarm

bells ringing yet? No? OK. How about the synth engine? Analogue? At all? Just a bit? Nope. This is completely 100% digital. I think some of you might need to have a sit down.

Jupiter-80 is actually largely based on Roland's acclaimed 'Supernatural' sampling technology, which samples every key from the instrument (instead of just a few zones) for super-realistic, dynamically smooth sounds. It also features a virtual analogue modelled synth, which Roland call a 'Supernatural Synth', featuring several

virtual analogue waves, the 'Supersaw' wave which debuted on the JP-8000 (which is a staple sound for Trance producers) a noise source, plus (like the Nord Stage 2) it also has sampled PCM waves too, though you can't import your own currently.

Supernatural

The really clever bit of the Jupiter-80 is its 'Behaviour Modelling Technology' which captures the performance nuances of particular instruments, analyses your actual playing performance in real-time and then melds these characteristics with the Supernatural samples to add a greater breadth of expression to sounds. For example, if you play a sax sample, as you press harder on the keys you can add more growl, while it'll also subtly change in tone, much as would happen when blowing harder on a real sax. On a violin or cello sound, as you lean into the aftertouch keybed, you'll find that the dynamics smoothly change and a very natural vibrato fades in. It's certainly no marketing gimmick and the results are truly stunning. Without doubt, the strings, brass and woodwinds (solo and ensemble) are the most realistic



USB Slot

Under this flip-up cover is a USB connector for OS upgrades and audio file playback/recording, using a memory stick.

Part Volume Control

These sliders and switches allow you to fade parts in and out, or switch sounds on and off on the fly.

Category Buttons

Direct access to preset or user sounds from these Jupiter-8 style switches.

and expressive I've ever had the pleasure of playing in a keyboard.

Performance

Instead of making 'a 2011 analogue monster' Roland have taken the original JP-8s heritage as a boundary-pushing live synth and ran with it. Jupiter was where Roland put their latest technology and the same holds true with the 80. The case and controls (which are obviously designed to hark back to the Jupiter-8) feel very high quality (which is what you would expect on flagship pushing-£3,000 instrument) and the 76-note, synth-action semi-weighted keyboard, is great, though it's a shame there's no weighted option. The acoustic and electric pianos, plus many of the other acoustic sounds would benefit from being played via a weighted keyboard.

Controller-wise, the Jupiter-80 is pretty sparse for a performance instrument and this is its biggest downfall. There's the usual pitch/mod wheel, four volume part sliders/switches, the D-Beam (for hands-off expression) plus four assignable dials under the screen that are preset to control filter cutoff (for the upper and lower parts) and for controlling the

The Synth Section

The synth section is one of the punchiest and most versatile VAs available.

A 'Supernatural Synth' tone consists of three 'partials' (oscillators) with two LFOs per partial, ring mod and a powerful multi-mode filter with selectable 12 or 24dB slopes. It's a brilliant synth, though the filter does step a little with fast cutoff changes.

When you consider you can have two 'Supernatural Synth' based live sets (with four 'Supernatural Synth' tones in



each) plus another synth tone on the percussion and solo parts, if you combined them all, you could have a humongous 28-oscillator synth running (depending on the processor and

polyphony of course). The PCM samples in the synth cover most of the bread and butter sounds that you'd expect (more pianos, strings, guitars and effects) plus sampled synth tones.

'tone blender' function, that allows you to control multiple parameters via one dial (which is a godsend). It's a real shame that this basic interface lets the Jupiter-80 down, as it really is a super-powerful synth and thus it would have really benefited (like the Jupiter-8) from dedicated hardware controls for envelopes, filters and effects – why just a reverb and rotary

on/off? I would have been much happier with a tiny screen and a full compliment of analogue style sliders, dials and switches (like the JD-800 or JP-8000) and this would have made many people take it much more seriously as a Jupiter-8 successor.

The colour screen is large and the fonts are easy to read compared with the Korg Kronos but it would have

SPECS

Keyboard:

76 keys (with velocity and channel aftertouch)

Colour LCD touch screen

Polyphony: 256 voices (varies according to the sound generator load)

Parts: 4 parts (Upper, Lower, Solo, Percussion)

Registrations: 256

Live Sets: 2,560

Effects

For Live Set (Upper/Lower Part): Multi-Effects (MFX): 4 units, 76 types per each Upper/Lower (total: 8 units), Reverb: 1 unit, 5 types per each Upper/Lower (total: 2 units)

For Solo Part/Percussion Part: Compressor + Equaliser + Delay: 1 set per each Solo/Percussion part (total: 2 sets), Reverb: 1 unit, 5 types

Master Effects: 4-Band Equaliser, USB Memory/Song Player/Recorder Section

Tracks: 1 stereo track

Format: WAV, AIFF, MP3

Arpeggiator Preset: 128 styles User: 128 styles

Harmony Intelligence: 17 types

Continues over...

Touchscreen

The heart of the beast. Most of the editing is done from here. It's clear and easy to read.



76-notes with Aftertouch

The semi-weighted, synth-action keyboard allows plenty of room for sound splits and layering.

ALTERNATIVES



Nord Wave

£1,684

Versatile and portable virtual analogue synth, with user sample import and sample library access for loading acoustic and other synth sounds.

nordkeyboards.com



Korg Kronos 73

£2,999

Very powerful synth workstation, with modelled analogue synths, sampled waves, and acoustic modelling, plus sequencer and sampler.

Korg.co.uk



Roland Jupiter-8

£3k+ second hand

The Jupiter-80's predecessor, now fetching silly money second-hand and very sought-after for its hands-on control and versatile analogue engine.

been nice to have a monitor screen output, plus it's not yet apparent whether or not there's going to be a software editor to aid with patch making. Also, some of the on-screen boxes are a little awkward to select with your finger as they are just that bit narrow. What is good here (unlike the Kronos) is that if you select a parameter on screen you can simply drag the selected control to change its

value (whether it's a slider or dial). Plus if you select and hold a parameter and turn one of the four under-screen dials, that parameter becomes assigned to the dial.

Roland in the deep

Now let's examine the sound structure as it's initially pretty confusing. The main element in a Jupiter-80 sound is a 'tone'. This can be a 'Supernatural

Acoustic' tone or a 'Supernatural Synth' tone. Up to four tones (acoustic or synth) can be layered to form a 'live set' (which includes envelopes, filters, offsets etc.) and up to two live sets can be used together in what's called a 'registration'. This registration contains a snapshot of performance related settings such as splits, layers, note ranges, arpeggiator settings, pedal control assignments and more, plus it includes 'upper' 'lower' 'percussion' and 'solo' parts which all have dedicated front panel volume sliders/switches and to which you assign the live sets. This gives you a total of 10 separate tones to split and layer per registration. Thankfully, the Jupiter-80 also has 256-note polyphony to accommodate this huge sound engine and sonically, a 10-tone stack can sound massive. Also note that you can assign any type of tone to the percussion or solo parts too, not just monophonic parts. There are also some very nice percussion, FX and drum kits available, accessed from the drum/SFX and manual percussion buttons on the front panel.

Live and kicking

For live performance, it's easy to change registrations/banks/sets using the Jupiter-4-style buttons under the keyboard and there's a 'lock switch' option to stop you inadvertently changing sounds if you brush them with your body or fingers, which is actually quite easy to do. Finally, the multi-coloured Jupiter-8-style switches provide quick access to several categories of sounds (to which you can also assign your favourites) giving you instant access to all the sounds you could want for live performance. However, the lack of hands-on editing controls is again a persistent disappointment.

The sound department is where the Jupiter-80 really pulls its punches. If when you think of the

The Good and Great

Things we really love about Roland's brand new super synth



> Be under no illusion. This thing can create huge walls of layered sound. Layering a super expressive 'Supernatural' sax with an orchestra, bells, Rhodes, Moog bass and FX can be very inspiring and it's pretty easy to set up using the colour touchscreen



> Having the dedicated front panel sliders with meters and direct on/off switches for upper, lower, solo and percussion parts, allows you to quickly switch sounds in and out whilst performing and also smoothly fade sounds in and out too This adds a lot to the expressiveness of a performance, whether live or in the studio



> Make no mistake, this is one serious synth with a phat and heavy sound. It's a sound designer's/film scorer's dream, yet it can do simple, subtle and beautiful sounds too, much in the spirit of the original Jupiter-8



original Jupiter-8, you call to mind the definitive synth string sound of '80s Pop, a huge array of modulation and creative sound design control with analogue at its heart, you won't enjoy the sound of the Jupiter-80.

However, if, when you recall the 8, you remember big, bold, brash, powerful, flexible and impressive sounds, then for you, the Jupiter-80 will be a logical and modern step forward from that. The 'Supernatural Acoustic' tones are superb (as I mentioned earlier) and if you're careful how you layer and play them, they could almost pass for the real thing. They respond smoothly and authentically and this really is as close as you can get to playing the real instruments but on a keyboard. The acoustic pianos are excellent (there's a sympathetic resonance effect too) the electric pianos sound

Arpeggiator, Song Player and Intelligent Harmony

The Jupiter-80 has a capable arpeggiator with 128 preset and 128 user styles and it's switched on/off from the front panel. Deeper settings (including accent,

shuffle, velocity, variation and Motif) are accessed by pressing the shift+arpeggiator on/off buttons but the arpeggiator can only be applied to upper and

lower parts. Effects-wise, the Jupiter-80 has 76 types (chorus, reverb, slicers, delays and more) that sound great, plus a master EQ and separate effects chains for the solo and percussion parts.

Four effects at a time can be applied to a live set and each tone has an independent effect send level. There's also a handy USB song recorder/player and an intelligent harmony function that adds harmony to 'upper' monophonic sounds when chords are played in the 'lower' keyboard area.



SPECS

Controllers

D-Beam Controller, Pitch Bend/Modulation Lever, Assignable buttons x2, Assignable knobs x4, PART LEVEL sliders (PERC, LOWER, UPPER, SOLO)

Connectors

Phones jack (stereo 1/4-inch jack), Main out jacks (L, R) (XLR), Main out jacks (L/MONO, R) (1/4-inch TRS jack), Sub out jacks (L, R) (1/4-inch jack), Audio in jack (Stereo mini jack), Digital audio jack (Coaxial), Foot pedal jacks (CTRL 1, CTRL 2, HOLD), MIDI (In, Out, Thru), USB Computer port (Audio/MIDI), USB Memory port

Dimensions

1231 x 439 x 140mm

Weight

17.7kg

If you remember the Jupiter 8 as big, brash and powerful then the Jupiter-80 is a logical step forward

non-analogue shock) there is actually very little to fault. Even if you treat its acoustic tones – which are the most expressive

warm and deep (especially when paired with the also excellent cabinet models, phasers, delays and wahs) while the acoustic guitars, basses and electric guitars offer up a whole new level of expressiveness that I haven't experienced on any other instrument. Play legato on the acoustic guitar or electric bass and you get realistic slides, play harder and you get pops and slaps and string noise, plus (for example) you can assign a mute bass to one of the 'S1' or 'S2' switches to quickly move to a muted style.

To my ears, the on-board tonewheel organ sounds much like the Roland VK8 and in edit mode you get on-screen drawbars and percussion controls, though I wish these came up

on the screen by default when selecting the tonewheel organ preset. There's also a very good 'VK Rotary' effect too that can be switched on and off directly from the front panel, though it's too easy to knock when switching rotary speed. Also, in this early software version the 'scanner' vibrato and chorus (which is a major part of a tonewheel organ's sound) is conspicuously missing, so let's hope Roland can add this in a software update as soon as possible.

Jupiter great?

The Jupiter-80 is therefore a conundrum. Once you get to grips with its confusing sound structure and sparse interface (and get over the

and true-to-life I've played – as a bonus, the Jupiter-80 is still a sonically versatile, impressive and supremely powerful synth. **FM**

FutureMusic VERDICT

BUILD

★★★★★★★★

VALUE

★★★★★★★★□□

EASE OF USE

★★★★★★★★□□□□

VERSATILITY

★★★★★★★★□□

RESULTS

★★★★★★★★

We'd love more sliders but this is expressive sonic power. It sounds amazing and inspires creativity.

Connections

Digital output, MIDI, USB, audio in, main and sub outs plus pedal inputs.



Nord Stage 2 HA88 | £3,399



Nord's Stage 2 is the latest version of their flagship series. *Dan 'JD73' Goldman* checks what's new...



ON THE DVD

WHAT IS IT?

Latest flagship Nord Stage model, with improved organ and synth, more memory and user sample loading capability

CONTACT

Who: Sound Technology
Tel: +44 (0)1462 480000
Web: nordkeyboards.com

HIGHLIGHTS

- 1 Very authentic organ, piano and electric piano sounds
- 2 Much improved synth section with arpeggiator and dedicated LFO
- 3 User sample upload and Nord Sound Library access

PRICING

HA76
£3,299,
SW73
£2,999

Nord's original Stage launched in 2005 and became a hit with live performers and studio bods with its great sounding organ, piano, electric piano and synth sections, coupled with versatile effects and controller functions, in a portable and easy to use package. I loved the review model so much, I bought one!

Thankfully, the Stage 2 doesn't stray from the original Stage's concept. The form factor and weight of all three models remains unchanged, though there has been some renaming – the Stage 88 is now the Stage 2 HA88 (HA stands for hammer action) the 76 is the HA76 and the Compact is the SW73 (semi-weighted). Perhaps this has been done so that the weighted 73 keybed (recently introduced on the Electro 3 HP) can at some point be offered as an option. The hammer action versions have also been tweaked and now feel much like the Nord Piano, which is a good thing. The downward key travel is fairly shallow and there is no sluggishness. The two weighted actions work well even for organ and clav

playing, though the SW73 is the best option if clavs, organs and synths are more your bag, though it's still very playable for piano/EP.

The next Stage

The Stage 2's interface is intuitive and one of the best around, with little

reliance on the screen except for tweaking extra system parameters, but for most sound tweaking you needn't ever really look at it.

Having said that, I still wish the original stored patch parameter values would pop up when changing parameters. Regardless, so many keyboards I review are held back by unintuitive interfaces that get in the way of your creative flow. This is not the case here. Essentially, there was little to criticise with the original Stage/EX models though the biggest downside was the lack of user sample upload ability and Nord Sample Library access (as on the Electro 3).

This has now been addressed and the Stage 2 can load user samples (beats, chords or any WAV files you like using the Nord Sample Editor) plus instruments from Nord's ever-growing sample library, extending its sonic palette infinitely. Simply load the Nord

The Stage 2 Piano Section

The Stage 2 has much more memory than the old Stage/EX so it's possible to load in larger piano/EP samples and more of them, plus many of the samples now include a long release option and string resonance features, which add much to the authenticity of the piano samples, especially when using the new Nord triple pedal (optional).

Press the soft pedal and the samples play more quietly, stamp on the sustain and cabinet



resonance can be heard, plus harmonics come through too (sympathetic

resonance) if you hold down the keys without striking them and then play a note, much as on a real piano. Coupled with the large range of new acoustic piano samples available from the Nord website, this is one of the best sounding piano engines available.

Finally, the new 'slot detune' feature allows you to have two pianos/EPs/clavs/harpsi (one on Slot A and one on B) and you can subtly detune them to add chorusing or phasing.





Sample Editor (Mac or PC), select any WAV files you wish, add them to the editor and create an instrument. Then load the instrument into the Stage 2 via USB or grab ready-made samples from the online Nord Sample Library.

These samples can then be loaded into the synth and layered with the organ, piano or other synth sounds with

these available free online to cater for most tastes and styles and plenty of memory to have several onboard at once. While the Kronos I reviewed recently undoubtedly sounds great for pianos, EPs and as a synth, there is still a level of realism and musicality with Nord's samples that is unique. I'm also digging the new synth section – it's

can now be synced to the new master MIDI clock function, as can all the other effects. The MIDI spec has been pimped too (particularly with the latest 1.30 update) so the Stage 2 will communicate well with most MIDI equipment and computers.

Again, it's clear that Nord listen to their customers and continually seek to

improve features, sounds and software. By now you've probably guessed that I rate the Stage 2 pretty highly. As a keyboardist it just feels good to play,

it's portable and versatile and strikes the right balance of features and great sounds. As a one-stop piano, electric piano, organ, synth and sample playback instrument, the Nord Stage 2 is hard to beat. **FM**

Nord listen to their customers and continually seek to improve features, sounds and software

little menu diving. This feature alone is reason enough to upgrade from the old Stage and ensures that the Stage 2 will still be sonically relevant years down the line. I'm also confident that no other keyboard available has this much sonic power but is also this easy to use.

Master key

There are many other key improvements in the Stage 2. The organ has been upgraded and now uses the latest version of Nord's tonewheel modelling technology. It sounds much more B3-like (as the C2), with better vibrato, chorus and percussion, while the rotary and drive emulation is also much improved. The EP samples, Clavinet, Harpsichords, Wurly and CP80 are still superb and some of the best I've ever played and there are many variations on

easier to use than the old one and it's now based on the Nord Wave. It has the typical rich yet cutting Nord synth sound and I'm pleased it now has a dedicated LFO, envelope controls and a simple but useful arpeggiator that all syncs to MIDI clock.

There's also a new multi-mode filter, plus wavetables and a powerful FM synth. The only thing missing here is the old Stage's dedicated synth EQ but as the synth sounds so much better than the old one, it's not a big deal.

Sound improvement

The effects section remains largely unchanged, though now there are Jazz chorus and Fender twin amp emulations (that sound much better than the old amp simulations) plus there's a new Univibe effect. Also, the delay effect

SPECS

Pitch stick and Mod wheel
400 programs over 4 Banks
/300 synth programs
Program sort mode
5 Live Buffers
2 Individual Slot Setups
3 Morph sources
(Modulation Wheel, Control Pedal, Aftertouch)
Global Mono output
Programmable Transpose
Master Clock functionality with manual, external and tap-tempo rate control
Internal and MIDI clock source
MIDI over USB

Connections

4 assignable jack outputs
Stereo headphone output
1 stereo mini jack monitor input
Sustain Pedal/Triple pedal input
Rotor pedal input
Organ swell pedal input
Control pedal input

Dimensions:

1297 x 121 x 334mm

Weight:

18.5kg

FutureMusic VERDICT

BUILD

★★★★★★

VALUE

★★★★★★

EASE OF USE

★★★★★★

VERSATILITY

★★★★★★

RESULTS

★★★★★★

A huge upgrade, cementing its status as the most authentic stage piano/organ/synth available.

ALTERNATIVES



Roland Jupiter-80

£2,939

Roland's new flagship synth including a plethora of 'supernatural' acoustic and synth sounds coupled with powerful effects and large colour touch screen.

roland.co.uk



Yamaha MOX8

£1,576

Surprisingly powerful and super-portable 88-note synth with sequencer and choice effects.

yamahasynth.com



Korg Kronos 88

£3,199

Korg's new flagship workstation. Nine sound engines on-board plus large colour touchscreen and sequencer/sampler.

korg.co.uk



Yamaha Tenori-on TNR-i iOS App | £12

The Tenori-on hardware broke the rules... And caned the wallet. **Daniel Griffiths** opts for the iOS option



WHAT IS IT?

An iOS app emulating the famously brilliant but rare and expensive Yamaha Tenori-on hardware

CONTACT

Who: Yamaha UK
Tel: +44 (0)844 8111116
Web: yamahasynth.com

HIGHLIGHTS

- 1 At last. Discover the Tenori way of making music for just £12
- 2 Exactly the same sound set, button and menu structure as the original
- 3 Works on iPhone too! And is futureproof with updates on the way

SPECS

iPad, iPhone or iPod Touch. iOS 4.0 or later.

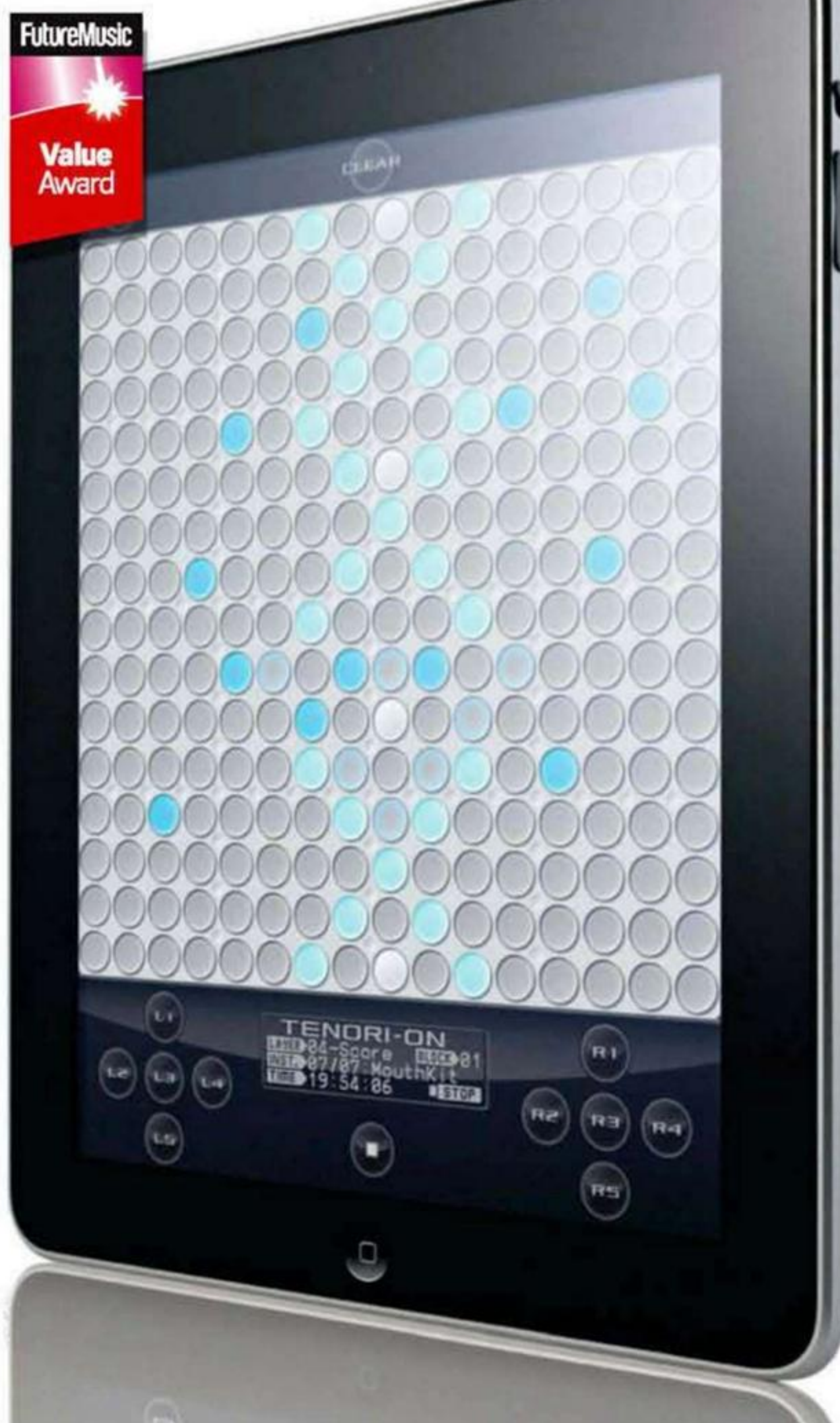
MIDI Control: 30-pin MIDI adaptor required for iPhone or iPod Touch, Core MIDI device and Camera Kit required for iPad

We have a love/hate relationship with the Yamaha Tenori-on, the magnesium-framed,

hand-held, light and button encrusted synth 'n' sequencer from 2007.

We love the fact that technology can still create an entirely new musical instrument. But we hate that it's made out of magnesium and costs a fortune. We love the fact that Yamaha made a cheaper TNR-O version. But we hate

that it wasn't actually any cheaper, didn't have lights on the back and was exclusively mains powered. We love that Yamaha still go balls out to be so 'out there'. But we can't forgive them for not putting a cheaper Tenori into more hands. In fact, it's taken Apple's iPad for the whole daft idea to finally make sense. Now you can own a Tenori for just £12. And relax...



Tenori-on is basically a grid of 16 by 16 buttons. Left to right is time and up and down is pitch. You select a button by pressing it, it lights up and when the sequencer loops left to right it triggers its note. Simple. There are 256 tones to choose from (one per button) and 16 'layers' each with its own sequence and tone. And there are 16 'blocks' with which to build tunes.

Forget everything

With no sense of 'keyboard' or musical scale it's amazing how quickly your established, well thought out method of writing becomes 'let's make a pretty pattern' and 'don't put two notes next to each other because that sounds bad.' Within minutes, you're making music that would literally never have happened on any other device.

Strengthening this feeling is the unique tone set on board. The default gate time is short 16th notes for simplicity, so at least 60% of the tones on offer are simple synthesizer 'chiffs' 'blips' and 'beeps'. Tracks are therefore always very... Tenori.

Coming soon

The hardware version did allow you to import (short) audio samples via SD card for use in compositions, most usefully being able to put your own 'proper' drum sounds in the unit, rather than the quirky, reverb-drenched thuds and wood blocks that dominate here. Right now this is missing, but is surely just a software update away. The good news is, app updates are easier to implement than hardware ones so we expect Yamaha to respond thick and fast to any user requests.

Either way these are petty gripes on one of our favourite music-making apps. We'll never get over the fact that Yamaha never did make the £200 Tenori we begged for, but giving us an easier to use, future expandable version for £12 kind of makes up for it. **FM**

FutureMusic VERDICT

STABILITY

VALUE

EASE OF USE

VERSATILITY

RESULTS

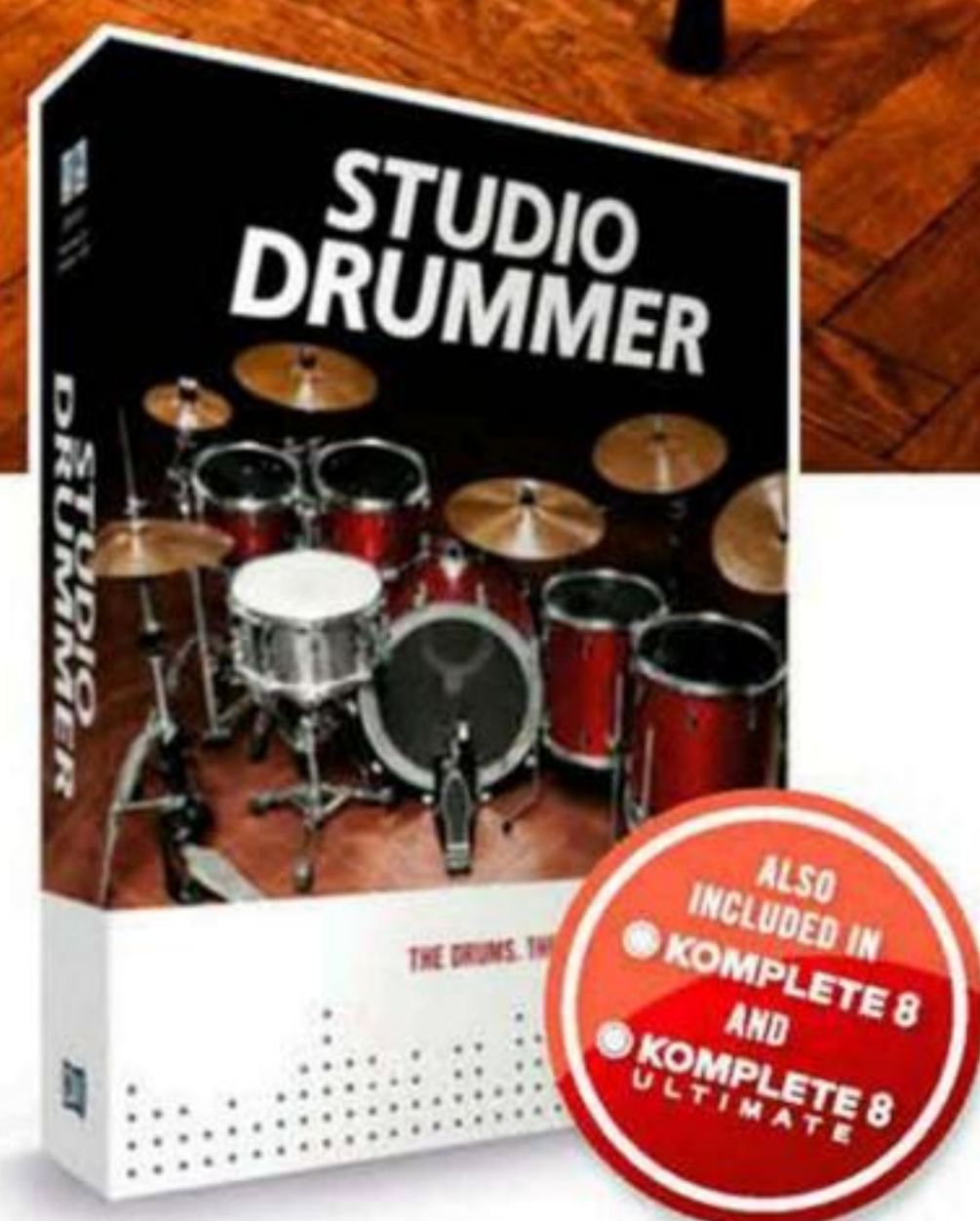
Your chance to finally get with the Tenori program. Cheap, fun and mind-wideningly inspiring.

TAKE THE THRONE.



STUDIO DRUMMER is the perfect realization of a drummer in software. The only product of its kind built on the amazing new features of KONTAKT 5, the world's most powerful sampling engine, STUDIO DRUMMER gives you three world-class drum kits expertly sampled with thousands of inspiring patterns ready for your productions. And with top-class effects from Native Instruments' new Solid Mix Series compressors and Transient Master built-in, you have total control over your drum sound. It's the drums, the studio and the drummer in one easy-to-use package. So if you're ready to give your music the royal treatment, take the throne, and put STUDIO DRUMMER to work for you.

www.native-instruments.com/studiodrummer



NI NATIVE INSTRUMENTS

THE FUTURE OF SOUND

**WHAT IS IT?**

Mobile sequencer based on FL Studio

CONTACT

Who: Image-Line
Who: +32 (0)9 281 15 33
Web: flstudiomobile.com

HIGHLIGHTS

- 1 Based on Xewton Music Studio
- 2 133 sample-based instruments
- 3 FL Studio-inspired sequencing options

PRICING

FL Studio Mobile HD
£12



Image-Line FL Studio Mobile | £9

For the first time ever, FL Studio steps outside the Windows platform. **Greg Scarth** is feeling fruity

Since the mobile music world exploded into life with the arrival of the iPhone, FL Studio has been a prime candidate for porting to Apple's handheld devices. From its earliest incarnations as FruityLoops, the program has been renowned for its ease of use and intuitive sequencing approach. With so many iOS apps aiming to recreate a similar blend of slick, professional sound and fun workflow, it seems logical that FL should work well on the iPhone and iPad. It's worth pointing out that the mobile app isn't a direct port of FL Studio. In fact, it's not even a newly programmed app, but a re-skinned version of an existing app.

Image-Line aren't trying to hide the fact that FL Studio Mobile is based on Xewton's Music Studio. The companies have worked together to develop a product based on the Xewton code but with the appearance of FL Studio.

Layout

Users of both FL Studio and Xewton Music Studio will instantly be familiar

with the layout of FL Studio Mobile. When compared to Music Studio, the most notable differences other than the FL-style visual appearance are to be found in the instrument selection.

Whereas the Xewton app features a large number of acoustic instrument samples, the instrument set has been updated to reflect a more electronic approach. However, don't expect to find the same instruments you'd use in FL Studio. The collection of 133 presets includes familiar names – Sytrus Warm Pad, Morphine Lead and so on – but the instruments are much more basic than the plug-ins found in FL Studio.

The app's sounds are perfectly usable but they're all essentially sample-based presets, with editing options restricted to attack and release times. No direct control of filters or oscillators, no modulation and very little in the way of hands-on sound sculpting.

In addition to the synth sounds, a further range of drum and sample-based instruments round off the selection. Taking its lead from Slicex, the Loops section offers audio loops sliced into sections for playback as individual

sounds. Interestingly, the app doesn't offer in-app purchases of extra instruments, as found in Xewton Music Studio, restricting you to the presets and making the absence of editable instruments a major weakness. FL Studio's synth plug-ins are some of its strongest features, so it's a real shame that the mobile version doesn't offer at least one or two synths based on classics like Sytrus and WASP.

Sequencing

With no audio recording capabilities, FL Studio Mobile's composition workflow revolves around its sequencing engine. The sequencing features are based on Xewton's setup but with the addition of a step sequencer. Along with the piano roll, on-screen keyboard and pads it makes for a very versatile setup but for ultimate control the app also supports MIDI over USB via a Camera



Pads and keys take care of instrument control

Connection Kit. When it comes to the mix, levels, pans, filter automation and effects sends are also controlled via the main Tracks page. The app offers six effects: limiter, reverb, delay, three-band EQ, amp (a guitar-style overdrive effect), and an accelerometer-controllable multi-mode filter.

The reverb effect includes reasonably good hall, canyon and room modes, with adjustable size, brightness, stereo width and wet/dry mix. Reverbs can be rendered in low, medium or high quality modes, allowing you to minimise processor usage while working on tracks, then switch to high quality to bounce the mix. The delay offers adjustable feedback and mix, but the effect timing is always perfectly tempo-synced. Xewton's accelerometer-controlled pitch bend effect is also found in the app's Setup menu.

Pros and cons

FL Studio Mobile only fails in the sense that it doesn't live up to our

The Android's Dungeon

The arrival of FL Studio for iOS is a watershed moment for the software: until now, developers Image-Line have steadfastly refused to port FL Studio to any operating system other than Windows (despite constant requests from Mac users). Boot Camp excepted, FL Studio Mobile marks the software's debut on Apple hardware. Almost

inevitably, speculation has started to build about the chances of Image-Line porting the software to other platforms.

However, chances of a Mac version of FL Studio still seem slim at best, with Image-Line currently focusing on developing for alternative mobile platforms (the company have announced that development work has begun for an Android

version of FL Studio Mobile, but that users shouldn't expect a release version in the near future).

For the time being, Mac users will have to make do with the fact that a number of FL Studio's built-in synths are available as Mac-based VST and AudioUnit plug-ins. The full-blown DAW itself looks set to remain Windows-only for the foreseeable future.

get sample-based instruments with no custom options. Perhaps most frustratingly, Image-Line have chosen to release two distinct versions of FL Studio Mobile rather than a universal binary capable of running on the iPhone and the iPad. If you want to run the app on your iPhone and your iPad you'll

weak in comparison to its Windows equivalent. The absence of editable instruments and custom samples significantly detracts from the appeal of the whole FL concept. It's tempting to make comparisons with Apple's GarageBand for iPad, which shows how an application can be ported over to the

less powerful mobile platform and offer a different feature set without losing much of its essential character. FL Studio Mobile

does a few things very nicely, but it simply doesn't improve on Xewton Music Studio enough to make it stand out. FL Studio users will be disappointed that the mobile app isn't closer to the Windows version, while users with no loyalty to FL will no doubt be tempted by other, more versatile options. If and when Image-Line and Xewton introduce editable instruments, sample importing and audio recording, FL Studio Mobile will be a great option. For now, it's a solid enough app but it's seriously underwhelming considering how good it could have been. **FM**

FL Studio Mobile does a few things very nicely, but it simply doesn't improve on Xewton Music Studio

expectations. There's nothing dramatically wrong with the app as such, it's just that it doesn't really offer anything special to help it compete with the best that iOS has to offer. Where we hoped for proper integration with the full Windows version, we get the ability to export files. Where we dreamed of mobile versions of classic FL synths we

have to buy both versions or make do with the low-res graphics of the iPhone version stretched up to fit the big screen. Graphic resolution aside, the two versions appear identical.

It's unreasonable to expect developers to create identical versions of their software for mobile platforms, but FL Studio Mobile is disappointingly



The effects options include delay, with locked-down timing

SPECS

133 instruments, drum kits and sliced beats. Piano roll, step sequencer, on-screen keyboard and pad sequencing. Reverb, delay, EQ, amp, filter and limiter effects. MIDI import and export. FLM export to FL Studio

System Requirements: FL Studio Mobile compatible with iPhone, iPod Touch and iPad. Requires iOS 3.1+
FL Studio Mobile HD compatible with iPad only. Requires iOS 4.2 or later

ALTERNATIVES



Xewton Music Studio
£9

The app that provides its code for FL Studio is still worth a look. Includes a different instrument set but it'll run on both your iPad and your iPhone without having to buy it twice.

xewton.com/musicstudio



Apple GarageBand
£3

Apple's music app shows how a full DAW can be scaled down for mobile use, with editable instruments and audio recording. Ludicrously cheap but iPad-only.

apple.com



Blip Interactive NanoStudio
£9

NanoStudio shows how it's done with synths, samples, real-time effects and great sequencing. Sets the standard for this kind of all-in-one sequencer app.

blipinteractive.co.uk

FutureMusic VERDICT	
STABILITY	☐
VALUE	☐
EASE OF USE	☐
VERSATILITY	☐
RESULTS	☐
No editable synths or custom sample-based instruments makes FL Studio Mobile a poor cousin.	

ADAM A7X Active Monitors | £899

The A7s are *FM* favourites. **Greg Scarth** finds out if Adam have managed to make them even better

WHAT IS IT?

Active studio monitors with 7-inch mid-woofer and X-ART ribbon tweeter

CONTACT

Who: Adam Audio UK
Tel: +44 (0)1992 525 670
Web: adam-audio.com

HIGHLIGHTS

- 1 New X-ART ribbon tweeter
- 2 Updated 7-inch mid-woofer
- 3 New amps: 50W class A/B for the highs and 100W PWM for the lows

SPECS

Two-way active monitor
X-ART folded ribbon tweeter
7-inch carbon/Rohacell/glass fibre mid-woofer
100W PWM amp (mid-woofer) and 50W class A/B amp (tweeter)

Frequency response: 42Hz – 50kHz ±3dB

THD 90dB/1m >100Hz ≤0.5%

Input: XLR/RCA

Controls: tweeter gain ±4dB, high-shelf >5kHz ±6dB, low-shelf <300Hz ±6dB

Dimensions:

337 x 201 x 280mm

Weight:

9.2kg



It's no secret that we're big fans of the original Adam A7s, released back in 2006. With a 6.5-inch mid-woofer and excellent ribbon

tweeter, the A7s lend themselves particularly well to Electronic music.

Not content to rest on their laurels, Adam have been hard at work updating their product line over the last year or so. We didn't think there was much wrong with the original model, but the A7 has now been replaced with the A7X, so we were very keen to see how it sounded.

Updates

On the surface, the A7Xs appear broadly similar to the originals but closer inspection reveals that almost every element has been redesigned. The main update focuses on the high end: Adam's ART (Accelerating Ribbon Technology) folded ribbon tweeter has been upgraded to the X-ART, which offers a flat frequency response all the

way up to 50kHz (the X stands for eXtended). The concept of ultra-high frequency response isn't anything new – as far back as the 1960s speaker manufacturers were using 'super tweeters' to carry out a similar job – but it's an unusual approach in the pro audio world. The 7-inch mid-woofer has also been redesigned with a larger voice coil. Elsewhere, the changes are smaller but still significant.

At the front, the baffle has been redesigned with two ports rather than the original one. Round the back things are broadly similar to the original model, with XLR and RCA inputs, plus controls for tweeter level and high and low shelf filters. Inside, the A7's 50W PWM amps have been replaced by a 50W class A/B design for the highs and 100W PWM for the lows.

Sound

Critically listening to a mixture of mastered tracks and unmixed sources,

the first thing that stands out is the exceptional detail. Given that human hearing only extends to around 20kHz at best, you may wonder what the point of the A7X's ultra-high frequency response is, but the accuracy of the sound justifies Adam's approach. Transients are reproduced with incredible clarity, creating an extremely detailed, precise sound.

Imaging is also seriously impressive, making it easy to place sounds around the stereo field. The main criticism of the A7s was that the tweeters were a little bright, to the point of being fatiguing to some listeners but simply a bit too prominent for others. The highs are noticeably less bright on the A7Xs, albeit still exceptionally detailed and revealing. The crossover frequency has been raised from 2.2kHz to 2.5kHz and the transition from mid-woofer to tweeter is practically unnoticeable.

We didn't like the mid-range of the bigger A8X model when we reviewed them back in *FM238*, but the A7X doesn't suffer from the same problem – the mids are accurate and revealing with none of the hi-fi smoothness of their bigger brother. At the very bottom end, I'd be quite happy to work on the A7Xs without a subwoofer. Testing with some synth bass sounds, the frequency response extended comfortably down to around 50Hz before rolling off.

Conclusion

The mid-range monitor market is extremely competitive, but to my ears the Adams are easily as good as any of their rivals and I'd be tempted to choose them over anything else in a similar price range. Whether you go for the A7X or something like the Dynaudio BM5As or Genelec 8030As will probably come down to personal taste, but the A7X is a top quality monitor which improves on what was already a great design. **FM**



FutureMusic VERDICT

BUILD



VALUE



EASE OF USE

VERSATILITY

RESULTS

One of the best monitors on the market. The A7X beats the original in almost every way.

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.

These ultra-versatile mixers feature premium XENYX mic preamps, our highly musical "British" 3-band channel EQ, plus studio-grade "one-knob" compressors and editable FX*. We also include a recording/editing software download that will turn your PC or Mac computer into a high-performance home recording studio, thanks to the built-in USB/audio interface.

While we can't promise you'll be the next big musical "legend," our XENYX USB Series mixers will give you the tools to make a little music history of your own—the rest is up to you!

*Not available on 1204USB. © 2011 MUSIC Group IP 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



Neve Designs Portico 5042 Tape Emulator | £1,516

The Portico series gets a new design to match the aesthetic of the 5088 console. **Robbie Stamp** goes saturation-crazy with the pint-size tape emulator



WHAT IS IT?

Two-channel tape emulator and line amp

CONTACT

Who: Sonic Distribution
Tel: +44 (0)845 500 2500
Web: rupertneve.com

HIGHLIGHTS

- 1 Range and depth of tape saturation
- 2 Classic Neve signal path headroom
- 3 Simplicity and quality of design

Rupert Neve Designs have been building up the Portico range of 1U half-rack width units for some years now,

but with the (relatively) recent release of the 5088 console the whole range has been given a re-model to fit in with the grey/blue paint scheme and satin powder coated knobs. Though the 5042 tape emulator is not a new product, it's worth focussing on not only as the most idiosyncratic model of the Portico range, but also in response to the many tape emulations that are available in real and virtual formats.

So true

The Portico 5042 is a two-channel line driver and 'True Tape' emulation device. The line driver role may be secondary but it can prove useful in the studio environment. The high signal path headroom and output level (+25dBu) in conjunction with the +/-12dB trim controls mean that the 5042 can attenuate very hot levels before passing to less robust devices or to really push a

proceeding input stage, e.g. overdriving a valve compressor. Though the unit is ostensibly transparent the input and output transformers do impart a subtle imprint on the signal that is very pleasant on any wide ranging source (mixes, super-saw synths, etc.).

The effect is a slight softening of the upper mid frequencies which quickly build up in a full mix and means I

would definitely leave this in an analogue mix chain even if the tape emulation wasn't in use.

Each channel (Tape A and Tape B) has a switch to engage a parallel output to two busses (Buss A & Buss B respectively) which appear as two pairs of TRS jacks at the rear. These are intended for interconnecting with other Portico units at a system-wide -2.5dBu level (i.e. 6.5dB down from line level), but without a collection of Porticos these extra outputs are still handy for running parallel signal chains.

IPS factor

The main event with the 5042 is its 'True Tape' emulation that is engaged via blue backlit 'Engage Tape' buttons on each channel. The emulation focuses on the harmonic distortion and compression effects that occur as the tape's oxide layer is magnetically saturated. The magnetic record and replay tape heads are essentially transformers and these too distort the signal, augmenting the non-linearity that tape recording is venerated (and sometimes reviled) for.

To simulate these effects the 5042 couples two magnetic 'heads' (record and replay facing one another) between

The Portico Seven Dwarves

The Rupert Neve Designs Portico range started life looking like Dinky toys with their small plastic knobs and rusty red and black paint jobs.

Their sheer sound quality did make them a bit of a genie-in-the-lamp, but now that the whole line has been matched to the awesome 5088 mix console the looks seems more in line with the

sound. The seven half-rack 1U Porticos, which offer combinations of mic pre, EQ, compression/limiting and stereo mix functions, have now been joined by API 500 series and full rack-width format units.

These original seven dwarves of the Portico range are also worthy of note by virtue of two small but significant design

features. Firstly, Buss A and Buss B paths create flexible signal chains without disturbing their main I/O. Secondly they can derive their +/-17.5VDC power from any 9-18VDC power source that can deliver around 8W per unit, be they wall warts or car batteries. Like Dinky toys they are just so damned, collectible!





an emphasis and a de-emphasis amplifier, which are essentially equalising circuits that compensate for the frequency bias of the tape. The effect can be dialled in with the Saturation knobs, which in effect drive the input to the simulation circuit and reduces the output proportionately to keep the level flat as the harmonic distortion/compression effect rises. The emphasis/de-emphasis equalisation

up the lower frequencies come forward as they are harmonically distorted (i.e. low order harmonics are generated from them) leading to a thickening effect, which at extremes before clipping can become dominantly mushy.

Experimenting with the 5042 really brings home how much the source material dictates the effect of tape saturation and how subtle manipulations can produce a wide

Second) gives more scope to the tonal and dynamic effects of the 5042 with 15IPS providing a higher cutoff point for the HF shelving effect that can work wonders on hi-hat and cymbal sheen in a drum mix. Though the controls are simple the range and depth of the effect is not and requires some experimentation to become fluent in its idiosyncrasies. Once you're up and running though, the 5042 can become

a regular bearer of sonic gifts, especially when it comes to dealing with the studio digital blues.

The Portico 5042 offers an excellent emu-

lation of the most obvious components of the tape sound, while leaving out other aspects such as hiss and self-erasure (the loss of high frequency components due to over-saturation). Nevertheless this is a great solution to the tape-envy suffered by digital audio users. Its effects can be addictive and I can see it getting regular use in my studio (if it were to magically appear) and would easily pay its way, which is no bad thing considering it'll set you back just over a grand.

There are some great plug-ins that provide almost limitless virtual tape channels, but maybe just two high quality analogue channels will encourage a more essential and sparing use of this important effect. **FM**

FutureMusic VERDICT

BUILD	☐
VALUE	☐
EASE OF USE	☐
VERSATILITY	☐
RESULTS	☐

A subtle and addictive weapon that artfully combines simplicity with superb audio quality.

Experimenting with the 5042 really brings home how much the source material dictates tape saturation

characteristic is altered by the 7.5/15IPS selectors that emulate the frequency domain qualities of two common tape speeds.

Tops n tails

Engaging the tape emulation circuit at the minimum saturation level has an immediate effect on the audio that manifests as a shelving of the highest and lowest frequencies, a kind of topping and tailing. Strapping this across a mix can be quite devastating to a big bass end, though I do like the smoothing out of the top end, but as with real tape this is where the user needs to understand the process and work into it. As the saturation is wound

range of responses from the process. Mostly this consists of driving bass and treble into the unit to accentuate the saturation circuit's distortion/compression effects.

Goodbye digi blues

Though I have mentioned strapping the 5042 across a mix this is not its ideal role, though mixing into it can prove very fruitful. Shaping individual sources is where the unit shines, and this is mostly a subtle process. Drum channels and submixes can be glued together effectively while chopping back some of the LF baggage in favour of a tighter, punchier sound. Electric and acoustic guitars can be thickened up while rolling off their less desirable upper frequencies without taking the life out of them, though you can go too far and create a syrupy fuzz that just eats mix space. Digital sources, and particularly soft synths, can quickly lose their harshness and become far more focussed without losing their dynamism, a problem that often happens when compression is used to fulfil this role.

Bass-heavy instruments can be tightened up and given a more discernible mix position on small speaker systems by virtue of the harmonic distortions. Switching between the IPS settings (Inches Per

SPECS

Inputs: 2x XLR
Outputs: 2x XLR, 4x 1/4" TRS jack (Buss A & B outputs)
Input Gain: +/-12dB
Max. Output Level: +25dBu (Saturation Min), +6dBu (Saturation Max)
THD+N (Line Amp only): @ 1kHz, +20dBu output <0.0015%, @ 20Hz, +20dBu output 0.25%
THD+N (Tape engaged): Approx 1-2% 2nd & 3rd harmonic below 1kHz
Freq. Response (Line Amp): -0.5dB @ 10Hz and -3dB @ 200kHz (measured at +10dBu at main output with gain at unity)
Freq. Response (Tape engaged): -3dB @ 16kHz (7.5 IPS), -3dB @ 20kHz (15 IPS)
Crosstalk (Line Amp): <-90dB @ 16kHz (channel to channel)
Crosstalk (Tape engaged): <-80dB @ 16kHz (channel to channel)
Metering: Two 8 segment LED bar meters, switchable between input and tape levels
Power Consumption: 0.68A (@ 12VDC)
Dimensions: 238 x 243 x 44mm

ALTERNATIVES

Kush Audio UBK Fatso

£2,278

Tape-style saturation is one of the talents of this excellent alternative take on the Empirical Labs Fatso.

kushaudio.com



Universal Audio Studer A800

\$349

If you've got UAD-2 then this will allow a range of tape emulation effects right across your mix channels.

uaudio.com

AnaMod ATS-1

£3,360

The most expensive way to get the tape sound without actually buying a tape machine, but by all accounts this is the Daddy!

anamodaudio.com

Apogee Duet 2 | £445

Offering improved audio quality, design and I/O options, Duet 2 looks a worthy update to Apogee's original. **Jono Buchanan** provides harmonies...



WHAT IS IT?

An updated version of Apogee's Duet audio interface for Mac

CONTACT

Who: Sonic Distribution
Tel: +44 (0)845 500 2 500
Web: apogeedigital.com

HIGHLIGHTS

- 1 New hybrid inputs for microphones and line sources
- 2 Improved mic pres and audio conversion
- 3 Colour metering display a vast improvement

SPECS

System Requirements

Mac: Intel 1.5GHz or faster, 2 GB RAM, OS X 10.6.4 or greater

Connection and Power: USB 2, bus-powered or via DC power supply

Features

USB 2.0 Mac audio interface
2 analog inputs:
Combination Line (balanced +20dBu max)
Mic/Instrument (+14dBu max)
4 analog outputs:
Balanced line outputs:
+20dBu maximum output level
1 independent 1/4" stereo headphone output
2 Microphone preamps with up to 75dB of gain
A/D and D/A conversion at 24-bit/192kHz
Top panel high resolution OLED display
Multi-function controller knob
Two assignable top panel touchpads

Duet 2 is, as its name suggests, a second-generation, dual-channel audio interface made by

Apogee for the Macintosh. While this updated release has given Apogee an opportunity to address several key features of Duet's capabilities, it has also afforded the company the chance to overhaul its design – as the original 'silver' Duet echoed the corresponding generation of MacBook Pro, so Duet 2 matches the aluminium and black plastic design of the 2011-generation laptops. The updates are more than skin-deep, however, so let's dive in.

Interface made for two

The package contents contain the interface itself, which is of a compact desktop design, an audio break-out cable containing twin hybrid XLR/1/4" jack inputs (Duet 1 featured XLR inputs only) as well as an optional power lead (the unit is otherwise bus-powered) and the all-important USB connection cable. Mindful of future-proofing, this is the first notable change – whereas the first Duet offered connection via FireWire 400, the absence of this port from new Macintoshes has clearly prompted a re-think.

There's no install CD, so a quick trip to Apogee's website

ensures a combined package offering the software and a firmware update for the unit is downloaded as one.

Thereafter you're up and running, ready to record and playback, with the latter now offered via an independent headphone port (notably absent from Duet 1) as well as the stereo outputs. Duet 2 uses Apogee Maestro 2 software to configure inputs, with the option to toggle between Microphone and Instrument sources, select gain levels and enable phantom power etc.

However, the most notable update is the audio quality of Duet 2 which

is a considerable improvement over its predecessor, thanks to redesigned microphone preamps and updated converters too. It's worth noting that few of Duet's rivals offer audio I/O with this quality. Once configured through the Maestro software, many of Duet's settings can also be controlled direct from the front panel where the prominent silver knob allows you to dial values in or press to jump between input and output routings.

These settings are supported by the new full-colour display at the top, which is neatly designed.

Duet in harmony

Above the silver rotary on the left and right are two user-assignable buttons which the Maestro software will allow you configure with a fairly extensive range of options for, including useful 'summing to mono' options for the outputs, which is useful at the mix stage. There are cheaper audio interfaces than those provided by Apogee across their range but the first thing to note is that if you're Mac-based, you'll struggle to find a company whose approach is so tailored to Apple's product-range, with rock-solid integration guaranteed. The audio quality of Duet 2 is extremely good too, blowing most of the competition away not just among the array of cheaper interfaces available but also out-performing some of those retailing for higher prices.

While I always think break-out cables don't provide the most professional-looking solution, I'm aware that this is simply personal taste and that the implementation of a combined cable here makes perfect sense, allowing the Duet 2 unit to fit snugly in a laptop bag.

If you can live with limited I/O, this is a great interface choice for Mac devotees who prioritise audio quality above all else. **FM**



FutureMusic VERDICT

BUILD



VALUE



EASE OF USE



VERSATILITY



RESULTS



With improved sound, I/O and design, Duet 2 is a worthy update to Apogee's original.

DESIRE ANALOG...
...EMBRACE DIGITAL

STUDIO DEVIL®

VIRTUAL TUBE AMPLIFICATION



Studio Devil Amp Modeler Pro
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Pioneer DJM-900 Nexus | £1,600

Pioneer's new mixer aims to sync the booth into a fury of effects. **Chris Barker** networks the Nexus

WHAT IS IT?

Four channel DJ mixer with Pioneer Pro DJ Link technology, MIDI, and USB audio interface

CONTACT

Who: Pioneer
Tel: +44 (0)1753 789 789
Web: pioneerdj.com

HIGHLIGHTS

- 1 Pro DJ link LAN port
- 2 brand new colour effects
- 3 X-Pad touch control for beat effects



When Pioneer launched their flagship DJM-2000 mixer, it seemed to be the perfect compliment to their top-of-the-line CDJs, offering masses of connectivity, effects and control. But, it also seemed to be a mixer that split the DJ community and was too much of a leap forward from what had become the club standard, the DJM-800. Here at FM we loved the DJM-2000 and its

overflowing amount of features, but it didn't find its way in to the hearts of as many DJs and clubs as Pioneer probably hoped. Here then is where their new DJM-900 Nexus steps in. Built in a similar shell to the DJM-800, the Nexus packs in some of the same behind-the-scenes brains as the DJM-2000 with Pro link Ethernet support and a full audio interface and USB connection. Although the 900 only sports a single Ethernet port, using

a LAN hub multiple CDJ-2000s can be connected and will make sure any tempo grid information from Pioneer's Rekordbox software is also read perfectly by the mixer, keeping all the effects in sync with the CDJ's tempo.

For example, adjust the pitch of the CDJ and providing the quantise button on the Nexus is enabled, the tempo information on the mixer's screen will change with it, all perfectly in time.

Effect tricks

The whole mixer is packed with these small, but important improvements and additions. While remaining very familiar in layout and feel, inside it's worlds away from the beloved DJM-800. There's new colour effects too, bringing the new total from four to six including a noise oscillator, reverb, dub echo and a gate/comp effect.

First up is the noise oscillator, whose brilliance comes from the ability to assign this to a separate channel (even if it's not playing back audio) and have the option for sweeps and build effects at your leisure. While the space



effect creates its own version of the dramatic build and pause to huge effect, with gorgeously glossy reverb tails continuing long after the signal is cut, if desired. The dub echo is reminiscent of an old tape delay effect with timing controls of the speed of the delay while the gate/comp effects mimic a hard-sidechained gate and is fantastic for tightening up mixes when blending a particularly chaotic or overly percussive outro with a minimal intro.

The right of the mixer also sports beat effects with Reverb, Spiral, Slip Roll, Melodic and MIDI LFO all new additions. Spiral is probably the most interesting of these, being a type of pitched delay while melodic lets you snatch a beat of audio and then transpose that samples' pitch like you would if you were playing it over a keyboard – fantastically creative when playing with acapellas or sparse musical moments. Possibly the most exciting feature of all these effects is the new ability to control them using the touch sensitive X-Pad – see the *X-Pad* box for more on this.

Future proof

Another development of the DJM-900 Nexus is the Traktor certification, enabling access to all four decks using the built in 24-bit/96kHz interface in Traktor, all via a single USB cable. There's also timecode compatibility,



The X-Pad

This simple but effective touch-strip enables single finger control and triggering of effects.

Slide your finger to the left to increase the rapidity of rolls or the speed of a flanger and so on. This makes ultra fast triggering a breeze and clever trills and fills feel natural and tight and it's

not long before you become accustomed to it. It also enables dual control of LFOs when using the Filter, Phase and Flanger sweeps.

The usual beat button and rotary dial controls one of the LFOs while a second LFO's speed can be controlled via the X-Pad. Wobbly!



that can be grown into by CD jocks and laptop jocks alike.

Although, it's a bit of a pain having to upgrade the firmware every now and again – especially as it's done via LAN cable. Let's just hope that clubs and venues keep the firmware up to date, because unlike the CDJ-2000, it's not something that can always be done before your set.

the effects and what is actually required by most DJs is outstanding. Combining the colour effects with the beat effects meant I was constantly discovering new tricks and tweaks when mixing. The USB connection made integration with Traktor extremely simple. Aside from all the creative improvements, this mixer also sounds better than the DJM-800 and has all

the same pristine imaging as the flagship DJM-2000 mixer.

It's fair to say there are more advanced mixers in this price range and there'll always

be mixers that suit specific DJ needs, but Pioneer's replacement for their omnipresent DJM-800 will undoubtedly be on the majority of tech riders before the end of 2011. **FM**

Combining the colour effects with the beat effects meant I was constantly discovering new tricks

meaning DJs no longer need to take their timecode interface to use Traktor Scratch with timecode CDs or vinyl. EQ has also been tweaked with the usual -26dB cuts now also selectable as an isolator EQ similar to the one on the DJM-1000 mixers, so complete kills can be enabled on all three bands when turned fully anti-clockwise.

At the time of going to press, Pioneer also updated the Firmware of the DJM-900, which is something that is going to get some getting used to. It adds extended tweaks to the effects section, but more importantly the update proved that the life of this mixer should be substantial with Pioneer responding to updates, tweaks and suggestions in the same way they have with the CDJ-2000 and it is a mixer

There are plenty of things that I'd like to have seen on the mixer. I've always thought that individual effect mute buttons next to the colour FX rotaries would be useful as would simple EQ or tone controls on the booth monitor and headphone outputs, but this certainly wouldn't deter me from making this my mixer of choice.

Nexus episode

The DJM-900 Nexus is without a shadow of a doubt a brilliant mixer and is designed in such a way that most of its power is disguised behind a friendly and familiar interface, which is quick to learn. Dig deeper and combine the CDJ-2000s Pro DJ Link integration and you have an exceptionally creative, mix environment. The attention to detail on

SPECS

Screen 10cm bright dot matrix display

MIDI/HID Control 61 fully assignable MIDI controls

Channels: 4

Sampling Rate / Depth: 96kHz / 24-bit

Outputs

Master Output (XLR)

Master Output (RCA)

Booth Output (1/4-inch jack)

Rec Out (RCA)

Digital Out (Coaxial)

S/PDIF Digital Out (RCA)

Send (1/4-inch Jack)

USB-B

Inputs

4 x CD/LINE Input (RCA)

2 x PHONO (RCA)

4 x S/PDIF (RCA)

Digital LAN Input (Pioneer Link)

MIC Input (1/4-inch jack)

MIC Input (XLR/Jack Combo)

RETURN (1/4-inch jack)

Dimensions

331 x 409 x 108mm

Weight

7.1kg

ALTERNATIVES



Allen & Heath Xone:DB4

£1,900

Four DSPs, multiple matrix inputs, USB, configurable EQ and filter options make this one hell of a creative mixer. Expect a review in next issue's *FM*.

allen-heath.com



Rane Sixty-eight

£2,100

Aimed slightly more towards Ableton DJs, this high-end mixer sports two USB inputs for DJ hot-switching with ease! If you fancy the Serato and Ableton's The Bridge, then this might be for you.

rane.com

FutureMusic VERDICT

BUILD

VALUE

EASE OF USE

VERSATILITY

RESULTS

Easy to use and packed full of future-proof features. A perfect balance in the DJ booth.

SubtleNoiseMaker Cacophonator II Synthesizer | €260

If you like your music gear experimental, you're in luck. **Greg Scarth** checks out an unpredictable new option from Austria



WHAT IS IT?

Synth, noise toy and effects pedal

CONTACT

Who: SubtleNoiseMaker
Email: sascha.neudeck@chello.at
Web: sascha-neudeck.com

HIGHLIGHTS

- 1 Six oscillator 'cacophony oscillator' synth
- 2 External input for processing audio signals
- 3 Highly unpredictable control features

SPECS

Specs
Quarter-inch unbalanced mono audio input and output

Dimensions:
188 x 120 x 73mm

Weight:
1kg

Every now and again a product comes along which defies categorisation. The Cacophonator, conceived in 2006 by synth DIY enthusiasts Kevin Buckholdt and Arthur Harrison, is exactly that. A 'cacophony oscillator' based around a single CMOS chip, the design falls somewhere between a synth, an effect and an experimental noise box. Austrian musician Alexander Renner has been awarded the exclusive rights to build and market the design as a finished product, adding an audio input and preamp, a true bypass and various mod switches in order to create the Cacophonator II.

If the Cacophonator looks a little bit hand-made, that's because it is. SubtleNoiseMaker is a one-man operation. Despite the brutally utilitarian appearance of the raw aluminium case, the unit is clearly well

built, with high-quality parts all round and a good solid feel to all the knobs and switches. My only gripe is that there are absolutely no clues about the functions of each knob or switch. It's understandable that the Cacophonator is intended to be an unpredictable device, but it seems unnecessary to omit such basic labels.

The unlabelled knobs and switches control six oscillators that generate square waves, interacting with and modulating each other in unpredictable ways. The Cacophonator's two LFOs don't modulate oscillators or filters directly, though. Instead, they introduce fluctuations in the device's power supply, affecting almost every aspect of the sound.

Disconnect

You won't find a keyboard, MIDI control or USB connections on the

Cacophonator. Instead, it's all about hands-on control, with three rotary pots to control oscillator frequencies, one for modulation, one for current level, one for speed and one for feedback. A row of three-way switches allows different capacitors to be switched in and out of the circuit. As you turn knobs, the circuit changes from what the designers refer to as deterministic to stochastic mode. In less technical terms, things get a lot more random.

Cutting to the chase, if you're looking for predictable, controllable sounds the Cacophonator isn't a great choice. The unit generates everything from throbbing sub-bass to heavily modulated, digital-sounding leads, but as you turn a knob or flick a switch it's incredibly hard to know what's going to happen to your sound next. As a synth, the only realistic way to make the Cacophonator play in tune with the rest of your production is probably to sample it and loop, pitch shift and edit sounds until they fit.

Predictable?

To make things a bit more predictable, it's possible to run external signals through the Cacophonator's audio input, allowing it to operate as an effect pedal. Drums and percussion loops work surprisingly well, although synths and other pitched instruments tend to descend into wonky madness sooner rather than later.

The Cacophonator II is one of the craziest products we've seen for a while. If you're looking for a traditional device with clearly defined controls and an easily manageable sound, you can probably already tell that it's not for you. On the other hand, there's no denying the Cacophonator can make some great sounds, it's just that you might not necessarily be in control of them. If you're willing to take that experimental risk, the Cacophonator is worth a look. **FM**



FutureMusic VERDICT

BUILD	☐ ☐ ☐
VALUE	☐ ☐ ☐
EASE OF USE	☐ ☐ ☐ ☐
VERSATILITY	☐ ☐ ☐
RESULTS	☐ ☐

If you can cope with its unpredictable nature, the Cacophonator can make great sounds.

ARTIST
SERIES™
DOWNLOADS

loopmasters

The Sample Boutique



loopmasters.com

TC-Helicon VoiceLive 2 | £665

Are stompboxes for guitarists alone? TC-Helicon don't think so and neither does **Jono Buchanan**, who unleashes his inner diva...



WHAT IS IT?

A multi-effect stompbox targeted at, but not limited to, live vocal performance

CONTACT

Who: TC Electronic UK
Tel: +44 (0)800 9178 926
Web: tc-helicon.com

HIGHLIGHTS

- 1 A genuinely inspiring tool
- 2 Intelligent harmony creation a real joy
- 3 Huge sophistication coupled with ease of use



Think of stomp-box multi-effects units and you're bound to conjure up an image of a guitarist,

slamming down on distortion or fuzz pedals to enhance performance throughout a track. For some reason, a vocal-targeted equivalent has taken longer to catch on but with artists including Imogen Heap and Björk now reliant on guitar-like real-time processing, it's perhaps no surprise that at least one company has been paying attention.

It's no surprise that that company is TC-Helicon, if you consider their history in vocal processing. VoiceLive 2 could just revolutionise vocal performances coming soon to a stage near you. Featuring multi-effects, intelligent on-board algorithms and huge flexibility, this is a processor designed to inspire and delight.

Going live

At the heart of VoiceLive 2 is a collection of real-time effects processors which can be 'stomped' on and off, guitar-style. Each preset or user-created program features up to six of these modules simultaneously and there is real sophistication here, with effects including auto-tune style pitch correction, voice doubling and intelligent Harmonization, of which more shortly. Additionally, Delay and Reverb modules provide a range of spatial effects to enhance these more obviously 'vocal' algorithms.

The design of VoiceLive 2 is superb – as well as the stomp switches for each effect, foot-controlled preset navigation is offered, as is a Shortcut foot-switch which activates a user-defined parameter for each preset, to allow you to interact with an additional sound control in real-time. A

bright, back-lit LCD display at the top keeps you in touch with preset parameters and if you want in-depth editing, this is offered via four rotaries below the screen which correspond to the parameters shown.

The rear panel offers remarkable flexibility, with microphone, line level, guitar and 3.5mm input sources, balanced stereo XLR, line and S/PDIF outputs and MIDI I/O too. This means that a range of sound sources can benefit from VoiceLive 2's processors via multiple input types but there's a hidden benefit too. As the processor auto-detects pitch information from incoming audio signals, if you're a lead singer/guitarist or singer/keyboard player, you can use the output signal from your guitar or MIDI out port to feed VoiceLive 2 the note information it will use to generate harmonies. A performer's dream.

Intelligent harmonies

VoiceLive 2 shows its colours as an inspiring tool the moment you switch it on, as it's extremely simple to use. This is best exemplified by its intelligent Harmonizing engine which either allows you to select the root scale of your track or to auto-detect it as you perform, offering up to eight Harmonized notes in support of your performance. Once this information is onboard, VoiceLive 2 neatly side-steps the problems offered by real-time pitch shifters. Normally, these allow you to set up one or more Harmonizations of your input source but with each voice





at a fixed semi-tone offset above or below the performed pitch. VoiceLive 2 is different, as it intelligently detects which note you're singing within a scale and adjusts its harmonies accordingly, so if you're in C major and you sing the root note, you'll be greeted with harmonies appropriate to that chord but if you sing a D, the chord will change to an appropriate minor, as

providing octave-only harmonization. While I'm very happy creating harmonies in the studio in Melodyne, VoiceLive 2 provided the first Harmonization capabilities to have really blown me away in the hardware domain, with the huge thrill of real-time operation too.

Quality-wise, I'd as happily route a recorded lead vocal into VoiceLive 2

parameters alone, as they'd be unlikely to change during a single song.

If you do want variations to these parameters, simply make them and save them to the next program location, so you can switch easily during a performance.

Heard and not seen

Whereas 10 years ago the idea of taking cutting-edge technology onstage seemed brave and risky, now we're positively embracing tools which are as much for use in

VoiceLive 2 works intelligently through tracking and mixing to provide a rich, unique flavour

it will when you sing an A. Similarly, the Harmonies produced will jump from thirds to fourths as appropriate to the scale. This is wonderful – I'm no singer but even I found myself jamming away with a huge smile on my face. Harmonies are supported by the 'Double' module, which provides 'voice thickening' effects by reinforcing your input signal at its original pitch, or

and fly it back in my DAW in studio sessions as I would use this box onstage. What I like so much is that the unit is geared to let you play with the parameters you'd want but covers so many other bases in the background. So, via the Tone button, for instance, you can set up EQ, compression, de-essing and gating for a preset but then leave these

the heat of live performance as they are in the studio. VoiceLive 2 fits this description perfectly, allowing you to achieve the kinds of looping effects currently associated with Jamie Lidell, Beardyman and Shlomo plus a whole lot more besides.

While the unit is targeted at real-time performance and therefore suggests itself for live use alone, I'd struggle to think of a more inspiring studio tool, as it will get ideas flowing but also work quickly and intelligently through the tracking and mixing stages to provide a rich, unique flavour. I'm adding one to my own shopping list and whether you're performing live or looking for a studio processor with a difference, I'd highly recommend checking VoiceLive 2 out. **FM**

MP-75 Microphone



As well as VoiceLive 2, TC-Helicon sent its new MP-75 microphone, which is designed for live performance and for seamless compatibility with VoiceLive 2, VoiceLive Touch and the rest of TC-Helicon's VoiceTone range. MP-75 is a dynamic microphone with a super-cardioid pattern and a frequency

response of 50Hz to 18kHz. Its response features a deliberately generous push between 5kHz and 10kHz, while its rejection of off-axis signals limits feedback possibilities and its construction features effective pop-reduction techniques underneath the grille. Most excitingly, however, it features 'Mic

Control' which is a button on the mic's handle, allowing control across the range of processors.

With VoiceLive 2, it can be used to switch your Shortcut parameter on and off and as this is user-definable, you could enable/bypass harmonies, switch on the looper, or carry out a huge range of other tricks. Great stuff.

SPECS

Analogue Inputs

Connectors, balanced: Mic: XLR, Line: 1/4" phone jack, Guitar: 1/4" phone jack, Aux: 3.5mm stereo jack
Mic Input Level @ 0 dBFS: -49dBu to +10dBu
Line Input Level @ -37 dBu to +22 dBu: -37dBu to +22dBu
A to D Conversion: 24-bit

Analogue Outputs:

D to A Conversion: 24-bit
Connectors, balanced: XLR and 1/4" phone jack
Frequency Response: +0/-0.3dB, 20Hz to 20kHz
Headphone Out: 3.5mm mini stereo jack, 320mW, +16dBu max (180mW max)

Digital Audio Connectors

RCA Phono (S/PDIF) & USB audio
Formats: S/PDIF (24-bit), EIAJ CP-340, IEC 958, USB Audio
Sample Rates: 44.1kHz, 48kHz, 88.2kHz, 96kHz
Control
MIDI: In/Out/Thru: 5-pin DIN
Pedal: 1/4" TRS phone jack

Dimensions:

76 x 350 x 261mm

Weight:

2.3kg

ALTERNATIVES



VoiceLive Touch, VoiceTone Harmony and VoiceTone Singles

From £85

Via individual effect pedals or lighter spec'd multi-FX units, you can find what you need for less wedge.

tc-helicon.com



Korg Kaoss Pad Quad Dynamic Effects Processor

£229

Kaoss Pad Quad also features multiple inputs, including a dedicated mic input for vocal interaction.

korg.co.uk



Guitar Multi-FX units

£30+

Line 6, Boss, TC and more offer units but be aware that plenty of their power is given to amp modelling.

FutureMusic VERDICT

BUILD

VALUE

EASE OF USE

VERSATILITY

RESULTS

An inspiring collection of effects designed for, but not limited to, live vocal performance.

SPECS

Capsule types: Cardioid (supplied), omni, figure-8, hyper-cardioid and bass-roll-off cardioid (all available separately)
Frequency range: 20Hz to 20kHz
Sensitivity: 6mV/Pa (-44.5dBV), rated with 1kHz into 1k load
Equivalent Noise Level: 18dB (A-weighted)
Signal-to-Noise ratio: 74dB relative to 94dB SPL (A-weighted)
Max SPL: 150dB SPL for THD of 0.5%
Dynamic range (mic amp): 131dB (A-weighted)
Output Impedance: 200
Rated Load Impedance: 1000
Package contents: Mic, cardioid capsule, storage canisters for all five capsules, suspension mount, padded wooden microphone case, protective cloth hood, flight case
Dimensions: 200 x 44mm (diameter at widest point)
Weight: 248g (microphone only)



sE RN17 | £1,139

The sE/Rupert Neve coupling presents a new small diaphragm mic. *Robbie Stamp* pencils it in...

WHAT IS IT?

Multi-capsule small diaphragm condenser microphone

CONTACT

Who: Sonic Distribution
Tel: +44 (0)845 500 2500
Web: seelectronics.com

HIGHLIGHTS

- 1 Natural, detailed sound
- 2 Very smooth frequency response
- 3 No harmonic distortion

Just as their first model, the RNR1 sought to address the inherent problems of the ribbon microphone, the RN17 has been designed to extend the acoustic and electrical standards of the workhorse small diaphragm 'pencil' mic. The result is a multi-capsule microphone system aimed at the high quality field currently served by names like Schoeps, DPA (ex-B&K) and Neumann – a field where the Neve name carries much weight.

Clear and present

The RN17 looks like a snake that swallowed a dustbin, though the dustbin in this case is the step-up transformer that is an essential part of all Rupert Neve designs and is critical to maximising the quality of the preceding head-amplifier. The mic comes with five canisters in the wooden

storage case that house the range of capsules made for the RN17, though the mic is supplied with just the cardioid capsule: omni, figure-of-8, hyper-cardioid and bass-roll-off cardioid capsules are available separately. The trick with condenser/electret transducers is to balance the upper frequency range cutoff, dictated by diaphragm density/diameter (smaller=higher), with the noise performance that deteriorates as the diameter is reduced. To this end, and thanks to the Neve head-amp, the RN17 utilises a slightly smaller than usual capsule compared to many SD mics, though not tiny like Earthworks and some DPA mics. The first impression of the RN17 sound is one of clarity and detail. Across a range of sources the RN17 captures and articulates a highly natural sound that neither hypes nor hides any particular

frequency area. In comparative tests the RN17 frequently offered a more balanced or flat tone, though sometimes this translated as less 'forward'. On harmonically complex sources the RN17 maintains a precision that other mics begin to lose as phase shifts and transient losses become more pronounced across the frequencies.

Naturally balanced

The well-balanced behaviour of the RN17 extends to its performance with regard to proximity effect and off-axis response (with the cardioid capsule). The clear delineation of the source allows off-axis sounds (room reflections in particular) to remain phase coherent while getting up close emphasises the LF range without collapsing into a low-mid mush. This mic is particularly suited to the naturalistic capture of sources with a transparency that works well on grouped instruments where the balance is already set.

Maybe it's due to the mics I am used to, but there is a low-mid presence that I expect which is a little light here and has me reaching for the EQ on occasion, but the lack of any obvious phase shift problems means that the RN17 output can be poked and prodded quite far without falling apart.

The RN17 is clearly aimed at the higher end of the market, just as with the RNR1, and its price places it against some strong competition. The fidelity of this mic is excellent and the flexibility of a multi-capsule system makes it a worthy investment, though this will depend on the price of the other capsules. The non-standard design of the mic, again like the RNR1, may put some (less imaginative) people off, but it is no gimmick, rather a shape dictated by a lack of compromise on the audio quality. This is a great sounding mic that can fulfil a wide range of roles in the studio and on location without ending up as the 'niche' choice. **FM**

FutureMusic	VERDICT
BUILD	
VALUE	
EASE OF USE	
VERSATILITY	
RESULTS	
A distinctly natural and detailed mic that will produce great results whatever the session.	

SPECS

System Requirements:

PC: Intel Core 2 Duo 2GHz/ AMD Athlon 64 or equivalent, 1GB RAM on XP, 2GB RAM on Vista/Windows, Win XP 32-bit SP2 & SP3, Vista Business/Ultimate 32-bit, Windows 7 32-bit

Mac: Core Duo 2.3GHz, 2GB RAM, OS X 10.5.8 – 10.6.7

Key Features:

Modelled on the Ampex 350/351 1/4" reel-to-reel
Adjustable speed, bias, flux, wow & flutter
Slap & feedback delay
24-bit 96kHz resolution
Mono and Stereo components
Supports TDM, RTAS, Audio Suite, VST, AU



Waves Kramer MPX Master Tape plug-in | from \$200

Waves surge forward to join the retro-tape plug-in war. Let warm, saturated, wowed and fluttered battle commence! *Jono Buchanan* bears arms...



ON THE DVD

WHAT IS IT?

A tape simulation plug-in for track elements and mixes alike

CONTACT

Who: Sonic Distribution
Tel: +44 (0)845 500 2 500
Web: waves.com

HIGHLIGHTS

- 1 Wonderful, warm sound
- 2 On-board delay is flexible and sounds great
- 3 Wow and flutter FX add further sound colouration

HIGHLIGHTS

Native
\$200
TDM
\$300

Despite the relentless march of futuristic-sounding plug-ins, it's fair to say we're currently experiencing a renaissance as concerns replicating the sound of yesteryear.

Suddenly, the market-place is awash with plug-ins aiming to recreate the sound of analogue tape, as our fascination with taking pristine digital audio and 'warming' it up with retro crunch continues. Plug-in giants Waves are the latest to dip a toe into this water with their MPX plug-in, which was developed in collaboration with engineer/producer Eddie Kramer.

Wow and flutter

The specific tape machine modelled here is rare and customised, featuring an Ampex 350 quarter-inch machine with 351 electronics on-board. This means that it's now possible to model

Kramer's signature Olympic Studios sound as the separately-available Kramer HLS Channel plug-in emulates the sound of the desk used 'before' this tape solution as his setup of the time. The GUI is nicely designed, with spinning reels in the lower section that match your choice of tape speed and a range of flexible options above. Starting on the left, you'll find Record and Playback levels, which determine the gain strength passing through the respective heads of the tape machine. These dials can be linked so that Playback automatically adjusts to compensate for the Record level, though de-coupling this option provides a greater range of sounds.

Further across, Wow & Flutter and Noise dials bring characteristics to your tracking/mix elements with anything from mild colouration to full-on degradation possible.

At the top, three dials allow you to bring tape delay effects to the process too, with the first offering variable Delay Time, the second setting feedback level of these taps (with a switch to toggle between Slap and Feedback effects) and an optional low-pass filter to allow for tone control of any delay you set up. This additional section is wonderful – fans of dub-based tape delay effects will have a field day as some wonderfully trippy sounds can be created which greatly enhance the sonic possibilities afforded by MPX.

Bias delays

Offering similar flexibility, Bias offers two options – Nominal and Over. The former matches the manufacturer's recommended calibration setting, while 'Over' allows the user to experiment, as many engineers did, with pumping extra juice through the system to enhance the sound. Two additional parameters complete the parameter line-up, in the form of Flux and Noise.

As tape technology developed, so its ability to withstand increasing amounts of gain evolved too. A huge set of developments in tape-recording history can be emulated via this dial, while Noise allows you to tune the level of tape noise to your project to leave it sounding warm and pristine, or saturated and crunchy. This is a great-sounding plug-in which is suited to individual track elements and to output channel settings alike. Its mastering settings work well at the end of a fully emulated tape mix but they also add warmth and flavour, if you simply want to sprinkle some MPX magic onto your otherwise digital mix as an output mastering solution. As a processor for individual track elements such as drums and lead guitars it adds wonderful layers of warmth and depth, so if you're about to buy into the retro trend, MPX should definitely be among your plug-in contenders. **FM**

FutureMusic VERDICT

STABILITY



VALUE



EASE OF USE



VERSATILITY



RESULTS

Warmth, character and flexibility
– MPX is a great choice for those seeking a classic sound.

**WHAT IS IT?**

A Kontakt-driven, flexible string library from Native Instruments

CONTACT

Who: Native Instruments
Tel: +49 (0)306 110 350
Web: native-instruments.com

HIGHLIGHTS

- 1 Animator creates instant, soundtrack-ready string sequences
- 2 Rich, warm string sound
- 3 Flexible ensemble sizes

HIGHLIGHTS

Upgrade from Session Strings:
199 euro



NI Session Strings Pro | €299

The market is awash with string libraries. Can NI's latest step up to challenge the big boys? *Jono Buchanan* warms up his bowing arm...

SPECS

4 string ensembles, each with 4 violins, 3 violas, 2 cellos and 2 basses
22 articulations
Animator changes held chords into rhythmic staccato, spiccato or pizzicato phrases
Separate workflows for Production and Performance
Motown presets tailored to capturing '60s/'70s sounds
Bow noise control allows you to add extra richness to Ensemble sounds
FX section with 10 convolution reverb types, 3-band EQ and Compression
48GB of 24-bit, 44.1kHz samples

System Requirements

PC: Windows XP/Vista/7, Intel Core Duo or AMD Athlon, 2GB RAM

Mac: OS X 10.5 or 10.6, Intel Core Duo, 2GB RAM

If you're interested in adding high quality string samples to your production work, these days it's a buyer's market, with packages available to suit all requirements and budgets. A few years ago, heavyweight libraries went head-to-head to offer comprehensive string solutions with prices to match but the more recent trend has been for considerably cheaper, albeit less versatile, packages to emerge. Following on from its popular 'Session Strings' library powered by its own Kontakt sampler engine, Native Instruments now return with Session Strings Pro – can this become one of the first libraries to offer the Holy Trinity – versatility, quality and affordability?

Section by section

From the off, Session Strings Pro utilises interesting solutions to tailor your virtual string ensemble to the

requirements of your project, starting with Ensemble size. The library contains four recorded 'Sections', all of which feature four violins, three violas, two celli and two basses but these have been mic'd in different positions to give each Section its own 'Contemporary' or 'Classical' sound. Two Sections are available whenever you load a preset and you can decide how big the overall sound will be simply by turning up or down the volume dials for each section. Speaking of presets, you'll find sounds organised into two Categories – Performance and Production.

As their names suggest, these two approaches are tailored to different working practices with bespoke Edit pages to match. For instance, within a Production preset, you'll find three Tabs, the first of which is a Main page covering Section volumes, Contour (including dials for Bow Noise volume

and Stereo Width) plus Envelope dials to control Attack and Release times. Then comes a KeySwitch page where you can easily assign different articulations, with 29 types available to match the trigger keys of your choice.

On this page you can also set up velocity response to taste, with Curve types and minimum/maximum settings to restrict dynamic range, if desired. The final 'FX' page contains a comprehensive EQ section with Lo, Mid and High cut/boost, all with sweepable central frequency dials, an on-board Compressor and Reverb, with 10 convolution models and a Mix dial.

Animation station

A Performance preset features the same Main and FX pages but offers different Tab pages in the middle. Foremost of these is the Animator page, whereby you can switch on SSP's own Step Sequencer. Each step of this features a slider to route a velocity value into the sound engine and with choices of global step size, groove, swing and note length, it's not long before you're holding down a chord and hearing a dynamic, rhythmic string section playing back sequences tailor-made for scoring work, in particular. The Animator's playback engine can toggle between arpeggiators and chord generators, so a held chord can either trigger several notes at once, or run up and down through them, for instance. The second Tab within a Performance preset also handles Articulation switching, but with an emphasis on using performance tricks (pedals, controllers etc.) for instrument switching. Flexibility is key to SSP's success – four sampled ensemble groups, with two available within each preset, independent level control over each, myriad articulations, the dynamic Animator, not to mention high-quality effects. The sound oozes class too and seems particularly tailored to scoring and Pop production work. A real joy. **FM**

FutureMusic VERDICT

STABILITY	☐
VALUE	☐
EASE OF USE	☐
VERSATILITY	☐
RESULTS	☐

Matching versatility and classy sound to reasonable price – SSP is truly excellent.





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



SHAKE THE FOUNDATION!

Get ready to leave those bad-tipped warm-up gigs in the 2nd room for good! With Prime Loops' latest sound smasher "Platinum Dubstep" you're all set to invade, conquer and rule the main stage arena ranks that make the big crowds go absolutely nuts!

A true multitude of hyper-modern drum loops, drum one-shots and synth loops awaits any software and hardware set-up to combine and refine characteristic sonic weapons that have the power to make your name known between Bristol and Bogotá!

£19.95



URBAN DANCE FREAKZ

With this eccentric sound thriller you're guaranteed to get the dance crowd go crunk and the urban section get their glowsticks out! Turning any bash into a full-blown Warehouse rave "Urban Dance Freakz" is here to stay until the break of dawn.

£17.95



BLACK SFX

"Black SFX" is a driving compendium of extremely versatile one-shot samples and FX loops that'll make the tracks of any serious producer in the fields of music production, sound design or soundtrack composition absolutely stand out from the rest!

£14.95



DUBSTEP ILLUSIONS

Prime Loops' latest cornucopia of loops and samples brings an endlessly pulsating flow of spaced-out, atmospheric and imaginative sounds that will leave a lasting impression with any dedicated bass-lover between Shoreditch and Babylon: "Dubstep Illusions" has arrived!

£17.95



BLACK FX

The Battle continues! With "Dirty South Wars 2", we give you all the weapons you need to enter and win this second round of the ongoing fight for the sparkling crown of raunchy, smoked-out and rollin' HipHop and R&B that comes right from the deep and dirty south.

£14.95



Over 10,000 music producers can't be wrong...
Join us @ [facebook.com/primeloops](https://www.facebook.com/primeloops)

www.primeloops.com

Mini Reviews

The latest musical bits and pieces racked and rated

Samson Meteor USB Mic | £89

samson.com

Next time you're travelling, imagine how great it would be to have a small, high-quality, simple USB mic that you can plug into your computer, ready to go any time inspiration strikes.

Meet the Samson Meteor Mic, a small, highly-portable USB mic that's ideal for quick vocal ideas, making your own percussion samples and generally getting the real world into your computer without you having to worry about pop shields, stands and placement. In the weeks we've been using it, it's really become part of the studio furniture. Its built-in stand folds up to protect it during transport

and the quality of both the capsule and converter are up there with USB mics costing twice as much.

Where we can see the Meteor really excelling is in its use with iPad and iOS apps. It's small enough to always be accompanying the 'Pad in your bag for quick demo recordings with apps like GarageBand. If you do a lot of travelling or if you just want a professional audio sketchpad for magical music moments, it's a cheap enough solution to provide a lot of quality without a lot of hassle. iPad music-makers continue to be spoiled.

Daniel Griffiths

8/10



Marshall Major | £99

marshallheadphones.com

This is one seriously good-looking set of headphones. But, would you expect anything less from

this legendary music brand? Compact, foldable and beautifully crafted on the outside, it's only when you pop these on do things get a little disappointing. It's always going to be a trade off at this price, especially with such attention to detail in the design. The sound is a tad lacklustre and although it's clean, flat and well imaged the lack of low-end thump lets these headphones down. It's only

really a problem for club music, acoustic tracks sound fantastic, with the mid-range being much, much better than a lot of the competition.

EQ'd to your listening taste they can handle a few dBs of extra bass and some of the sizzle can be taken out of the mid. I really enjoyed listening to more subtle, gentler genres, but everything else left my ears wincing on every snare. The build is superb but the sound isn't for everyone. *Chris Barker*

6/10

iLuv iBA200 back-up battery | £40

i-luv-uk.co.uk

With today's gadgets doing more, shining bigger and brighter than ever, the batteries in most devices are starting to slouch. Here's where these pocket sized heroes come in. Small in size, simple in design, these power packs charge over micro USB and will pump out USB power to your portable devices. For the cash, the iBA200 is a great option, but will probably only give you a 50-75% top up on most smartphones with its 1250mAh battery.

It does have some larger relatives though with the iBA300 packing a tidy 2200mAh for a longer charge. A must have for anyone who travels often.

Chris Barker

9/10



Sample Station

Generation Electro | £17

soundstosample.com



Brilliantly-dirty and varied, this cheap little £17 download pack really caught our eye as hitting all the right notes and delivering a surprising amount of dancefloor bang for its buck. There's some dangerous Skrillex-style basslines and a set of rhythm loops that alternate from the face-slappingly straight up to the downright funky and wigglesome. Teaming pairs of mis-matched rhythm loops and bass never sounded so quick and easy and the results always sparked off an idea. Perhaps not as vast and genre-defining as some other compilations it certainly straddles plenty of sound styles, with massive Clubby clap sounds waiting to be teamed with dangerous Dubstep-style bass. Not too keen on the processed vocal FX (but then, when are we?) but the rest of this pack is bang on target and a great way to get an injection of freshness to your troublesome tracks for just £17. **Chris Barker**

8/10

Waveform Recordings

New School Tech | £22

soundstosample.com



Now this is just a bit special. Unique-sounding, massive, lovingly crafted loops and hits that just have that extra bit of House magic about them. This classy compilation has got the works. There's not a huge amount of samples at play here 312 loops and 61 one shots but the sheer usability is second to none. This is all killer and no filler from it's surging hypnotic loops to bubbling, swelling Deep House bass. Every sound has a width and warmth that you don't often get from a sample pack meaning that – if you let it – these loops will totally dominate your track. These aren't for adding a little excitement here and there – these are full beds for you to add your own sparkle to. In fact, after a few days with this pack, it's in danger of making all that tiresome mixing and tweaking a thing of the past! Use with caution. Aw, what the hell, use like crazy!

Greg Scarth

9/10

Alex Niggemann 'I Call It House!'

| £30

loopmasters.com



Yes! We call this House too. There's so much variety and quality in this pack that we'd say it's possible to put together a track in practically any modern Electronic style using the ammo on board. There's Ethnic loops, old skool Synth Pop

and some great classic Ravey Pianos and hits alongside all the hard, deep dancefloor staples that today's tracks require. Quality throughout is superb and every sound feels hand-picked to sit in the compilation despite its all-encompassing mindset. It's deep, it's mainroom, it's one of the most powerful and useful sample packs you can buy right now. Thoroughly recommended. **Greg Scarth**

10/10

Zenheiser Drum Rolls and Fills: Club

| £15

soundstosample.com



Totally off the wall and just a bit weird, this kit of 200 'drum rolls' sounds like madness but is actually just a bit brilliant. Yes, anyone can take a bunch of cool drum sounds and program them up into velocity ramps and builds but why bother when Zenheiser have done all the hardwork for you. We had great fun dragging and dropping these amazing bursts of energy and excitement around Funky House and Electro works in progress and they never failed to inject fun and anticipation. There's military rolls, bizarre, effected Glitch loops and surging building eighth, 16th, 32nd, 64th House burst that go off like a machine gun. Just the thing to make your drop seem extra massive. Simple but amazingly effective. **Daniel Griffiths**

8/10

Bomb Squad: Tactical Beats & Sample Artillery

| £35

loopmasters.com



Just stunning. No messing. No cheese. This is all about the beats – and not just individual hits and loops but huge, track-filling soundscapes of Glitchy-hits, crunchy Hip Hop stolen snatches and amazing, unrepeatable and unplaceable percussive synths and effect atmospheres. Sometimes African, sometimes Urban but all the while dangerously cutting edge and ripe for experimentation.

It's a huge, genre-crossing compilation and just because this was put together by the genius that is Hank Shocklee (of Bomb Squad and Public Enemy fame) should you assume this is purely Hip Hop. The sounds at play here could equally drive Dubstep or even give a glistening top loop to Minimal House.

Not too sure about the slightly daft folder naming protocol (samples being grouped in terms of 'Sniper Weapons' 'Anti-Tank Weapons' 'Traumatic Weapons' and more) but the net result is a veritable army of fresh 2012-ready beats. Can't wait to deploy this lot in our next manoeuvres. Ten-shun! **Will Seelig**

10/10

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Q&A

Our panel of experts answer your music-making questions, from hardware issues to software ideas, with tips and tricks along the way

iPad audio recording

Conor Lee asks:

Q I've got an iPad and I'd like to start using it as a multi-track audio recorder. I've seen various apps out there, but none of them quite fit my requirements (I don't want any internal instruments and I'd like more than eight tracks to work with if possible). Do you have any recommendations or am I just asking for too much at the moment?

Mark Gyver replies:

A When Apple launched GarageBand for iPad, some speculated that it might deter other developers from releasing DAW-style apps for iOS, but as you've proved, some people aren't bothered about Touch Instruments and just want a

comprehensive set of audio recording and editing tools. Arguably the best app that currently provides this is 4Pockets.com's Meteor, a straight-up audio recording solution that enables you to work with up to 12 tracks. What's more, these can be mixed down to stereo, so if you're prepared to keep bouncing, you should be able to have all the tracks you need.

Other notable features include a sample editor, basic automation and effects, though it should be noted that compression, distortion and EQ have to be acquired separately for £1.79 each as in-app purchases.

Meteor itself costs £11.99 – significantly more than GarageBand, but it is an app that feels capable and serious. And that's still not too much to pay to turn your iPad into a multi-track recording studio.

Meteor Power

4Pockets.com's Meteor is one of the best-spec'd iPad audio recording apps on the market.



THE EXPERTS

Mark Gyver computer music expert



With 15 years of music production experience, Mark knows everything (and more) about the current and classic software market.

Doug Kraul technology author



Doug Kraul is an electronics and computer industry innovator, who has designed analogue modular synthesizers and MIDI devices.

Dan Goldman artist/producer



Aka JD73, Dan is a session keyboardist, producer and remixer, specialising in vintage gear, mixing and production techniques.

To send in your queries you can email us at futuremusic@futurenet.co.uk and we'll pass them on to the relevant expert. Or write to **Future Music Q&A, 30 Monmouth Street, Bath BA1 2BW**

Keyboard fail

Dan Nolan asks:

Q My MIDI keyboard controller has suddenly failed. A number of keys no longer send MIDI, in some cases entire octaves. The keyboard has not suffered any physical abuse. I could understand a key or two failing because of dirty contacts but since the number of keys is so great I fear something else. Any ideas what might have occurred?

Doug Kraul replies:

A Software failure, though unlikely, can produce similar symptoms. This might happen if your sequencer's MIDI input handling has somehow become incorrectly set up or even corrupted. Whether this is even possible depends on the sequencer. Fortunately it is easy to check. Run a MIDI monitoring program like MIDI Monitor for OSX (snoize.com/MIDIMonitor), or MIDI Ox for Windows (MIDIox.com). Set it to monitor the MIDI from your controller. Start at the first key and strike each one in succession. You should observe a MIDI note message in the monitor each time you strike a key. If a key does not send a message then it is 'bad'. If all keys work as expected then your problem lies with your sequencer software.

Once you have confirmed that the keys have actually failed there is no easy way to determine if it is an electronic failure or a key switch issue. Normally we expect electronics to completely stop working but switch controller electronics can partially fail. Such failures might manifest themselves as groups of keys not working, or a pattern like every "nth" key. Unfortunately the only way to confirm, then remedy such failures requires knowledge of electronics troubleshooting and repair.

Physical switch failure normally arises due to some type switch contact contamination – far less likely is the switch simply wearing out. Smoking near your controller or poor air quality, like urban pollution in some areas, can cause contamination. Which keys are affected depend somewhat on chance and how often the key is played.

You can sometimes bring a key back to life by repeatedly playing it. However your best option is cleaning the contacts. This involves opening the controller, locating each key

Turn Off Those Effects!

Caitlin Slater asks:

Q I use a workstation keyboard and record a lot of its sounds into my software sequencer.

Many of my favourite sounds from the keyboard use the synths's built-in reverb. Should I record these sounds with the synth's reverb, or should I apply reverb with one of my sequencer plug-ins?

Doug Kraul replies:

A There is really no right or wrong answer here. It depends on the sound, what you are trying to accomplish, and the other elements in the mix. Some synth presets are designed to sound full and lush when played by themselves but can overwhelm a mix when played with

others. Decide whether you should bypass built-in synth effects based on what works with your song. The final judgement is best left to your ears!

That said using different reverbs with different settings on different sounds often causes the individual parts to lose definition. Furthermore an assortment of reverbs can interfere with creating an authentic illusion of

front to back sound placement. The mix may sound more artificial when each part appears to be in its own acoustic space. It's often better in these circumstances to turn off the individual reverb effects and use a send buss to share a single reverb effect. When you select a preset ask yourself if its effects are really needed, especially if it uses a lush reverb effect. Anticipate whether other sounds might require similar effects and try to imagine how they blend. You can always add the effects later but it's difficult to remove them from a recording!



Built-in effects often sound lush when played alone but can clutter up a mix

Samson's G-Track is a USB mic and audio interface combined



contact, then using a special electrical contact cleaner.

Again, this is something probably best left to an experienced electronics repair technician.

USB mic/interface?

Phil Klein asks:

Q I've got a laptop and, for the sake of simplicity, I'm considering buying a USB microphone so that I can record vocals on the go. However, on occasion I'll also want to plug

instruments in, so could you tell me if there any USB mics that have a suitable audio interface built in?

Mark Gyver replies:

A The product that springs immediately to mind is Samson's G-Track – a USB condenser mic with a built-in audio interface that can accept line/instrument signals. You could even use it to record your vocal and instrument simultaneously.

It retails for £150 but can be picked up for less. You might also consider Apogee's One: this does things the other way round, being a single channel interface that has a built-in microphone.

MIDI Out for GarageBand

Ben Hayes asks:

Q I've been using GarageBand on my Mac for a while and I'm really happy with it. However, I've now decided that I'd quite like to buy a hardware synth, and I've been told that if I want to use that with my computer, I'll have to upgrade to Logic (or some other piece of

software) because GarageBand doesn't support MIDI Out. Is this true, and if so, why is it important?

Mark Gyver replies:

A Apple have done a lot to GarageBand over the years, to the point that it's now a pretty flexible DAW. However, a lack of a MIDI Out option is still one of the things that holds it back, but the good news is that it doesn't have to be a show-stopper.

Before I tell you why, it's worth explaining why having MIDI Out in a DAW is important. In a nutshell, this is because it enables you to trigger MIDI gear outside of it – in your case, this means using an external hardware synth to play back the parts that are currently being voiced by GarageBand's Software Instruments. Of course, you could just record parts from a hardware synth as audio, but if you do this, you'll lose the editability (if that's a word) that MIDI provides.

So what's the solution? A little third-party utility made by RetroWare called MIDIO (mysite.verizon.net/retroware). This is free, and once installed, can be opened as a plug-in

on any Software Instrument track. Once this is working, you can choose where you want to send the MIDI data (to a hardware synth, in your case) and on what channel.

Logic on the road

Simon Danson asks:

Q I want to take my largely electronic project out live by adding in a drummer and some vocalists and I'm wondering what's the best way to run sequences and set everything up.

Basically, I use Logic for writing and sequencing on a MacBook and I'm wondering whether it's stable enough to take out on the road to use for backings. Also, I'm not sure how I would need to set things up for monitoring or to send sounds out front either, so any help you can give me would be appreciated!

Dan Goldman replies:

A If you simply want to take out your tracks as they are and not mess with the arrangements too much, then running Logic will do the job no problem, though there are a few

How Do I Use My Hardware Compressor with Record?

Alex Glenn asks:

Q I have a hardware compressor that I would like to use on some tracks that I recorded with Propellerhead's Record sequencer. Is this kind of routing possible, and if it is

would you walk me through how to set it up?

Doug Kraul replies:

A Record has quite flexible audio routing facilities so it's more than capable of using external

hardware devices as effects processor. However, there is something you need to keep in mind whenever you send audio through external hardware devices: latency.

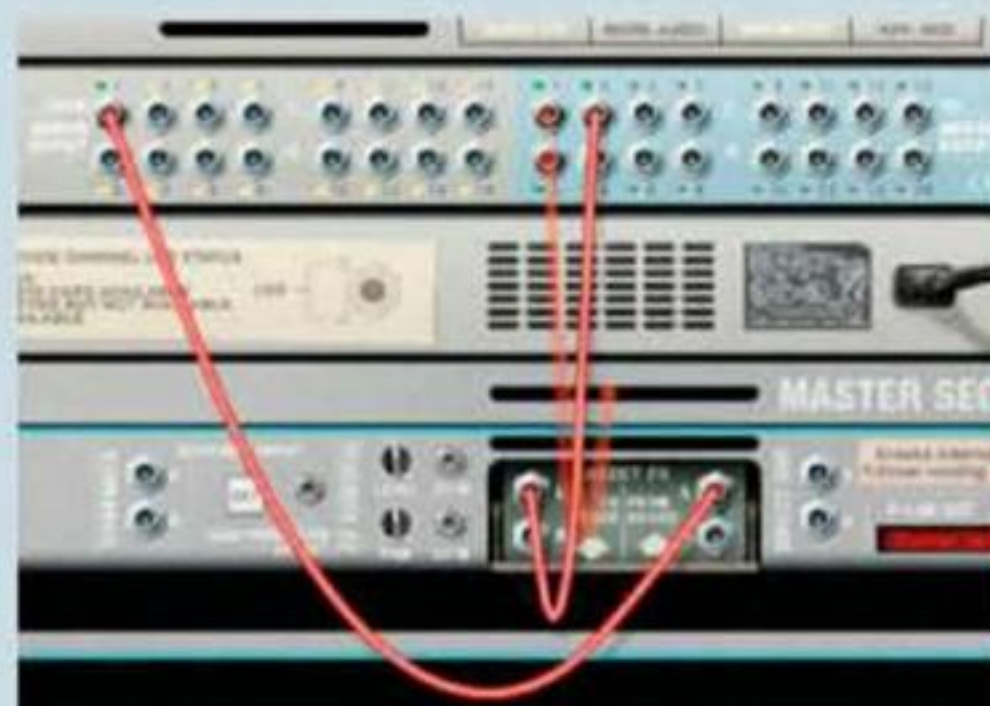
Audio encounters a short delay when it leaves Record

through your soundcard outputs, and when it returns through the inputs. Digital hardware effects processors also add delay. These delays cause your audio track to play behind other tracks. You may need to manually adjust your

track timing to compensate for the delay. Round-trip delay can also lead to phasing problems when you mix the return audio with the original, such as when you are using external processing for a send effect. If this delay proves to be a problem you will need to delay the original audio before it is mixed with the return audio. Here's how you would set up a Record track to use a mono external compressor as an effect.



1 Open Record's rack and flip it around to show routing cables. Find the track where you want to add the external processor. Open its insert I/O panel by pressing its 'Show Insert Effect' button. These jacks are used to patch effects in the track's signal chain.



2 Wire the left 'To Device' jack to the soundcard output that you connected to the hardware compressor. Connect the left 'From Device' jack to the soundcard input that connects to the compressor's output.



3 Before adjusting the external effect processor place it in 'bypass' mode and play your track to confirm that everything is properly wired – you should hear the original track. Once you've confirmed the wiring turn 'bypass' off and you are ready to use your hardware effect.



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pointers that will help things run smoothly. Try using as low a buffer size in Logic as possible to avoid any latency problems first off and it's worth bouncing things down to stereo or mono audio stems, as this will put less strain on the computer.

Running lots of MIDI or audio instrument tracks live is not advisable and can be a recipe for disaster, especially as Logic's MIDI timing isn't always the most solid, particularly when lots of MIDI tracks are firing off.

So, bounce down a percussion stem, a keys stem, strings stem and so on – this way it keeps things a lot simpler too and easier to tweak levels quickly for different venues. Once these stems are bounced, you can assign each stem (which can be mono or stereo as you need) to its own stereo or mono output in Logic, which will then pass into your audio interface (FireWire or USB).

From here, grab a high-quality eight-way loom (normally jack to XLR)

and plug out of your interface's outputs into the stage box that goes to front-of-house, or alternatively you can plug into a mixer to mix the levels onstage before sending to front-of-house. Don't forget you'll also need to sort a click for your drummer and put that on its own stem too, (running alongside all the other audio stems) and pan it to one side so that the drummer can get the click in one ear and music in the other (which is the way I've found most drummers like to

work). It may be necessary for the drummer to have his/her own headphone amp too, in order to boost the headphone signal enough to hear it over the live drums.

You'll need to provide a clear count in before each track kicks in and the best way to do this is to use a clear sound such as a cowbell, woodblock or shaker which should play a four-count then a spoken '1,2,3,4' (so eight clicks before the track starts) so that there is no mistaking when the track is going to kick off. This click track should also run throughout the whole track, so again make sure it's a sound that cuts through well and make sure you don't send the click out front!

Finally, in order for everyone else on stage to hear the backing track, you'll need to get your monitor engineer or front-of-house sound guy to send an aux feed back to the on-stage monitors or in-ear headphones and sound check those levels along with everything else.

Key skills

Pete Simpson asks:

Q I'd love to improve my keyboard skills in the studio and I'm thinking you might be able to give me some pointers. At the moment, I'm saving for some keyboard lessons but if you could give me any tips in the meantime that would be great.

Dan Goldman replies:

A One of the main problems I see when I'm teaching piano is lack of finger strength so make sure you try and build yours up as much as possible. Scales and arpeggios are a great way to build strength and dexterity so bob down to your local sheet music shop or online and grab a Classical or Jazz scale book and work through them. To learn chords, start off by learning all the basic three-note major and minor chords (triads) then embellish them as your music requires. Try and play from your fingers not your wrists and arms, this will make playing easier and give you better dynamic control over the keyboard. Don't forget one of the best forms of practice is to always force yourself to train your ears and fingers by playing along with your favourite records. Finally, always practice to a beat or metronome to improve your timing, as this will always help both your playing and productions.



Online Synth

Soundation Studio's new Wub Station isn't actually a plug-in, but it looks and sounds like one.

Online Plug-ins?

Paul Knight asks:

Q I was wondering whether there's any online DAW out there that will enable me to use all my VSTs? I've seen basic browser-based music-making apps in the past, but nothing on this level. I've heard some talk about Ohm Force's Ohm Studio – could this be what I'm looking for?

Mark Gyver replies:

A Ohm Studio is certainly looking good (it's not actually out yet)

but it's important to understand that the application itself doesn't actually exist online. It supports VST plug-ins and allows you to collaborate with others via the internet, but the software still installs on your Mac or PC.

Sadly, I can't point you in the direction of an online DAW that has plug-in support – it just isn't something that's possible at the moment, and it may not be in the future, either. The better news, though, is that we are starting to see more

advanced virtual instruments existing online.

If you're looking for evidence, check out Soundation Studio, a free online DAW from PowerFX. Launched in 2009, this was recently equipped with a new plug-in-style instrument called the Wub Machine – a two-oscillator synth that specialises in Dubstep, Drum 'n' Bass and Grime sounds.

OK, it isn't a VSTi, but it opens like one, looks like one and sounds like one. Then there's Audiosauna, a

new online studio that's currently in beta (audiosauna.com). Open this up and you'll find that it has analogue and FM-style synths with proper interfaces and – again – decent sounds.

So although they can't use plug-in instruments, the latest generation of online DAWs is starting to provide sound-making tools that can compete with them. Check out *FM's* last issue (242) for a whole feature on online music-making.

Q **Anne Dudley asks:** Herbie Hancock's *Headhunters* has always been one of my favourite records of all time but I've been unable to recreate the bass sound on *Chameleon* so far. Could you show me how to do this using one of Logic's synth plug-ins?

A **Dan Goldman replies:** The bassline on the intro to *Chameleon* is probably one of Herbie's most well-known (and most sampled). There's something about that particular sound and the way it overdrives and punches that is quite hard to recreate, but it is possible. Also, don't forget that tape was the recording medium of the day, so we'll employ some tape emulation using Logic's delay plug-in to get even closer to the original sound.



1 Herbie used an original 'white face' Arp Odyssey for the bass in *Chameleon* so let's use ES1 to emulate the original two-pole filter. Load up an instance in Logic and select the 12dB (two-pole filter). Two-pole filters generally sound slightly thinner, punchier and more raw, compared to 24dB four-pole filters. Set the filter cutoff to the second notch on the cutoff dial with triangle wave on osc one and the sub osc to the stepped wave. Set the attack control to the fastest time for maximum snap.



2 Next set the wave/sub mix to just under half to get more growl into the sound and push the filter resonance up to half way to add more squelch. Reduce the voice control to one voice, to turn ES1 into a mono synth. Now set the 'int via velocity' slider to control filter cutoff, set the slider to notch number five and lower the filter cutoff dial to almost closed. This gets the sound much closer to the original.



3 Now let's adjust the envelope a little. Bring down the decay slider to just below the mid position and sustain down to the halfway point to add more punch to the initial transients of the sound, while sloping off the tail. Also, let's slightly slow the initial attack using the attack slider and increase the resonance up to around the three quarter point on the resonance dial.



4 This sounds pretty close to the original now so let's add some compression to control the sound a little and make it sound a little more like it's going to tape. Use Logic's own compressor plug-in set to 'AR' mode with threshold at -35.5, ratio at 1:3:1 attack at 12.5ms and release at 11ms. This tightens up the sound nicely and smooths out the peaks.



5 Insert an instance of Logic's bass amp plug-in into insert two on the channel and select the 'Top class D.I. Mid' preset to simulate a high-end D.I. box. Set pre gain to 7.3, bass to 5.0, mid to 7.5, mid frequency to 1600Hz, treble to 8.5 and output level to -5.5. This helps give more of a weight to the sound and the mid boost helps bring out the grit.



6 The final step is to call up Logic's tape delay plug-in to use as a tape emulator. Untick the sync box, set delay to 0.0ms, feedback to 50%, dry to 49% and wet to 35%. This really adds a tapey tone to the sound and takes us right back to the '70s! There you have it – Herbie Hancock's *Chameleon* bass sound! **FM**

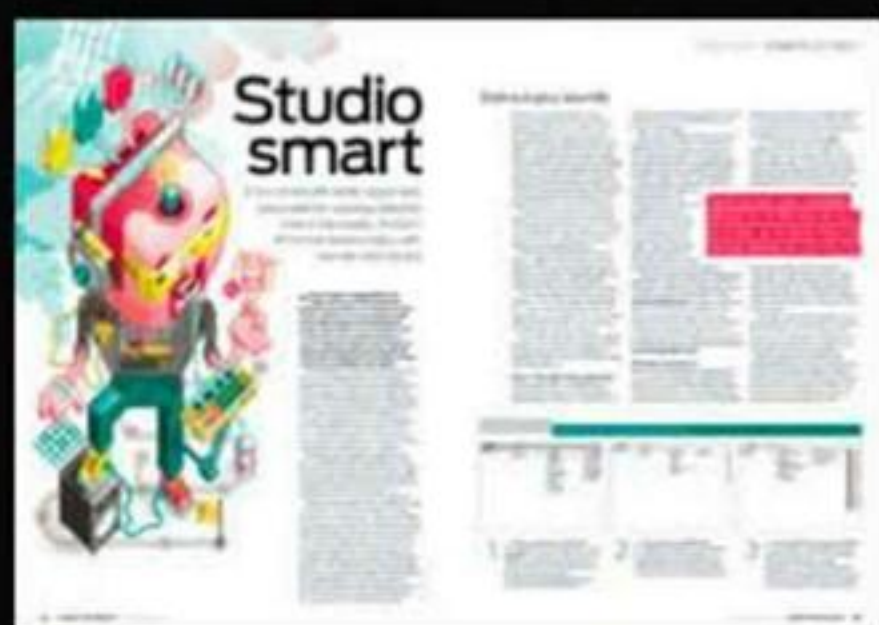
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Software

- > Logic Studio 9
- > Various Logic effects
- > Plogue Chipsounds emulating a C64 and a Colecovision
- > G-Force impOScar
- > iZotope Stutter Edit
- > iZotope Ozone 4

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> "The Focusrite VRM Box has been a lifesaver. The more natural stereo field it creates significantly reduces listening fatigue, and the ability to emulate different listening environments offers me a much greater range of reference sources during mastering sessions. This helps to really fine-tune the problem areas in a mix."



Solarno Cyclic Connection (Glytch-Pop Mix)

Contact: soundcloud.com/solarno



You can tell that this is going to be something special from the moment it flickers into life.

The soundfield is alive with flickering Glitchy beats and the digital lo-fi sound is brilliantly offset with a warm, well-rounded bass.

The mix is surprisingly balanced given the size of your studio, but perhaps there's a little too much top end brightness. It's when the track calms down, such as at 2:16, where things sound the most comfortable. Don't get us wrong, we love the bit-crushed 'crunch' to this whole track

but avoid any sustained use of overly shrill sounds if you're going for that more digital 'buzz'.

Love the multitude of stutter effects going on here – proof that it really is worth the effort to go back through a track and automate and have fun with what you've created using spot effects and edits even if you think you've finished. The result is a track that never stops moving and you're never quite sure what's coming up next. The instant you can get a 'fix' on a track's construction is the moment it becomes less interesting. Good work!

Great sounds, great arrangement and some brilliant programming too!

The Artist



Name:

Jim Furey

Where:

Los Angeles, California, USA

My track: "This mix

of Cyclic Connection has a raw SynthPop and Electro heart backed by a Glitch/IDM element to offer sound variation throughout the song. I drive the listener through the song with a strong but steady diet of kicks and syncopated melodic lines. There's definitely a lot going on at times but it's spread around the sound field so as not to overburden the listener."

Which bit of this track are you most proud of?

"I really like the results in the bassline as I layered an impOScar bass for analogue warmth with the EFM1 to add some FM grit and an occasional touch of pulse wave squelch from a C64 (via Plogue Chipsounds). Add some slight panning and EQ to focus/separate the frequencies and I ended up with a bassline that sits well around the kick."

If we were to give you £5,000 for gear what would you spend it on?

"I'd start with a sub to get a better sense of the low end in my mixes. After that I'd look into an actual hardware synth like the Arturia Origin."

The Best of the Rest...

Sventronic Dirty Data

soundcloud.com/sventronic



Time for some frantic, bubbling, Acid-ic Electronica for you.

There's definitely some UK Ravey flavour here and

everything is pleasingly low key and understated. And that electronic piano work is actually pretty damn Jazzy. It's a track with a bizarre personality of its own. Perhaps like it's maker Christopher Watson?

"I'd say the element of the track I'm happiest with is actually the mix,"

he says. "Being quite new to Electronic music means there's been a steep learning curve with the tech side of things rather than the compositional side. This is one of the first tracks where I felt really in control of the sound I was after, and I'm pleased with the tightness of the

percussion. I used the EQ and compression plug-ins that come with Logic 9 to get it."

Yup, it's certainly a very up-front sound. We'd prefer a little more warmth and low end, as all those rushing and clanking synths can be a bit wearing but fortunately there's always a neat musical key switch to keep things interesting.

"My set up is incredibly minimal and portable at the moment (owing to

the fact I travel constantly in my day job as a freelance singing teacher/pianist) but I'd love a Moog Voyager!"

Bam Spacey Lausanne

soundcloud.com/bam-spacey



Wow. That's a gorgeous fat bass sound and the delay on that lead synth is just perfect. It's 2011 Vangelis right

there! "I'd call this a dreamy Disco-meets-Deep House track with Pop-like vocals," says the track's master Magnus Johansson.

It's certainly very chilled and we love the detached, disembodied vocal performance and treatment. It really sits in the mix as part of the track, and the choice of sounds here – warm and analogue – are nicely offset with the biting, scissor-like top percussion. "I usually get overly excited about chords," says Magnus "So I'd say the chords that start at the break are my favourite part. I love the way they evolve the track and they're just a preset on the Sylenth1 with Sugar Bytes WOW filter on and Live's own Simple Delay. I usually keep things pretty clean and simple when it comes to effects." This track sounds all the better for it. Brilliant.

Bootleg Ben Prosthetic Brain

soundcloud.com/bootleg-ben



Another slightly spooky Minimal offering now. A bizarre vocal sample echoes

its way along detached popping and thudding slabs of sound. And there's a great sense of control here with everything feeling amazingly taught, only to be let loose from time to time into great pools of dub delay and domes of reverb.

And when the shuffling hi-hat line drops at 2:33 it becomes a definite head-nodder! "I'd describe this track as an atmospheric piece of Tech House," says Ben Ashley. "I'm most proud of the bassline which comprises of two separate parts. One part is one I wrote with the Arturia Minimoog and the other is a sample which I stumbled on when auditioning samples for Impulse in Live. I also like the shuffling percussion that comes in at about 2:30. I think the subtle toms really add some groove!"

We think our favourite element is that you're not afraid to drop out huge chunks of the track to give each element its time in the spotlight. The glaring emptiness from 3:35 sounds amazing and really highlights your – frankly – weird percussion and that scary sounding drone. Awesome.



SELECTED KIT

Hardware

- > Apple Mac Pro
- > UAD-2 card
- > UA 2-610
- > RME Multiface
- > Alesis 3630
- > Moog Source
- > Roland Juno-60
- > Roland SH-2
- > Studio Electronics SE-1X

Software

- > Logic 9

FAVOURITE GEAR

- > "My analogue synths. you can't replace an analogue warm sound with a plug."

Binary Boys Feat. Aktarus Bisou na Bisou

Contact: soundcloud.com/binary-boys

Love the big kick and snare sound here. Really in your face and old skool!

And we're suckers for a nice monotone Pop vocal. But when this kicks off with those big synth pads there's a really cool musical vibe to this. In a word – wicked!

"We're Matthieu from Villeteuse, and Bastien Deshayes from Paris. We usually specialise in music for TV commercials but Binary Boys is one of our side projects," say the guys. "We'd call this track a tropic Club sound with a sunshine Pop feel." Spot on.

There's definitely slightly crazy, tropical vibe here that's brilliantly at odds with the robotic synths and vocals. And the funky shuffling snare drums are pure street party.

"No hardware was used on this track, except a live snare drum roll that we recorded using a Shure SM57. We both use Logic Pro 9, so we synced our computers and started jamming, then we merged everything on one computer too." Truly a killer combination. Don't let all that ad work stop you being more Binary!

Hot Pick



SELECTED KIT

Hardware

- > Apple MacBook Pro
- > M-Audio Oxygen 49 MIDI keyboard
- > KRK Rokkit 8 monitors
- > Dr Dre Beats Studio by Monster headphones
- > Native Instruments Audio Kontrol 1

Software

- > Logic Pro
- > Lennar Digital Sylenth1
- > Rob Papen Predator
- > Vengeance Metrum
- > PSP Vintage Warmer 2
- > iZotope Ozone 4

FAVOURITE GEAR

- > "Now that I've got Metrum, I can't live without it. I saw Joachim Garraud use it in *The Studio* in *Future Music* issue 241. I just paused the video right there and bought it!"



Mediocre Soap (Original Mix)

Contact: soundcloud.com/mediocre

We can really hear this dropping effortlessly into a Minimal set when the DJ just needs to heat things up a bit.

Love the two opposing, push-'n'-pull basses. When the 'rave' line dips in and out of it's reverb and delay there's a warm drone filling in for it. And great effects automation. The build at 2:18 is absolutely textbook stuff too!

The percussion is brilliantly tight. A good mix of synth plinks and blips and a nice, funky, real tambourine and

shaker to give the track just that hint of wiggle. There's so much high frequency excitement here. The shimmering, fizzing passage at 3:30 sounds great. We would have dropped that into a real bass heavy passage with a sudden cold edit but hey, this track is still rocking.

The hypnotic droning parts building at 4:40 sound amazing and the whole track sounds alive and edgy without any particular tone being too obviously dominant. And your drums sounds great – really locked with that nice warm bass. Brilliant mix. Love this!

The Artist



Name:

Jan Roumeliotis

Where:

Stockholm, Sweden

My track: "Lately

I've been really

influenced by all the great stuff that Toolroom Records put out, so I aimed for that fresh, controlled sound and just lots and lots of energy to get people in the right mood! I'd say this is a great way to start an energy filled DJ set."

Which bit of this track are you most proud of?

"I love the 'bouncy' sound that comes in after the second break. It kind of gives the song another dimension, and just sounds so fresh. It was actually made with the ES P synth that comes with Logic. I just tweaked the sound until it felt right, put some white noise on it and sidechained it."

If we were to give you £5,000 for gear what would you spend it on?

"I would put the money on acoustic treatment any day, it's so much harder to get the mix right if you've got sound bouncing all over the place."

Nerd Rage! Third Hour (Original Mix)

soundcloud.com/nerdrageofficial



Back on the dancefloor now with a suitably stern combo of kick and clap

courtesy of Haakon Siri from Norway. It's a big club sound with a cool bouncing, shuffling feel. And when the synths and drums drop large at 2:00 it becomes very tricky to classify! "This track was my first attempt at making Progressive house, but it ended up being an Electro Progressive track," says Haakon. "I called the track *Third Hour* because I used three hours to make it! The part I'm most proud of must be when the drop comes at two minutes in. This is the part where you're supposed to dance! The sounds I use for the bass are samples made on my Moog Little Phatty, and the saw is reFX Nexus2."

There's certainly a great groove going on with your basic, unfussy drums and shuffling, interchanging synth bursts and bassline elements and you've obviously worked hard – with long filter sweeps introducing the next passage of the track – to make the arrangement as varied as possible. Top stuff!

Richard Horsley Closer

soundcloud.com/richardhorsley



We love the slight 'computer goes out of control' feeling here. It's been a while since

we heard such a digital, thwacking bassline. We're reminded of an old Korg DW8000 we used to have. [removes nerd specs, wipes away a tear] Not too sure about the sassy vocal hits. Perhaps a little lower in the mix and some delay – or at least some modulating stereo effects – would stop them sticking out like an unwelcome intrusion into what could easily be a great quirky little Rex The Dog-style track.

"I'd describe this as catchy Dance track written to try and get people moving," says Richard. "I'm happy with the lead keyboard part which was produced from a mixture of samples from a sample CD."

In fact Richard uses little more than his laptop to make his music which explains the rough and ready feel and obvious, clearly discernible sounds and treatments. Someone give this guy a bunch of new kit (or at least a plug-in or two) and let him make more brilliant music like this!

Sonic Transport System New Horizon

soundcloud.com/sonic-transport-system



Yes! Love that vocal and the mad filtered delay. It's been a while and – without

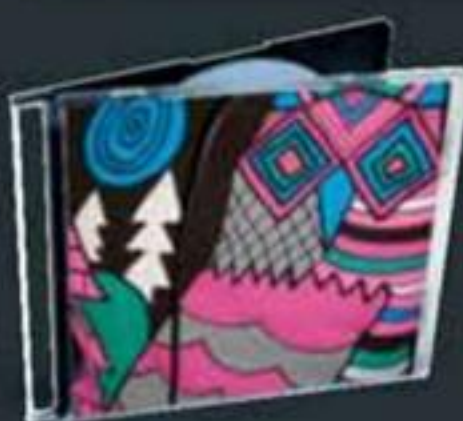
doing your track any kind of disservice – any sound, be it vocal snippet or otherwise, sounds awesome if you let it multi-tap around a stereo delay with a stiff slow filter running on it.

We love the small, intimate sound of this track. That tiny fingersnap-as-snaredrum and the weird 'springy' synth twangs that bounce around the stereo field.

"I'd describe this track as a nice journey into electronic sounds," says the man at the controls, Pedro Dias of Portugal. Suitably understated, we feel. Just like that simple lo-energy finger bassline that we just can't get enough of. Once this track gets flying it's amazingly Trancey. Reminds us of this one time at a rave in Leeds... [fingers decorators dusk mask and plastic smock affectionately]

"The bit of the track I'm most proud is when that little wonder, my Doepfer Dark Energy starts to sing out at 3:47 minutes. You can really hear that typical analog sound." Ah yes. 1989... The music... The mud... The lack of adequate toilet facilities... Sigh. **FM**

Hot Pick



SELECTED KIT

Hardware

- > Apple MacBook Pro
- > KRK Rokkit RP5 G2 monitors
- > Focusrite Saffire 6 interface
- > ESI KeyControl 49 MIDI Controller
- > Shure SRH840 headphones

Software

- > Logic Pro 9
- > Native Instruments Complete 7

FAVOURITE GEAR

- > "I need Logic Pro. That's the main tool with all my recordings. It just makes everything possible. Apart from that I would say Native Instruments Massive. I use it to make so many of my sounds. It's probably my favourite soft synth."



Tut Tut Child Sound Cartoon

Contact: soundcloud.com/tuttutchild

Appearances can be deceptive and that kick and snare combo in the first minute of that track really had us checking our speakers. But the drop (interestingly at exactly one minute in) puts things right. That's a brilliant fat bass and the interplay with the cheesy synths is amazingly funky.

"I'm pretty happy with the main bass sound," says its maker Nick Kingsley. "I made it in Massive and its layered up a fair bit. I think it works well for the heavy half time feel drop, the contrast between the dirty bass and

the relatively clean high lead works well." We couldn't agree more and when the Dubstep/Glitch hits (at *exactly* three minutes in) it's abrasive and nasty in all the right places!

"I want to get more hardware. My studio is very software-based at the moment mainly because it's cheaper," says Nick. "I could really do with a good quality vocal mic. All I have at moment is a Shure SM57 but that works better for instrument recording. I also am in need of a much better keyboard controller, the one I have is so basic!"

Your Foolproof Guide To Future Music Demo Submissions!

- 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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If you're an amateur music maker wanting to take the next step then we want to help



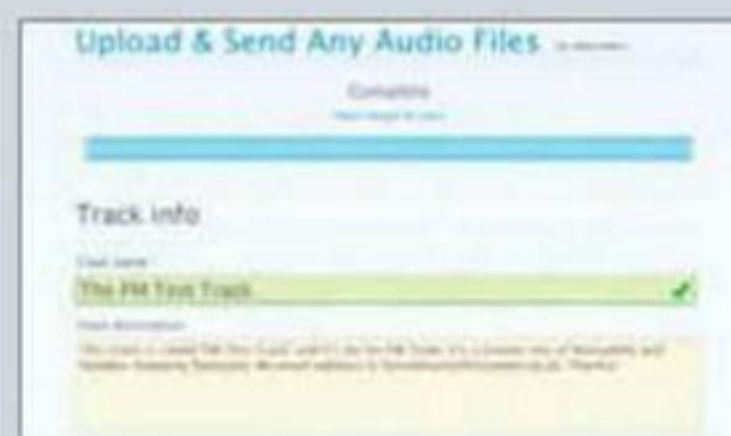
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2 Look for the SoundCloud DropBox

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'. YOU MUST add a description – your name, band name, track name – and give us your email address too! And set your track to downloadable.



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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Create web-ready video, high-quality stereo condenser mics, Advanced, work with SD cards up to 16GB (2GB included), connects via USB to Mac or PC for easy video transfer, composite video output, video resolution: 640x480 @ 25-30fps, compression: video MPEG4, still JPEG, 2.4" display, incl. battery, software, softbag, detachable handle, carrying loop & A/V cable, dim.: 11.4 x 6.3 x 2.5cm, weight: 90g.

€ 63.-
£ 55.-

o. code 256537

Zoom Q3

Handy video audio recorder

Stereo condenser mic, true X/Y configuration, 2.4" LCD display (320x240px), video resolution 640x480 at 30 frames per second, video format MPEG-4 SP, NTSC/PAL TV out, audio formats with video: 44.1/48kHz 16/24bit Linear PCM or MP3 up to 320kbps, without video u to 96kHz/24bit Linear PCM WAV, up to 1 hour video with 2 GB SD card, auto record level. Includes TV cable, soft case, wind screen, 2GB SD card and 2x AA batteries.

€ 85.-
£ 84.-

order code 234280

Zoom H1 Bundle

Mobile digital audio recorder

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.

€ 95.-
£ 84.-

order code 253718

Tascam DR-07

Mobile digital audio recorder

Record and play mp3 (up to 320kbps) and WAV files (up to 24bit), 44.1/48kHz, built-in stereo mic, analogue automatic level input control, analog limiter, stereo line input, headphone/line out (stereo mini-jack), USB 2.0, powered via AA alkaline or NiMH batteries, includes 2GB SD Card and windshield.

€ 133.-
£ 117.-

order code 223287

Zoom H2 4GB Bundle

Mobile recorder

24bit/96kHz, USB interface, record 360° sound as 2-channel data or 4-channel data simultaneously, mic/line input, headphone output, perfect for interviews, podcasts, meetings and live recording. Incl. USB cable, stand, power supply, windscreen and 1GB SD card. Bundle includes additional 4GB SD card.

€ 169.-
£ 149.-

order code 203048

Olympus LS-5

Portable digital recorder

24bit/96kHz, WAV, WMA, MP3 and PCM recording, built-in microphone, large back-lit display, 2GB internal memory, SD/SDHC card extension slot, internal stereo speaker, USB 2.0 connection, optional remote control, dimensions WHD: 4.8 x 13.15 x 2.24cm, weight: 165g (incl. battery).

€ 175.-
£ 154.-

order code 250006

Sony PCM-M10

Portable 24bit/96kHz audio recorder

Built-in stereo microphone, internal speaker, cross-memory recording, internal 4GB flash memory + MicroSD/memory stick micro slot, limiter and low cut filter, 5sec pre-record buffer, manual or automatic recording level control, USB-2.0 connection. Includes power supply, Soundforge Audio Studio LE, cable remote, 2x AA batteries and cable. Finish: Grey.

€ 279.-
£ 246.-

o. code 238886

Zoom R8 Bundle

Multitrack SD card recorder

with 24bit/96kHz USB audio interface, DAW controller and 24-voices pad sampler, 8-track playback, 2-track recording at the same time, 2x XLR/jack ins with 48V phantom power, over 150 DSP effects, built-in stereo mic, powered via batteries, USB or power supply, incl. 2GB SD-card, 1.5GB drum loops and Steinberg Cubase LE. Bundle incl. Superlux HD-651 stereo headphones.

€ 285.-
£ 251.-

o. code 267843

Zoom H4 N

Wizoo Bundle

24bit/96kHz digital recorder
Perfect for interviews, podcasts, meetings and live recordings. 2 built-in stereo microphones, provides 24V or 48V phantom power, USB port. Includes windscreen, USB cable, cover and Cubase LE4. Bundle includes 4GB SD card, Superlux HD681 stereo headphone and Wizoo Publishing 'Mobile Recording' Thomann Special Edition by Kai Schwirzke.

€ 319.-
£ 281.-

o. code 232016

Zoom R24 Bundle

Digital recorder

24-track playback and 8-track recording simultaneous, 24bit/96kHz, 8 ins and 2 outs, built-in stereo mic, compressor/EQ, tuner and metronome, support SDHC cards up to 32GB, USB 2.0, 8x XLR-/TR-Input Mic/Line/Hi-Z, headphone out, incl. Steinberg Cubase LE, 1GB SD card, USB Stick (2GB with Drum Loop Library), power supply and cable. Bundle incl. the t.bone SC400 studio microphone, the t.bone HD-800 stereo headphones and cable.

€ 499.-
£ 439.-

o. code 253669

Behringer DJX 750

5-channel DJ mixer

24bit digital effects, BPM counter with time and sync display, Ultraglides faders, XPO stereo surround effects, 3-band kill EQ, 3-way kill switch, monitor function with master/cue balance control and split option, auto talkover.

€ 166.-
£ 146.-

order code 223751

Behringer DDM 4000

32bit digital DJ mixer

Beat-synchronized sampler, 4 multi-FX sections, 2 patented BPM counters, digital crossfader and MIDI, 4x phono/line stereo channels, 2x mic inputs with gain, EQ, talk function and FX. 4x stereo channels with gain, programmable parametric 3-band EQ with kill function, fader curve control and flexible crossfader.

€ 288.-
£ 253.-

order code 206918

American Audio Flex 100

CD/MP3 player

Frontloader, plays CD, CD-R and MP3, 6 internal effects (scratch, delay, flanger, filter, brake, shutter), touch sensitive jog-wheel, pitch-fader CD (±4/8/16/100%) MP3 (±4/8/16%), 10 sec. anti-shock, fader Q-start, 4 memory buttons, digital output (S/PDIF), dimensions LWH: 34.8 x 24.6 x 10.6cm, weight: 3kg.

€ 139.-
£ 122.-

order code 266010

Pioneer CDJ-200S

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 32Kbps - 320 Kbps / MPEG-2 16 Kbps - 160 Kbps.

€ 333.-
£ 293.-

order code 177972

Native Instruments Traktor Kontrol S4

DJ Audio interface and controller

4-channel mixer with ergonomic layout and 2 high-res jog wheels, 2 analog inputs with phono and mic preamp for CD player or external audio gear, 4-deck-mixing and effects, loop recorder, 2 customizable FX, 24bit/96kHz, MIDI I/O, headphone output, Win XP or higher, Mac OS X 10.5 or higher (Intel), USB 2.0 bus power.

€ 877.-
£ 772.-

order code 253480

Behringer Xenyx X1204 USB

12-channel mixer

4x mic ins, 48V phantom power, low cut, internal 24bit FX with 16 presets, built-in USB sound card, 2 stereo ins, 3-band EQ, 2 aux, peak LED and mute each channel, XLR main out, internal power supply. Includes 19" rack kit, EnergyXT2.5 Compact Music Production Software for Win XP, Vista (32bit), Mac OSX and Linux. Dimensions: 9.7 x 27 x 32.8cm (HxWxD). Weight: 2.8kg.

€ 149.-
£ 131.-

o. code 243148

Mackie ProFX8

8-channel mixer

with built-in FX processor, 4 mic inputs, 3 stereo inputs, 60mm fader, 3-band EQ for all channels, 100Hz low cut and +48V phantom power, RCA tape I/O, mute switch, XLR outputs, USB, dimensions WHD: 35.7 x 29 x 9.1cm, weight: 3.2kg.

€ 189.-
£ 166.-

order code 242355

Behringer Xenyx X2222 USB

22-channel mixer

8x mic ins, 48V phantom power, internal 24bit effects processor, 16 presets, built-in USB audio interface, 4x stereo ins, 3-band EQ with parametric mids, 3x aux, peak LED and mute per channel, 2-track I/O, XLR main outs, 2x subgroups, internal power supply. Includes 19" rack kit. Weight: 4.78kg.

€ 229.-
£ 202.-

order code 243138

Mackie ProFX12

12-channel mixer

with built-in FX processor, 6 mic inputs, 4 stereo inputs, 60mm fader, 3-band EQ for all channels, 100Hz low cut and +48V phantom power, RCA tape I/O, mute switch, XLR output, USB, dimensions WHD: 35.7 x 37 x 9.1cm, weight: 4.1kg.

€ 269.-
£ 237.-

order code 242357

Soundcraft EFX 8

8-channel mixing desk

8x mono inputs, 2x stereo inputs, inserts on all channels, 1x FX send, 1x aux send (pre/post), 48V phantom power, solo/mute switch, integrated Lexicon FX with 32 presets, peak LEDs on all channels, integrated power supply. Dimensions: 33 x 9.1 x 36.2cm. Weight: 4.6kg. Optional rackmount available.

€ 289.-
£ 254.-

order code 118879

Behringer SX2442FX

24-channel mixing desk

16x XLR mic ins, Xenyx mic preamps, 3-band EQ, 2 xFX processors with 100 presets, stereo 9-band graphic EQ, FBQ feedback detection system, 4x subgroups, 4x auxes per channel, internal power supply.

€ 399.-
£ 351.-

code 217454

code 217456

Behringer SX 4882

48-channel mixer

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.

€ 977.-
£ 860.-

order code 246900

Mackie Onyx 1640i

Compact 16-channel mixer

16x mic/line ins, inserts and 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.

€ 1299.-
£ 1143.-

order code 236561

Yamaha 01V96 VCM

Digital mixing console

24bit/96kHz, 24 analog inputs, 12x mic inputs, expandable to 40 channels, includes ADAT interface, 4 FX processors, parametric EQ, includes Studio Manager software.

€ 2444.-
£ 2151.-

order code 161112

suitable flightcase

€ 192.-
£ 169.-

order code 199056

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Digital mixer with integr. audio interface

32x26 FireWire audio interface, 44.1/48kHz, 24 mic ins, 24 line ins, tape in (2x RCA), 2x FX return (stereo), analogue inserts, 10 aux mixes, 2 FX sends, 4 sub groups, class A preamps, dimensions WHD: 63.9 x 54.1 x 17.8cm, weight: 10.4kg.

€ 3259.-
£ 2868.-

order code 245038

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Novation Nocturn 25

USB master keyboard

25 velocity sensitive keys, 8 touch-sensitive encoders, 8 velocity-sensitive drumpads, 14 buttons, modulation, pitch and mod wheel, incl. Automap 3 software and USB cable, for Mac OS X 10.4.11 or better and Windows XP with SP2 or better, dimensions: 47,2 x 6,8 x 26cm, weight: 2,4kg.



order code 236378

€ 129.-
£ 114.-

M-Audio Oxygen 49 (3rd Gen)

MIDI USB Keyboard

49 velocity sensitive full size keys, 8 controller knobs, 9 fully assignable sliders, assignable buttons including 6 transport buttons, Windows XP/Vista 32bit and Mac OS X.



order code 236606

€ 135.-
£ 119.-

Oxygen 61 (3rd Gen)

61 keys.

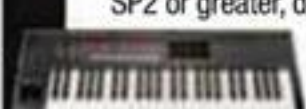
order code 236607

€ 189.-
£ 166.-

Novation Nocturn 49

USB master keyboard

49 velocity-sensitive keys, keyboard from Fatar, with assignable aftertouch, VST/AU/RTAS/TDM plugins, 33 MIDI controller (8 touch-sensitive encoders, 8 velocity-sensitive drumpads, 14 buttons, modulation, pitch and mod wheel), incl. Automap 3 software and USB cable, for Mac OS X 10.4.11 or greater and Windows XP with SP2 or greater, dimensions WHD: 79,8 x 6,8 x 26cm, weight: 3,8kg.



order code 236382

€ 168.-
£ 148.-

Thomann SP-5100

Stage piano

88 hammer action keys, 20 sounds, 20 styles, 60 songs, dual mode, split mode, metronome, DSP, transpose function, headphone output, stereo aux output, stereo aux input, MIDI in/out, USB port.



order code 154090

€ 322.-
£ 283.-

Korg SP-250

Stage piano

60-note polyphony, 2x 11W amplifier, 30 sounds, reverb and chorus effects, layer function with individual volume control, 2 headphone outs, damper, MIDI in/out, keyboard stand, music stand, includes sustain pedal and power supply. Dimensions: 129,5 x 38 x 14cm. Weight: 19kg.



order code 189377

€ 699.-
£ 615.-

suitable flightcase

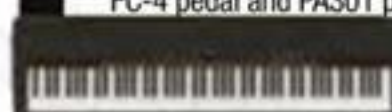
order code 116660

€ 188.-
£ 165.-

Yamaha P155

Stage Piano

88 graded hammer action keys, pure CFIII piano sound, 17 voices, 128-voice polyphony, dual and split mode, metronome, 2x headphone outs, 2x 12W speakers, includes music stand, FC-4 pedal and PA301 power supply. Weight: 18,6kg.



Black & Ebony

order code 223258

Black & Mahogany

order code 223244

€ 1244.-
£ 1095.-
€ 1244.-
£ 1095.-

Roland FP-4F BK

Stage piano

88 keys (ivory feel G keyboard), SuperNATURAL piano engine, session partner function, LCD display, 2x 12W speaker system, incl. DP-10 pedal, MIDI I/O, dimensions: 134,2 x 34,1 x 9,4cm, weight: 16,6kg.



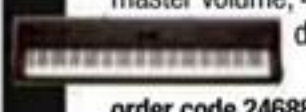
order code 263807

€ 1390.-
£ 1223.-

Kawai MP-6

Stage Piano

88 weighted keys with Ivory Touch key surfaces, 256 sounds, setup memory: 256, 12 tonewheel simulators, 192 note polyphon, DSP effects, pitch bend wheel, modulation wheel, master volume, 4x zone volume, incl. F-10H damper pedal.



order code 246881

€ 1444.-
£ 1271.-

Kawai MP-10

88 weighted woodkeys RH3 with Ivory Touch key surfaces.

order code 246882

€ 2199.-
£ 1935.-

Clavia Nord Electro III

Stage keyboard

Based on authentic emulations of Hammond B3 and electric pianos, Nord sample library support, flash memory for 256MB samples and 126 programs, new effects and amp emulations, compressor and EQ.



61 waterfall keys

order code 220551

73 waterfall keys

order code 220582

€ 1529.-
£ 1346.-
€ 1625.-
£ 1430.-

Roland FP-7F

Stage piano with speakers

88 keys (PHA III), SuperNatural audio engine, 128 voices, 351 tones, compatible with GM2 system, GS and XG lite, built-in audio looper, WAV/SMF playback, mix in, USB (MIDI) and USB host connectors, MIDI I/O, pedal jacks, incl. sustain pedal.



Finish: black

order code 253784

Finish: white

order code 253785

€ 1790.-
£ 1575.-
€ 1790.-
£ 1575.-

ESI ESPI010e

24bit/96kHz PCIe express audio interface

PCIe card with external 19" interface, 8x analog ins (2x with mic preamp and 2 Hi-Z instrument), +48V phantom power, up to 8x analog ins and outs, coaxial S/PDIF I/O, 2x headphone outs, 2x MIDI I/Os, support for DirectWire 3.0, EWDMM driver: MME, DirectSound, ASIO 2.0 support, Windows 7/Vista/XP compatible, power supply optional, incl. Steinberg Cubase LE 4.



order code 230632

€ 155.-
£ 136.-

Focusrite Saffire 6 USB

USB audio interface

2 preamps with 48V phantom power, Hi-Z instrument input with -10dB pad, 24bit/48kHz, MIDI I/O, headphone output, 105dB noise (mic in): THD+N = 0.0025%, 2x combo ins for mic/line/instrument, 4x analogue outs. Includes Focusrite plug-in suite, Xcite+ bundle and USB cable, for Mac OS X or Windows. Weight: 1kg.



order code 236371

€ 166.-
£ 146.-

Alesis IO|26

FireWire audio interface

8x analog mic/line inputs (combo connector) with phantom power and inserts, hi-gain inputs for channels 1 and 2 for guitar recording, 2x headphone outs, 8x analog outs, 2x ADAT ins, stereo 24-bit digital S/PDIF I/O, 2x FireWire ports, bus powered or optional power supply, includes Cubase LE.



order code 192631

€ 215.-
£ 189.-

Native Instruments Traktor Audio 6

Compact DJ USB 2.0 audio interface

24bit/96kHz, 6 switchable 12dBu line/phono inputs, 6 hi-gain outputs, headphone outputs with volume control, low latency drivers (ASIO, Core Audio and DirectSound), status LEDs, DirectThru mode, incl. Traktor LE 2 Software.



order code 261021

€ 238.-
£ 209.-

Native Instruments Traktor Audio 10

Compact DJ USB 2.0 audio interface

24bit/96kHz with High-End Cirrus Logic® AD/DA converter, USB 2.0 bus powered, 10 hi-gain outputs (RCA), 10 inputs (RCA) with 2 optional phono preamps, 1 alternative mic in (XLR), MIDI I/O, headphone out with level control (input 5/6 or output 7/8), low latency (ASIO, Core Audio and DirectSound driver), status LEDs, DirectThru mode, incl. Traktor LE 2.



order code 261022

€ 377.-
£ 332.-

MOTU Ultralite MKIII Hybrid

FireWire and USB audio interface

24bit/192kHz, 2x mic/instrument ins, 6x bal. ins and 10x outs (1/4" TRS), 48V phantom power, S/PDIF I/O, headphone out, CueMix FX, internal DSP, LCD display, suitable for use as a standalone mixer, compatible with Windows and Mac, supports WDM, ASIO and Core Audio, incl. AudioDesk software for Mac.



order code 239141

€ 458.-
£ 403.-

RME Babyface

22-channel USB 2.0 audio interface

24bit/192kHz, 10/12 I/O channels, 2 mic preamps, 2 balanced universal ins for line and instrument, ADAT or S/PDIF I/O optical, headphone out, MIDI I/O, SteadyClock, TotalMix FX with internal effects, DIGIcheck analyzer software, for Win VXP/Vista/7 and Mac OS X.



Finish: blue

o. code 246879

Finish: silver

o. code 258042

€ 539.-
£ 474.-

Digidesign Digi 003 Rack+ Factory

24bit/96kHz FireWire interface

19"/2U, 18 simultaneous channels of audio I/O, 8x analog I/O, 8x professional mic preamps, 48V phantom power, 8ch optical ADAT I/O or 2ch S/PDIF optical I/O, 2ch S/PDIF coax I/O, MIDI I/O, BNC WordClock I/O, 2x headphone outs. Includes Pro Tools LE, Factory plug-in bundle and Pro Tools Ignition Pack 2.



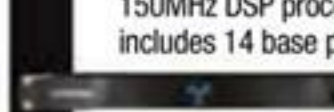
order code 219882

€ 985.-
£ 867.-

tc electronic Powercore 6000

DSP-system

Plug-in emulations of System 6000 (VSS3) stereo source reverb, MD3 stereo mastering, BrickWall limiter, NonLin2 stereo reverb, DWR2 digital vintage reverb, UnWrap stereo surround conversion and TapFactory multi-tap delay, 8x 150MHz DSP processors, -FireWire connection, includes 14 base plug-ins from PowerCore X8, for PC/MAC, VST/AU.



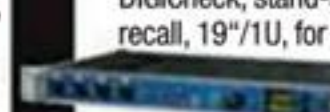
order code 220624

€ 1069.-
£ 941.-

RME Fireface UFX

USB/FireWire interface

Up to 192kHz, 30 I/O channels, 12 analog inputs, 4x mic/instrument preamp (48V phantom power), 12 analog outputs, AES/EBU I/O, 2x ADAT I/O, Wordclock I/O, 2x MIDI I/O, FireWire 400, USB 2.0, TotalMix FX Software, built-in monitor controller, SteadyClock, DIGIcheck, stand-alone operation with setup recall, 19"/1U, for Win XP SP2/Vista/Win7 and Mac OS X 10.5.



order code 255180

€ 1899.-
£ 1671.-

sE Electronics SE 2000 Screen Bundle

Large diaphragm studio microphone

Condenser, cardioid pattern, gold sputtered 1" Mylar diaphragm, 20Hz-20kHz, >16m V/Pa sensitivity ±2dB, <200Ω impedance, <17dBA typical output noise, <0.5% THD @ 125dB SPL, requires phantom power 48V (±4V), includes shockmount. Bundle incl. sE Electronics Pop Screen.



order code 266703

€ 88.-
£ 77.-

the t.bone SCT700 Set

Valve studio microphone

Nice and warm valve sound, 1.07" gold diaphragm. Includes transport case, wind shield, cable, shockmount and external power supply. Bundle includes the t.bone MS180 pop shield.



order code 203197

€ 155.-
£ 136.-

AKG C3000

Studio large diaphragm condenser mic

Cardioid, 20Hz-20kHz, 200Ω, switchable -10dB pad, includes shockmount. Diameter: 53mm. Length: 162mm



order code 141408

€ 189.-
£ 166.-

Shure SM 7 B

Studio microphone

Dynamic studio microphone with cardioid polar pattern, 50Hz-20kHz, bass roll off switch, mid-boost switch, 150?, shielded against broadband interference, fixed stand adapter, XLR connector, includes windscreen.



order code 129929

€ 379.-
£ 334.-

Neumann TLM 102

Large diaphragm condenser microphone

Cardioid pattern, 20Hz-20kHz, 50Ω impedance, 12dB-A equivalent noise level, 144dB max SPL for THD 0.5%, includes SG2 stand mount swivel. Weight: 260g.



Finish: Nickel

o. code 237768

Finish: Black

o. code 237769

€ 549.-
£ 483.-

Digitech Vocalist 2 Live

2-voice vocal harmonizer

2-part vocal harmony, selectable voicing: unison, 3rd, 5th-above or below your lead vocal, vocal enhancement effects matrix with separate compressor, reverb and EQ/enhance controls, XLR mic/line input with level adjustment, low-noise preamp and 48V phantom power, stereo 1/8" line out and mono XLR line out, includes power supply.



order code 113250

€ 179.-
£ 158.-

dbx 1231

Graphic 2x31-band equalizer

Switchable boost/cut range (±6 / ±15dB), ground lift, balanced XLR and jack I/O, gain control, internal power supply. Dimensions: 19"/3U



order code 145238

€ 295.-
£ 260.-

Golden Age Project PRE-73

1-channel preamp

No integrated circuits in the signal path, instruments I/O, mic input max. gain 80dB, switchable impedance 300Ω or 1200Ω, instrument input -20 to +10dB, LED meter, external power supply.



order code 253181

€ 299.-
£ 263.-

TL Audio Ebony A2

Class A and tube stereo processor

Balanced in and outs, stereo, 3-band EQ, compressor section with variable ratio, threshold, attack, release, knee and gain make up, EQ switchable pre and post, analogue style VU-meter for volume/ gain reduction.



order code 201019

€ 469.-
£ 413.-

tc electronic Reverb 4000

24bit AD/DA converter

USB interface, 44.1-96kHz, analog and AES/EBU, S/PDIF, TOS-Link and ADAT digital I/O, includes ICON Software Editor for PC/Mac.



order code 160189

€ 1059.-
£ 932.-

M-Audio AV40 Studiophile

Active 2-way nearfield monitor

4" polypropylene-coated woofers, 3/4" ferrofluid-cooled silk dome tweeters, 20W per channel amplifier with class A/B architecture, 85Hz-20kHz, OptImage III waveguide, magnetic shielding, headphone output. Dimensions: 22.2 x 15.2 x 18.4cm.



order code 110074

€ 175.-
£ 154.-

ESI nEar05

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?



Korg monotron | £192

Review FM240 Small, rock-solid build quality, audio input, sequencer, and a rich analogue sound. You'll be in tiny synth heaven!



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.



Korg Kronos | from approx. £3,000

Review FM241 A hugely versatile workstation with touch screen, sequencer and MS-20 modelling.

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-lab Poly KB | £149

Review FM228 A lush sounding recreation of the classic and rare. Poly Kobo. Great tones with the benefits of MIDI and automation.



u-he Zebra 2.1 | \$199

Review FM183 Subtractive and analogue synthesis with an ultra-phat sound. Ideal for shaking ground and wrecking speakers. In a good way.

MIDI Controllers



Novation LaunchPad | £149

Review FM220 Great features at an amazing price make this Ableton controller a performance dream.



Akai APC20 | £170

Review FM227 A more compact, better-value version of Akai's Ableton front end. Robust build and great features make this very gig-worthy.



Livid Instruments Block | £349

Review FM223 Built out of wood and metal, the Block is a great alternative to the more mainstream controllers.



Native Instruments Kontrol X1 | €199

Review FM223 An intuitive, well-built controller at a great price. If you're a Traktor user, try this.



Vestax VCM-600 | £649

Review FM216 A fantastic way to control Ableton Live. Vestax deliver a well built, fun and feature packed DJ style performance controller.

How Our Chart Works

We've fought, bitched, whinged and racked-up all our favourite gear that's available today into our Gear Chart. If it makes an appearance on these pages, then it's well worth a look. We've appraised the hardware in terms of its price point, performance and usability, along with the fond memories and sheer joy factor of cranking it up for the first time. We're not saying that keyboard number six is 'better' than keyboard number seven, for example. We're saying that you should have a think about the music you want to make, read our recommendations below, and check out the gear that sounds cool. Each month we'll be updating our charts with new finds and introducing new lists to keep things fresh. Special mention to the Digital Audio Workstation bit at the back, which should help you nail your ideal recording solution. We out.

The FM Awards

Editor's choice. If you see this little flag tagged on to one of our reviews it's impressed us above and beyond the usual excellence.

Platinum. Buy these. Unless you've got a perfectly good alternative or produce your music on comb and paper.

Value. A special chapeau to bits of gear that deliver the goods without breaking the bank. Value awards mean great gear at even better prices.

The Charts This Month...

122	Hardware Synths	From two-octave upstarts to two-grand monsters
122	Soft Synths	Our pick of sound-producing software
122	MIDI Controllers	The best performance and studio controllers in town
124	Monitors	Record, mix and master with confidence
124	Keyboard Controllers	Everything you need from portables to studio staples
124	Audio Interfaces	Get audio into your computer with quality and style
124	Effects and Manglers	Warp your sound and break new ground
126	Performance Samplers	Take control of your audio live and direct
126	High-end Audio Plug-ins	Treat yourself to the best that money can buy
126	Field Recorders	Record your band or go searching for found sound
126	Microphones	The best mics around for everyone's budget
127	eBay Classic Retro Finds	Keep an eye out for our suggested list of nostalgic love
127	Ways To Stand Out	Dare to be different and reap the rewards
127	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.



Roland Jupiter-80 | £2,939
Review FM243 It's not the Jupiter we wanted, but dig beneath the wonky interface and discover its power.



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.



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.



NI Razor | €69
Review FM241 A highly-capable Reaktor-based synth from NI. Great for modulated basslines, tones and everything electronic.



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 2 | £445

Review FM243 Still a fantastic-sounding interface but limited I/O at quite a high price might put many off from purchasing this tiny interface.



RME Fireface UC | £746

Review FM219 Robust reliability, rock-solid build quality and the trusted RME sound. Plus it's now on a lovely USB connection.

Effects Plug-ins and Sound Manglers



Korg Monotron | £59

Review FM229 A genuine MS20 filter with audio input, a fat analogue oscillator and LFO make this a must-have studio toy for everyone.



Rodec / Sherman Restyler | £649

Review FM219 A live filter that sounds good enough for the studio. Missing MIDI, but worth a look.



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.



KRK Rokit RP5 G2 | £270
Review FM205 These are so nice to work with our reviewer bought a set for his own studio. Great value monitors with a great punch.



Adam A7X Studio Monitors | £899
Review FM243 The high-end won't be for everyone, but we love it. A great price for a solid set of monitors.



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 keyboard 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.



Mackie Blackbird | £415
Review FM242 All the things you would expect from Mackie in a stable, versatile 16x16 package.



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.



Lexicon Native Effects Bundle | £870
Review FM241 Expensive but immaculate. The hugely-impressive sound of legendary effects.



SubtleNoiseMaker Cacophonator II | £260
Review FM243 A box that makes effects, signal processing and synth sounds completely unpredictable.



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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Performance Samplers



Korg microSampler | £436
Review FM219 Easy to use sampling with some clever extras. Another micro-dominator from Korg.



Akai MPC 5000 | £1,549
Review FM203 The 5000 isn't perfect, but it's without a doubt the best pad-ridden studio-in-a-box on the market. Check it out.



Roland SP-555 | £410
Review FM195 The latest in Roland's line is packed with features. A durable and flexible partner for the loop experimentalist.



Roland SP-404SX | £289
Review FM220 This new update tweaks the original SP-404 but lacks anything really special, so it doesn't climb any places in our chart.



Korg Electribe ESX-1 SD | £516
Review FM231 This classic has been given a new lease of life with an SD card slot and new sounds.

High-end Audio Plug-ins



Celemony Melodyne Editor | £319
Review FM222 A plug-in that has the potential to change music production forever. A killer tool for every genre.



Slate Digital FG-X | from £149
Review FM233 A revolutionary new mastering plug-in from Slate. Hear it and believe it!



Sonnox Fraunhofer Pro-Codec | £295
Review FM242 Real-time auditioning of different audio codecs. Specialist, but vital.



Brainworx bx_XL | €298
Review FM234 Another must-have mastering tool from Brainworx with Mid/Side and dual-band limiting to get the most from your final mix.



Brainworx bx_digital | €398
Review FM200 There's no other plug-in quite like BX's top of the line mastering tool - incredible software.

Field Recorders



Tascam HD-P2 | £729
Review FM186 Built to last and definitely the pro's choice. A multitude of formats and mic settings and superlative sound too.



Roland R-09HR | £259
Review FM204 This flagship recorder will produce crystal clear, 24-bit 96kHz recordings, all from the palm of your hand.



M-Audio MicroTrack II | £229
Review FM202 Not only does this new version look better, but it's also cheaper. A superb update.



Yamaha PocketTrak | £260
Review FM202 This ultra-compact 2GB recorder is a really useful weapon in your recording arsenal.



Edirol R-44 | £499
Review FM205 Record four tracks simultaneously via its quality pre-amps. If you need the flexibility it does the lot and more besides.

Microphones



Neumann Retro NR47 | £999
Review FM225 Despite the choice of name, this mic definitely delivers the classic sound. Bargain.



sE X1 and Project Reflexion Filter Bundle | £169
Review FM223 Unbelievable value for a robust recording solution.



Blue Bottle Rocket Stage One | £600
Review FM222 Interchangeable capsules make this great sounding mic even more of a must-buy.



Sontronics Saturn | £699
Review FM227 It looks drop-dead gorgeous and has a flexible airy sound that suits many different recording situations.



AKG C214 | £450
Review FM205 As part of the classic AKG family, this mic sets itself up nicely to be a recording bargain that holds its own around the studio.

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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.

**Alesis 3630** | £60-90

Released 1991 Noisy, harsh and absolutely pumping, everyone's favourite budget compressor is soon to be discontinued. Grab it now!

**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 1,000 presets from the Matrix 6 make this 1U a fantastic analogue sound source.

**Sequential Circuits Max** | £100 - £200

Released 1984 Limited editing unless you hook up a patch editor. An analogue bargain, if you find one.

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 the mixer.

Good and bad:

New workflow makes SONAR more accessible, but you'll want multiple screens to get the most out of it.

SAMPLE THIS...

A DVD packed full of insanely useful samples courtesy of Time+Space, plus 51 pages of in-depth technique on Creative Sampling. Tutorials from Bomb Squad's Hank Shocklee, Jon Carter and Sharooz. Interviews with Coldcut's Matt Black, Tim Exile and Scanner.



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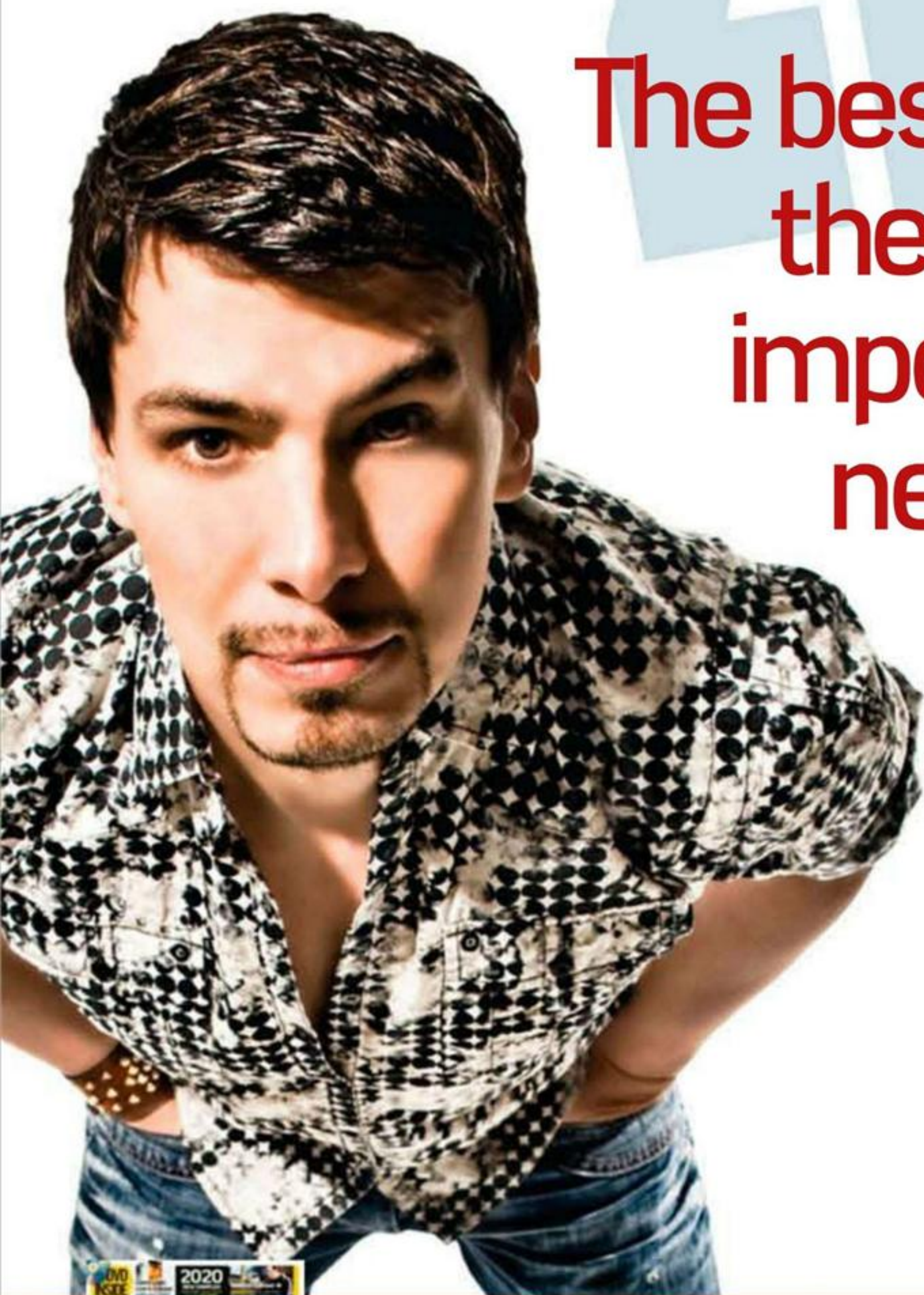
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