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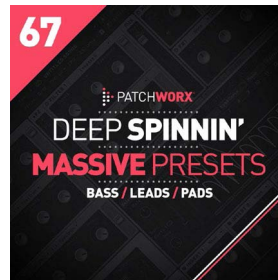
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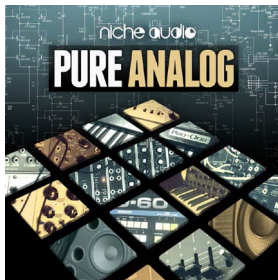
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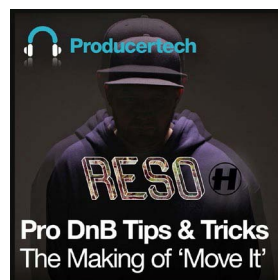
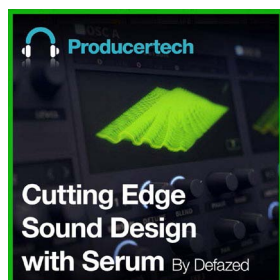
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BIG THANKS TO...

Catherine Hood, Mo Volans, Danny Turner, Tim Cant, Bruce Aisher, Al James, Roy Spencer, Jono Buchanan, Jon Musgrave, Dan 'JD73' Goldman, Trevor Curwen, Joseph Branstom, Daniel Byrne, Gavin Roberts, Joby Sessions, Mark Gyver, Tom Jones, Oli Bell, Robbie Stamp, Chris Barker, Will Seelig

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Group Marketing Manager: Laura Driffield
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PRODUCTION & DISTRIBUTION

Production Controller: Fran Twentymann
Production Manager: Mark Constance
Printed in the UK by: William Gibbons & Sons Ltd on behalf of Future
Distributed by: Seymour Distribution Ltd, 2 East Poultry Avenue,
London EC1A 9PT, Tel: 0207 429 4000
Overseas distribution by: Seymour International

CIRCULATION

Trade Marketing Manager: Michelle Brock Tel: +44 (0)207 429 3683

SUBSCRIPTIONS

UK reader order line & enquiries: 0844 848 2852
Overseas reader order line & enquiries: +44 (0)1604 251045
Online enquiries: www.myfavouritemagazines.co.uk
Email: futuremusic@myfavouritemagazines.co.uk

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Space Exploration



Reverb – it's one of those stock effect types that we all own and all use regularly. It's hugely rare to get through a project without turning to a reverb processor at some point, be it to smooth out the rough edges of a sound, gel elements together or simply to add a sense of space to a track. Once you get to know your chosen reverb tool, it's easy to apply

it on auto-pilot, but step out of your mixing comfort zone, and there's a whole world of unique spacial effects out there. That's what this issue's *Creative Reverb* cover feature is all about – exploring the sonic scope of applying and processing reverb in unusual ways. Don't miss the accompanying audio examples too, which can be downloaded – along with the rest of this issue's video, audio and samples – from <http://vault.futuremusic.co.uk>.

There's still time to enter our massive backline competition too. In conjunction with our sister magazines, we've rounded up a huge bundle of music gear worth over £14,000, including synths, software, interfaces, monitors, guitars, amps, drums and loads more! Head to **page 56** to find out more. We hope you enjoy the issue!

Si Truss, Editor
simon.truss@futurenet.com

EXPERT CONTRIBUTORS THIS MONTH...

Mo Volans
producer, engineer



Studio ace Mo knows his way around a rack of effects, be they virtual or analogue. He brings that expertise to this issue's *Creative Reverb* cover feature on page 28, and shows us how to liven up our tracks with unique spacial effects.

Bruce Aisher
musician, producer



A notable fan of anything that involves a few patch cables, Bruce has been getting plugged into Roland's new range of Eurorack-friendly Aira effects units. Find out what he makes of all four in *Modular Monthly* on page 58.

Jono Buchanan
producer, musician



Our resident Logic expert has been getting to grips with the new additions in the latest free update. Let him guide you through getting the most out of *Alchemy*, along with the rest of 10.2's new features, in this issue's *Producer's Guide*.



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IN THE STUDIO: Jean-Michel Jarre

Famed for 1976's multi-million selling *Oxygène*, Jean-Michel Jarre is still innovating. We visit the synth legend in his studio in Paris and discover the story behind new album, *Electronica*



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IN THE STUDIO: Fehrplay
We track Fehrplay down in Ibiza and find out how he makes his massive tracks

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REVIEW: Sequential Prophet-6

The hotly anticipated Prophet-6 has landed on the *FM* test bench and we're just a little excited!



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Creative Reverb

Twist things up for unique reverb effects

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INCLUDES VIDEO

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INCLUDES VIDEO

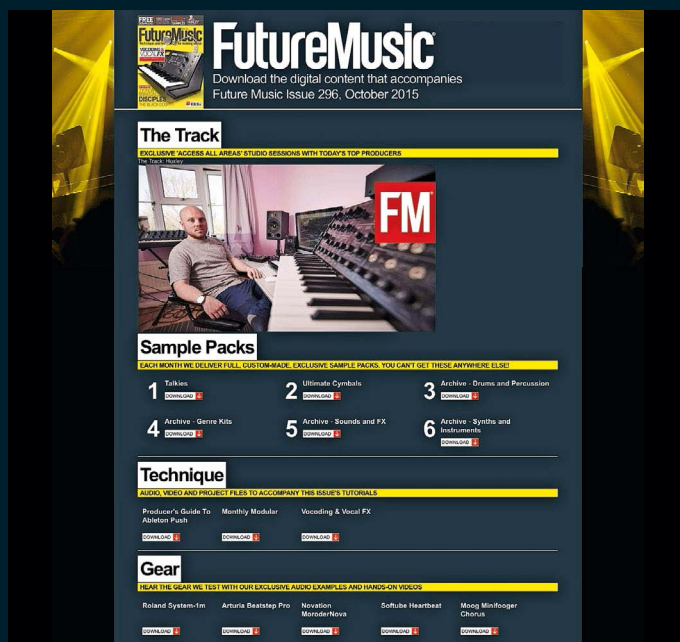
Producer's Guide

What's new in Logic Pro X 10.2?

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ON VIDEO

- > Roland Aira Effects
- > Sequential Prophet-6

AUDIO DEMOS

- > FabFilter Pro-C 2
- > UAD 8.3 Plug-Ins
- > Korg iM1



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INCLUDES VIDEO

THE TRACK: Miguel Campbell, *Free Falling*. Campbell breaks down his latest release, created with vocalist Beccs Lott



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FEATURE: Creative Reverb

Liven up your tracks with unique spatial effects – our guide to getting creative with reverb will get you experimenting



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INTERVIEW: Synkro

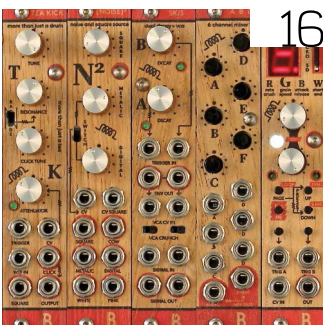
Synkro talks us through the lo-fi studio set-up that has proved inspirational in the making of his debut album *Changes*



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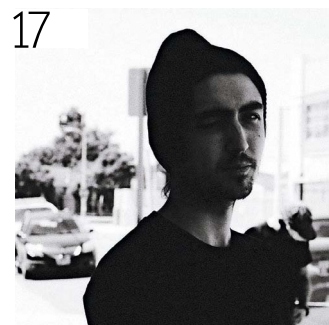


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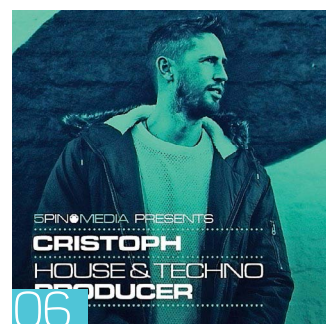
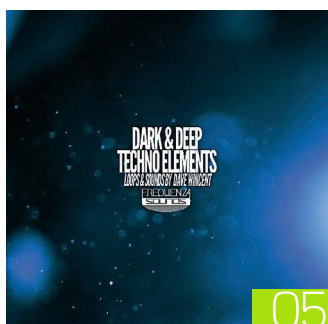
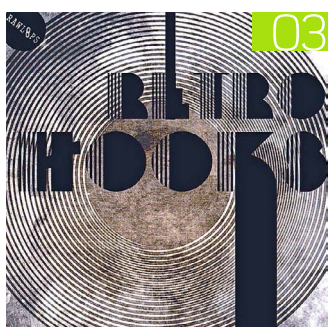
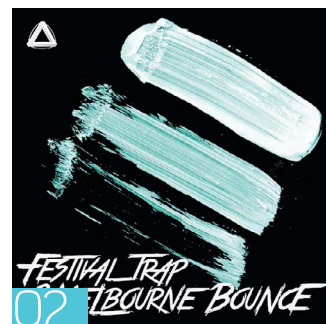
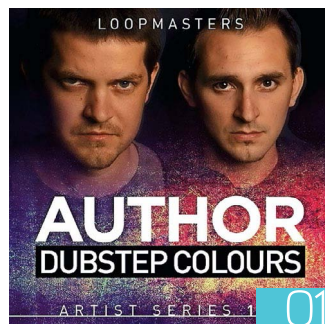
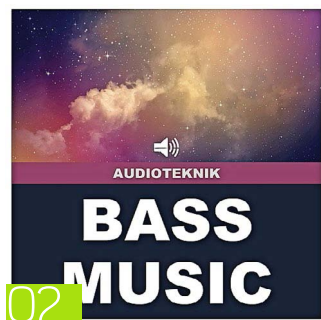
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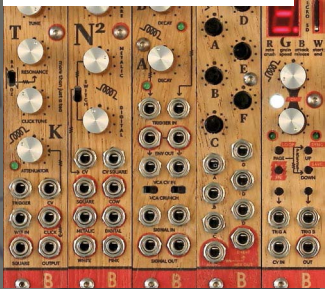


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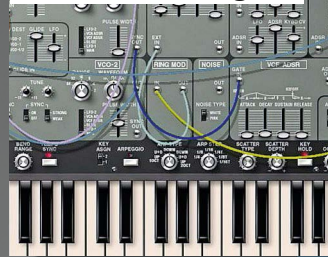
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16 Bitwig Studio 1.2 update



16 Roland System-100 for VST, AU & Plug-Out



17 Talking Shop: Sage Caswell





Welcome Reaktion

A price drop and overhauled UI make NI's 'DSP environment' more approachable than ever

Some 19 years on from its original release as **Generator**, **Native Instruments** have unveiled a major update to their DSP-based custom synth environment **Reaktor**.

Clearly aimed at tapping into Eurorack's recent surge in popularity, **Reaktor 6** significantly shakes up the format of the software, making the UI more approachable and user-friendly, while also throwing a substantial price drop into the mix. The new interface framework, named **Blocks**, takes its visual cues from modular hardware and is designed to be

cross patched in a similar manner.

The software comes stocked with a total of 30 **Blocks**, divided into several categories.

Bento Box **Blocks** offer classic modular synth components – such as oscillators, filters, envelopes, and so on – while **Boutique** **Blocks** are modelled on more esoteric units from the modular world. **Digilog** **Blocks** will, according to NI, be used to, “create complex rhythms, process notes and provide structure in patches”. Finally NI **All-Star** **Blocks** are the company's own range of **Reaktor**-based instruments,

including the likes of **Monark**, **Rounds** and **Kontour**.

Get creative

Version 6 still allows users to create their own instruments, effects and utilities at **Core** level. As before, it's possible to dive in and edit or add to existing modules, or create your own from the ground up. This latest version adds a trio of new features for **Core** creation too – **Bundled Wires**, which NI describe as, “like multicore cables, making intra-level patching cleaner and more elegant”, **Scoped Buses**, which are designed to offer ‘wireless’ connectivity across multiple structure levels, and **Table Framework**, which allows flexible data sharing throughout **Reaktor**, including from **Primary** to **Core** levels.

Best of all, **Reaktor 6** is now far more affordable at £169, or \$99 for an upgrade from previous versions.

www.native-instruments.com

3... Leap of Logic

With the latest update to Apple's all-conquering DAW recently arriving out of the blue, we've been looking back at Logic's first appearance in *FM*, all the way back in 1993 with issue 6. Back then it was still Notator Logic, produced by Emagic, and it featured a GUI that looks like something you'd find on a pocket calculator, by today's standards. Still, it impressed us in our first review, and we decided it was, "a worthy rival not only for Cubase, but also for Vision and Performer sequencers".

The issue also features an interview with 'The' Aphex Twin, back when Mr James was still a fresh-faced lad looking moody in press shots.

A logical choice?

Emagic has released a brand-new Mac version of its popular ST sequencer Notator. Mike Collins sees whether it can work its magic for the Mac.

HAVE YOU EVER wondered what it would be like to have a sequencer that was as easy to use as a pocket calculator? Well, Emagic's Notator is just that. It's a Mac version of the popular ST sequencer, and it's designed to be as simple and intuitive as possible. The interface is clean and uncluttered, with a clear focus on the music-making process. The software is easy to learn and use, and it offers a wide range of features and options. The price is also very reasonable, making it a great choice for anyone looking for a simple and effective sequencer for their Mac.

44 You just click on icons to change parameters or access your instruments. **FF**

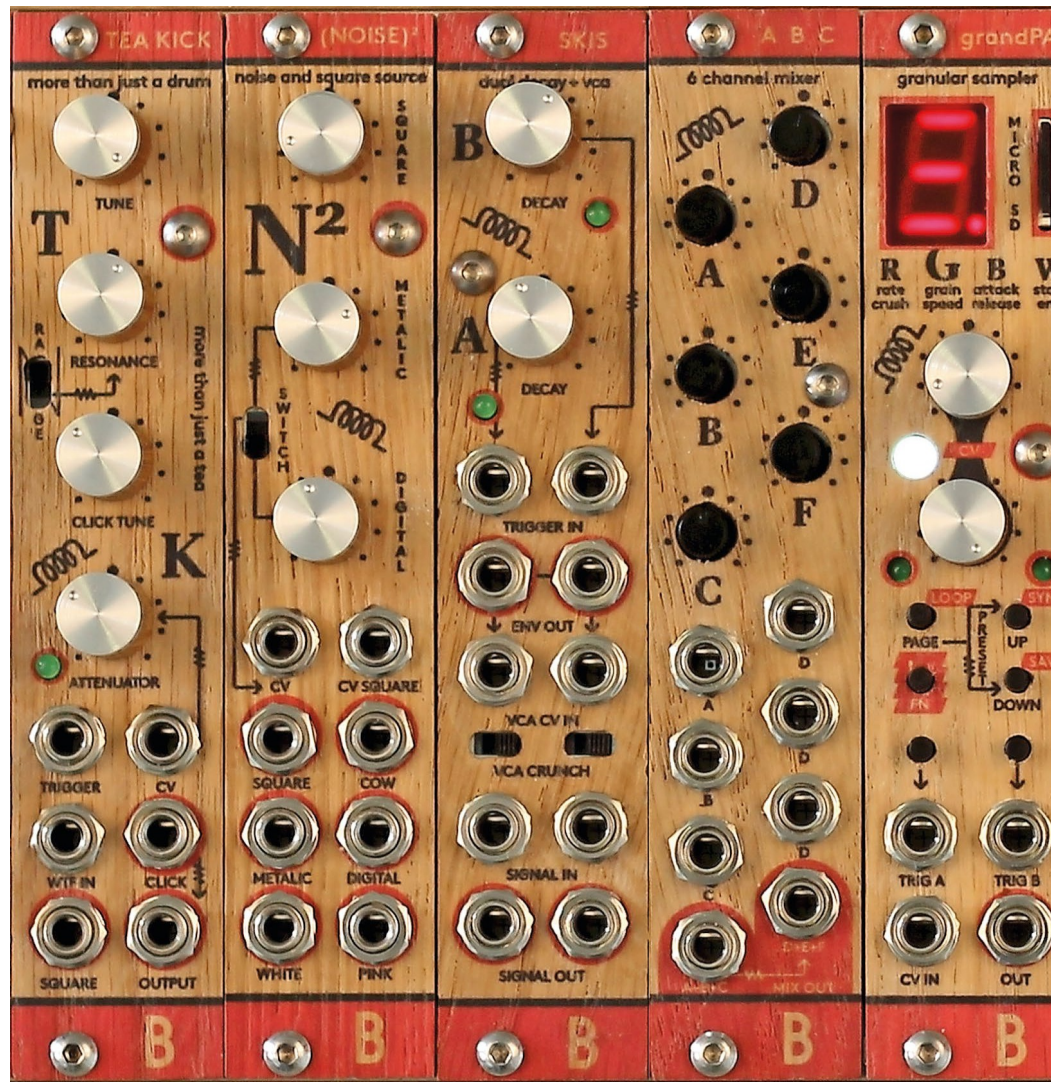
Notator is a powerful and flexible sequencer that offers a wide range of features and options. It's designed to be as simple and intuitive as possible, making it a great choice for anyone looking for a simple and effective sequencer for their Mac. The software is easy to learn and use, and it offers a wide range of features and options. The price is also very reasonable, making it a great choice for anyone looking for a simple and effective sequencer for their Mac.

Roland System-100 for VST, AU and Plug-Out

Roland's classic semi-modular monosynth, the System-100, is now available in VST, AU and Plug-Out formats.

While multiple instances of the System-100 plug-in can be used in any VST or AU compatible DAW, the System-100 Plug-Out soft synth will also operate with the System-1 and System-1m hardware, allowing users to load it into the hardware for use away from a computer.

1m users will benefit from knob-per-function hardware control and the semi-modular patching capabilities of the 100.



Bastl DIY module kits arrive

Czech electronic instrument maker Bastl have released their first batch of modules in DIY kit form. We first saw the oak-panelled modules at Musikmesse and fell in love with the wooden facade. Now the wait is over and Bastl are giving everyone the opportunity to build their own module. If you bodge up your build, or you're not brave enough to wield a soldering iron, you can send the kit back to Bastl and they will build or repair the kit for just 25 euros. Return shipping is free if the 'Come to daddy' service is paid for within a month of purchasing the module in question.

Bitwig gets its biggest update so far

Bitwig have made the beta version of Bitwig Studio 1.2 available to all Bitwig Studio licence holders with a full release in October.

Billed as the nascent DAW's most significant update yet, features include group tracks, which enable you to manage multiple parts of a mix at once, a pop-up browser for all devices to speed up your workflow,

and a histogram display on the Audio Mod, Compressor, Dynamics, LFO Mod, Peak Meter, Gate and Transient



Control devices. There's also the option to set up project templates and per-project controller mappings, as well as support for the new Multidimensional Polyphonic Expression (MPE) standard that's designed to help you to get the most out of controllers such as the ROLI Seaboard and Roger Linn LinnStrument.



samplemagic.com



© Daniel Hueter

FM TALKING SHOP

Sage Caswell

We catch up with the rising LA House producer

Over the course of just a handful of EPs, LA-based producer Sage Caswell has marked himself out as one of the most exciting House artists currently rising out of the US.

With his latest release, *Sleep Quarters* EP, out now on Spring Theory, FM caught up with him to find out more about the gear and ideas behind his tracks.

FM: How long have you been making music and how did you get started?

Sage Caswell: "I started working on tracks around the end of 2007. Two of my close friends (Justin Peoples and James Del Barco) were using Fruity Loops at the time; each of them taught me how to get around on it. I started off using VMWare Fusion on my MacBook but eventually switched over to an old Windows desktop. I remain inspired by both Jimmy and Justin – the music they make and the manner in which they carry themselves."

Tell us about your studio...

"The majority of my studio time has been wherever my bedroom is. Just this year I moved into a proper studio space alongside my friend Stevie (NYCPARTYINFO). I'd previously used the space and hoped that one day an

opportunity to move in would present itself (which I never really thought would happen). Fortunately, things worked out and I've been here almost a year now. I don't use any hardware; I think the only two VSTs I have and sort of use are Sakura and Hardcore (both stock synths in Fruity Loops). I'm pretty happy with my workflow at the moment, though there's loads more I can learn and I'm open to whatever opportunities present themselves."

Sage Caswell's essential production advice

Be happy with your environment

"Make sure that you're comfortable with wherever it is you're working on what you're working on. If you feel uninspired by your zone, try and rearrange things. New surroundings will aid your creative space, even if you don't believe in that stuff."

Do what you feel

"Take everything anyone tells you about the creative process and tailor it to work in a way that suits you. It's okay to take an unconventional approach; don't let anyone tell you that you're crazy for doing what makes you happy."

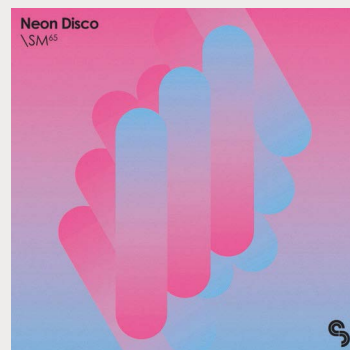


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Calibre Second Sun

Signature Records, 2005

Calibre's mighty wind has blown through the Drum 'n' Bass scene ever since his first tentative forays into production in 1998. As a trained musician and student of the genre, he then quickly developed a unique sound that was warm, orchestral and hypnotic. Attracting the attention of tastemakers like Fabio, the Belfast-born producer and DJ was encouraged to work harder and faster on this Liquid Funk, resulting in what would become his signature sound. By the time his sophomore album *Second Sun* came into orbit, Calibre was recognised as a shining star of the scene.

One of the few who had realised the potential of the album format, he crafted dubbed out House grooves, jazzier downtempo

numbers, and introspective vocal-led tracks amongst the more traditional tempos the largely dancefloor single-based genre was known for.

The album is awash with highpoints, from the anthemic *Drop It Down*, to the more reflective MC tracks like *Timeout* and *Blink Of An Eye*. Most producers would labour over such delicately balanced arrangements for weeks, but the fact that Calibre can knock such masterworks out in a matter of hours tells you how effortlessly and naturally his music comes to him.

"Working quickly gives me a unique and personal sound," says Calibre. "It also helps that I like to sample my own playing. Any type of instrument I could get my hands on, I'd record it live. Maybe quite badly, but I still did it. It helped create my own sound. If you can play an instrument, and you can play it with a little bit of passion and a little bit of love, it'll give you something back."

In the ten years that have passed (*Second Sun* dropped in October, 2005) Calibre has written more material than quite possibly anyone else in the scene, and this year shows no sign of him slowing up. Besides the usual wealth of remixes in the pipeline, and a forthcoming Techno album on Craig Richards' label, a fourth *Shelflife* compilation of unreleased Calibre material will be dropping on his own Signature Records label. But for now, let's rewind the story...

Track by track with Calibre

Bullets

"This is a favourite. I still play it. It was an instrumental first and going to be on a Mist:ical album that I was writing with Marcus Intalex and ST Files, but it ended up here.

"Diane Charlemagne [vocalist on Goldie's *Inner City Life*] wrote some lyrics for me and I cut them up, probably in a way she didn't want [*laughs*].

"It was really easy to put together. It was one of those ones. I could have put it together a bunch of ways and it would have still sounded great. It's the one tune that I can still play today and I still feel the same way about it."

Second Sun

"Every time I think of *Second Sun* I think about the orchestral samples. I would go for the obscure things, weird versions, and even some of the duffers. It was the stuff that you'd never think to listen to. That's where I'd get most of my samples from, just hidden within this horrible Classical music.

"I like to mess with the samples, too. If I put something in a tune without too much manipulation I don't feel right about it. It feels a bit too safe."

All The While

"This features Steve Spacek. It was made of vocals he'd passed on to me. He's dBridge's brother, so it was easy to get that hook up with him and do this and another few tunes that we've done together [such as the excellent *For You Alone* from 2007 on Exit Records].

"He was part of this great vocal beat thing that was going on at the time."

Don't Watch This

"This one is down to John Tejada, and the influence he was having on me at the time. I released an EP on his label [Dominick Martin – *Tell Me* (Palette Recordings) from 2002]. He's this LA Techno/House guy. I was releasing Techno and House and giving this bunch of material to him, and *Don't Watch This* was one of the tracks he didn't put out so I did here.



Calibre's next album will be a Techno affair on Craig Richards' label, *The Nothing Special*. No title yet, but it's slated for release this year. "It's hard to describe," says Calibre, "but what makes it interesting is that it's a wee bit more unique than the other Techno-y guys." Expect retro stylings, bpps in the 140 and 80 camps, and more than your usual 4/4. "I like to retrain myself and move in cycles," says Calibre. "It means I can come back to Drum 'n' Bass with a new perspective."

"It was something that was going on a lot in Drum 'n' Bass at the time, with people trying Deep House and stuff like that."

Got A Thing

"I would bang out tracks. It was like 'boom, boom, boom'. This track, like most of them, would have been done in a couple of hours.

"The recall thing wasn't so easy back then. People would say that you had to take photographs of the desk to get the sound back to where it was from the last session, but it would never sound anything like it did before. I was always dying to get going and get on to the next thing. At that stage I would write four or five tunes a day."

Is It U

"This mixes the light with the darkness and adds a bit more curvature to things. That's how it used to be. You'd get tunes out there that were absolutely banging, but had a soul as well.



"It was my second album and at that stage I was still learning, but I had an idea of how I wanted to order the tracks. There was some kind of sense of flow, for sure. If you're making music that is more visual, which is what I do, I think you have to keep that in mind. You need to have some ups and downs over a full album."

"Throughout all of this Drum 'n' Bass thing, I think that's something I've been trying to get. It's that mixture of some kind of toughness with a little bit of softness. A lot of that has been lost now, with the starkness.

"It's about that play and the buildup. There is no foreplay in music anymore. It's just kicking you in the fucking face. I hate that about modern music. It's got nothing about it that's subtle."

Drop It Down

"This came about because of A-Sides. He was always telling me to work with MC Fats, who's on this track. He sent me a CD of some vocals he'd done from tracks from a couple of years ago that hadn't worked. There was just this one little 'drop it down' line in there that stood out for me. I put it on this track I had, which was made up of me sampling my own playing.

"I like *Drop It Down* from that point because, bar the vocal and the

backing beat, everything was organically made by me."

Go Back To Go Forward

"The title here is a bit of a mission statement for me. It relates to a lot of things, besides Northern Irish politics [*laughs*].

"For music it's essential. You have to have some sense of the archaic and know where you come from. I love old Irish music. It has a beautiful innocence to it. It's a purist style.

"*Go Back To Go Forward* has that sense of removal. With good Dance music you have to reduce the musicality in it. If there's too much it can sound too 'frolic-y' or something. It's something I always try to avoid.

"*Go Back To Go Forward* is a good example of that, while retaining some resonance and quality."

Blink Of An Eye

"This features Lariman. He's a guy I know from Dublin. I think he's

originally from Nigeria. I met him in the Bassbin nights in Dublin. He'd stay with me for a few days and we'd work together. I loved him, and he always had this really nice weed [laughs]. It was hard to get that stuff.

"People often ask if I smoke. I'm always honest. I love to write music on it. My older brother used to look down his nose at it and be of the opinion that it just accentuates the boredom of normal life. I always said that it allows me to pass through the more boring aspects of life.

"It allows me to work on stuff that is repetitive, because this stuff is repetitive. It allows me to numb that part of it and it still leaves me hungry."

Breathing Man

"This is a little bit of a different one, this one. It's primarily one to sit at home and listen to. That was something I always wanted – to strike a balance within Drum 'n' Bass, having tracks that weren't just for the dancefloor. You try and go after that more transcendental effect. This is one of those.

"At the time we were trying to save a bit of money too, so I mastered some tracks like this to start with, and ST Files did some others. We ended up getting it mastered again anyway [laughs]. Klute was involved in the mastering then."

Kiya

"Crow is on vocals here. I met him when he came round to put my double-glazing in [laughs]. I was working on a tune and talking to him a bit, in-between making him cups of tea. He told me he was an MC, and after a couple of days I got him to do me a vocal.

"The pitch was all over the place, and I have a natural pitch, but I found a few little magical phrases that I ended up using that really made the track. He really gave the whole thing a great sense of pressure. It's one of the tracks that I still play now."

Timeout

"Del [MC DRS] is on this. I met him in Belfast when he was touring with [LTJ] Bukem. He was in the club smoking this really nice weed. It was absolutely stinking the whole place out. I was on my own and went up to him and said, 'Can I get a chuff on that?'. He just looked at me like I'd

walked up there and stuck my finger in his ear [laughs].

"He turned in some great lyrics for this track. With Drum 'n' Bass you can find that the vocals on tracks get quite concentrated on the dancefloor.

"A lot of club music doesn't really require any sense of introspection and expression, in terms of communicating some sort of message. With the music that we were involved with, in this Liquid Funk period of time, some part of it was to give us space to do that. To give us a place to express something.

"It wasn't just music where someone would be singing about a bassline or some kind of instruction for dancing or just about a girl, you know what I mean?"

Drinnahilly

"This is named after an Irish mountain. It's the smallest one in the range, and anyone can climb up it. It kind of explains this track, which is a

way of getting to the next one.

"It changes up the mood a bit. It's slower. When I make a track like this I'm thinking about people like Photek. He was one of the few Drum 'n' Bass guys that could make an

album and work with different styles. He had that versatility that a lot of guys don't have. It's hard to get that in Drum 'n' Bass. It was back then. I think it's getting better now."

"I would bang out tracks. It was like 'boom, boom, boom'. I would write four or five tunes a day"

These Few

"It's a pretty one, this one. More Dubby House. I like this one. It was the perfect one to end on. With all the albums I've done I like to leave with something that is genuinely emotive. I don't care if it's very deep. I just want something that has some sense of sadness. I don't really like 'happy' music. I like something melancholic and romantic. Something that you can't quite grasp." **FM**

WANT TO KNOW MORE?

For the latest information on new material from Calibre's label, go to <https://www.facebook.com/signaturerecordings>



In The Studio With... Calibre

"Very early on I used an old tape deck with an overdub mechanism, and would play every instrument in live. That was the first time I could really record any ideas. Then I started working with somebody who had an Akai sampler and Cubase. That was how my first album *Musique Concrete* was written, on Cubase with two channels coming out of an Akai 1200.

"It was a very ordinary set-up. I still have a very simple and ordinary set-up. The big shift was moving to Logic for the *Second Sun* album. Then I got a Juno keyboard and a Yamaha W7, which is a very conservative sounding machine.

"It had some nice modulation and some nice things that added to the sound, though, particularly on some of the bass sounds. I actually re-sampled a lot of the synths on *Second Sun*, rather than using a MIDI-triggering system.

"I complete tracks very quickly, as well, so that informs the type of studio I have, which is quite simple and basic."

LIKE IT?
TRY THESE...



Calibre Shelflife

First instalment of Calibre's unreleased material comps. This one spans his first production wave in 1998, until the *Second Sun* era of 2005.

ADD THESE TO YOUR PLAYLIST:

Peace Of Mind feat Lariman, Venus And Mars, Time And Space



Various Artists Liquid Funk

2000 collection of the jazzier side of D 'n' B on Fabio's own Creative Source label, an imprint that coined the term Liquid Funk, then refined the sub-genre.

ADD THESE TO YOUR PLAYLIST:

Carlito – Heaven, Hidden Agenda – Rogue Soul, Primary Motive – Who Has The Jazz



High Contrast Tough Guys Don't Dance

The other poster boy for deep and delicate D 'n' B. Calibre collaborator, Diane Charlemagne, also opens the album.

ADD THESE TO YOUR PLAYLIST:

If We Ever, Kiss Kiss Bang Bang, The Ghost Of Jungle Past



Mist:i:cal The Eleventh Hour

2007 album from the hard drinking supergroup of Marcus Intalex, ST Files and Calibre. Echoes of *Second Sun* abound in the musical directions and in the vocals from Charlemagne and MC DRS.

ADD THESE TO YOUR PLAYLIST:

Stay Away, Time To Fly, The Eleventh Hour



Various Artists Bassbin Recordings Present Rare Grooves

2005 'best of' from the Dublin Drum 'n' Bass label and club night promoters. Calibre, naturally, makes the track list, and was a regular sweating it out with the best on the floor.

ADD THESE TO YOUR PLAYLIST:

Calibre – Can't Stop This Fire, Digital – Lucky 7, Breakage – Rise



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Code: 208382

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Code: 71192



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Code: 216618 £999.99



Clarett 8 Pre

£799.99

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Code: 216617 £799.99



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Code: 216476



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Professional standard portable multi-track recorder featuring 8 inputs ideal field recording and outside broadcast applications. With 8-input/10-track recording, super low-noise preamps, and support for 24-bit/192kHz audio, the F8 captures the highest-quality audio and it also features an extremely low noise floor (-127 dBu EIN) and high gain (up to 75 dB), with +4 dB line inputs. Weighing just 2.1 pounds (without batteries), its aluminium chassis is both rugged and durable.

Code: 222023



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ALBUM OF THE MONTH

St Germain St Germain

Warner Music

Fifteen years since the release of his groundbreaking album *Tourist*, and 20 years on from his debut LP *Boulevard*, enigmatic French producer St Germain returns with a triumphant new record. Ludovic Navarre's first two albums were iconic for their generation and went on to hugely influence a new genre of French electronic music that won global acclaim with the likes of Air, Daft Punk, Cassius and Laurent Garnier. Whatever the reason for such a gap between records, the producer now returns with an album that fuses electronic music with Jazz, Blues and authentic instrumentation like only he can.

St Germain's trademark blend of intelligent, sensual Deep House and an improvisational Jazz spirit remains, but this time the strong influence of African music is added into the mix. The traditional African instruments, like the kora, the balafon and the n'goni that were recorded by Malian musicians, add a beauty which somehow becomes amplified by Navarre's lush, sensuous House production techniques. This is original and authentic Deep House filled with warmth, musicality, pianos, saxophones and breathy spaces between sounds. Laidback but with a vivid expression of the voices and rhythms of African life mixed with a sophisticated French atmosphere, this is St Germain expanded into a new realm but armed with the same skill for forging subterranean, electronic fusion atmospheres that originally brought him such acclaim. **Tom Jones**

ADD THESE TO YOUR PLAYLIST:

Sittin' Here, Voilà, Mary L.

10/10



Beirut No No No 4AD

Indie folk outfit Beirut return with their first album in four years, the spirited and uplifting *No No No*.

Following the release of the band's last LP, 2011's *The Rip Tide*, front man Zach Condon went through a divorce and suffered from mental and physical exhaustion. Now seemingly through the other side and inspired by a new love in his life, his creativity has fuelled a new record

that glows with plenty of warmth, heart and positive soul. The entire album is ingrained with a jaunty, playful mood and a contented sincerity.

Sonically, *No No No* is more stripped back than previous albums, with just guitar, piano, bass and drums providing the bulk – a far cry from the obscure instrumentation of much of the band's early work. Condon's warm-hearted, gentle

vocals are a real driving force on the record, interplaying with subtle melodies and flourishes of brass to create a quietly confident attitude that is at once calm and upbeat.

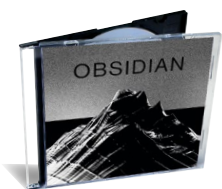
No No No is as relaxed and natural as Beirut have sounded thus far – a mark of a band truly revelling at returning to basics.

Tom Jones

ADD THESE TO YOUR PLAYLIST:

Gibraltar, No No No, Perth

8/10



Benjamin Damage Obsidian 50 Weapons

Having been the first artist outside of Modeselektor to release on the now revered 50 Weapons imprint, Welsh producer Benjamin Damage now has the honour of delivering the last ever LP for the label. A stalwart of Berlin's Techno scene, the label reaches its 50th release and with that meets its always-intended limited shelf life.

Closing in true style, Damage's *Obsidian* is a deftly constructed

Techno album that seems to reference the artist's personal journey in music throughout the years. By his own admission, the record is a collection of fragmented memories from all the music he has ever liked, distorted and reconstructed into a full-length Techno record. Its dream-like, ethereal atmospheres and rich textures conjure an emotive allure. It is a soundscape that is full of warmth, heart and

soul with subtle melodies given space to breathe between kicks and snares.

This expert arrangement and construction of his sounds allows Damage to build a sound that, although it contains plenty of muscle, draws such an affecting response. RIP 50 Weapons. **Tom Jones**

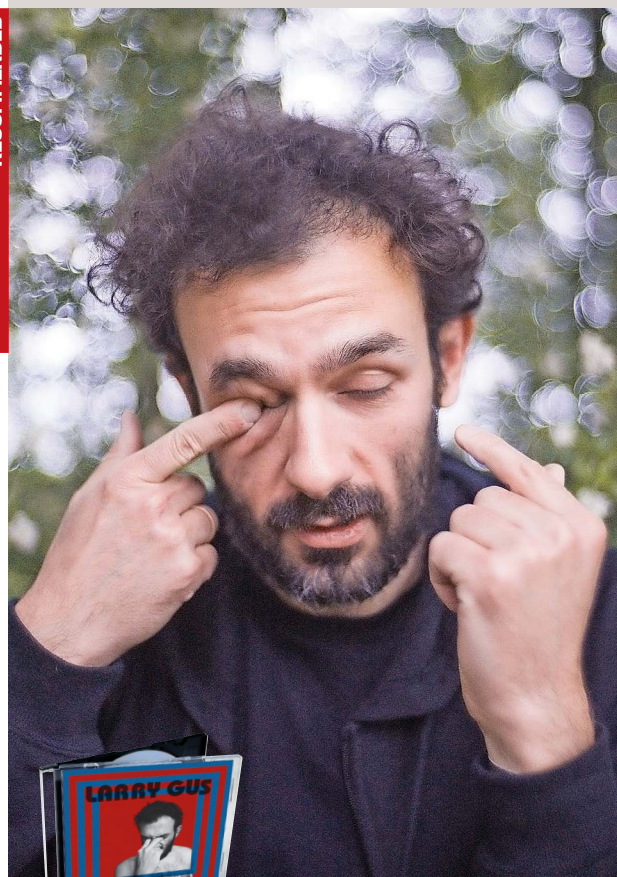
ADD THESE TO YOUR PLAYLIST:

Transmission, Parallax View,

Tetrapod

8/10

RECOMMENDED



Larry Gus I Need New Eyes

DFA Records

Greek producer and vocalist Larry Gus moves into new territory with his latest album, *I Need New Eyes*. It's the second album on DFA for the producer, real name Panagiotis Melidis and, whereas his previous output, including 2013's *Years Not Living*, followed heavily sample-based arrangements, the new record heralds an exploration of clearer songwriting structures. This new direction results in plenty more live instrumentation, which, in turn, lends the album a more natural flow. It is still as sonically adventurous as previous albums, merging his beatmaker percussion tendencies with far-flung sounds, complex rhythms and his distinctive vocals, but his arrangements are much more concise, his atmospheres more nuanced.

Melidis' lyrics come further to the fore too, both structurally and intellectually. This is the Greek at his most open, honest and thought-provoking. It is still, however, far from a chin-stroking conceptual album. Indeed its soundscape is on the most part joyous and celebratory, employing contented melodies, twinkling synths, orchestral stabs, shimmering electronics and bold brass.

A wonderfully engaging and inventive record, this is Larry Gus offering a more accessible sound without relinquishing his usual eccentricity, audacity or innovation. **Tom Jones**

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CREATIVE REVERB

Reverb can be so much more than a simple spatial effect. Twist things up and it can become one of the best creative tools you have

There's no doubt that reverb is one of the most important workhorse tools in the studio. Ever since the introduction of the first hardware processors, engineers have used reverb to separate instruments, add contrast and increase the perceived size of a mix. Many of the greatest records would simply fall flat without the space that reverb supplies.

Although reverb has made a huge impact in modern music production, it was really the advent of digital editing that allowed engineers to truly utilise reverb as a fully-fledged sound design tool. Pure reverb can be extracted from a mix, treated and

layered with other sounds to create ethereal textures. Reverb tails can be reversed, re-arranged and re-processed to create entirely new sounds. Combine these editing tools with increased processing power and the ability to manipulate reverb is now massively enhanced.

Just about any space, real or artificial, can now be reproduced. This is achieved through many methods, which we'll explore here. Convolution, component modelling and exciting new algorithms are all utilised in effects as plug-ins. If virtual models don't do it for you, there's always hardware. We'll also take a look at how you can integrate these devices into your system.



Know Your Verbs

The best way to become a master of reverb is to thoroughly familiarise yourself with the different ways the effect can be created. Before we talk about the different methods of processing that can be employed to produce reverb, let's think about the origins of the effect and how it is created naturally.

Even the smallest space will create some kind of reverberation that will be perceived by the listener. This reverb is produced by any sound in a space being reflected from available surfaces back to the listener. Even the interior of a car will produce internal reflections. Of course, larger spaces and more reflective materials will result in much larger reverbs and more expansive results.

In the early days reverb was produced by simply recording in a specific space; this was the only surefire way to get the sound you wanted. In the '40s both plate and

spring reverbs were developed allowing sound engineers to recreate spaces artificially for the first time. This literally transformed the sound of music production – pretty much every mix created from this point contained some sort of reverb processor, adding space and dimension to records of the time.

Early reverbs were large, cumbersome and required serious hardware to operate. Even with the introduction of rack-mounted digital processors, pro reverbs required substantial investment. Now we're lucky enough to have access to all of these reverb creation methods in the form of digital emulations. This gives us the flexibility to mix different spaces and create real contrast.

On top of the ability to emulate classic hardware, even more realism can be added to your mixes using convolution. Convolution-based processing doesn't actually involve any number crunching as such. The recreation of the space is achieved by

using high-quality samples called impulse responses. These samples are recorded in the 'target' space with a test signal. The result can then be used to process your own sounds. This is pretty much as close as you'll get to a real space in a digital environment.

You'll probably also come across a large number of software reverbs that are unique products in their own right. They may be algorithmic in nature but they may not claim to emulate or model any existing product. These are well worth considering as they often have much more interesting features and creative interfaces.

With all this in mind, it's a good idea to choose a group of reverb tools that cover all bases. This way you will be able to create a wide range of creative effects. It really does make a difference as the foundation for your effect will differ hugely depending on what processing method you choose. For instance, you'll probably find that short percussive sounds are going to work very well with tighter plate and spring reverbs, whereas something like an ethereal vocal sound may marry well with a huge algorithmic hall patch.



Advanced Space Exploration

When it comes to using reverb creatively, the key is to utilise it in ways it may not originally have been designed for. In a typical mixing scenario you may just set up a simple insert, choose a reverb size and mix to taste. Instead, try more creative routing, using 100% wet signals or exporting the results for further editing. You'll find that by reprocessing the pure reverb you can produce unexpected and very usable results.

The great thing about using wet reverb signals as the foundation of a new sound is that it's very likely that it'll drop perfectly into your project. The reasoning here is that the final effect has been produced using your source audio, so it contains the

original DNA of your project. Any harmonics that managed to leak into the reverb will be tuned perfectly with other elements in your mix.

Simple adjustments to exported reverb tails can make a huge difference here. Think about reversing, gating and even slicing the processed audio. A simple spatial effect can then be transformed into a riser, atmospheric backdrop or rhythmic effect. These effects can even be layered for a more complex, harmonically rich effect.

Once you start experimenting with reverbs in this way, you swiftly discover that the character of the plug-in (or specific reverb type) you choose is pretty crucial. A spring reverb emulation is going to produce characterful, often imperfect effects, whereas a high-end digital model will more than likely be much cleaner in



UVI Sparkverb allows you to blend and morph between different reverbs

nature. Of course, neither one is better than the other but it pays to know the sort of tone you can expect.

Some reverbs will allow you to alter the type of materials present in your virtual space. This can give you access to different tones and timbres without reaching for the latest emulation. Convolution reverbs allow different textures to be produced as they use recordings from real world spaces – so if you are in search of new textures this is a viable option.

If one patch or space isn't enough for you, try blending reverbs. This is

easily achieved by setting up a number of return channels, but there is a more elegant route. UVI Sparkverb and a number of other plug-ins allow you to perform this trick internally, moving between spaces in real time. This is actually a step up from a simple 50/50 blend as the space changes in real time. This is an awesome trick for creating mind-bending effects, so if your reverb plug-in sports this feature it's well worth test-driving.

Other things worth considering when setting up the perfect reverb are parameters that effect realism. Reverberation in the real world does two things. First the sound in a space takes time to return to the listener's ears after it has bounced off any internal surfaces. This time is called pre-delay and in the vast majority of reverbs this is a parameter which can be changed. If you are after absolute realism then alter this to match the space you are emulating. Generally speaking, the larger the space, the larger the pre-delay. Armed with this basic rule you can experiment until the patch 'feels' right.

The second aspect of reverb that seriously effects realism is modulation. This may sound like a strange thing to be important but it is. Here's why... When sound travels around a space it doesn't do so in a uniform way; movement of air, dynamic objects and changing spaces can all create imperfections and random anomalies. These can be partially recreated using modulation. A simple slow-moving LFO can go some way to creating this realism. Look out for this feature on your reverb plug-in and see if it makes a difference to your patches.

Creating Simple Filtered Reverb

One of the simplest ways to transform a traditional reverb return is to add a healthy dose of resonant filtering

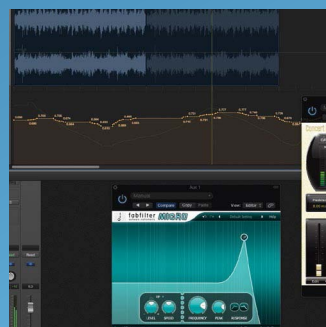
A large expansive reverb can really breathe new life into sounds but you might find you want to add some extra dynamics. Tacking on extra processors and effects to your return channel can be a simple way to spice things up. In this case, a low-pass resonant filter has been used, in conjunction with some carefully recorded automation, to create the impression of a moving backdrop. The great thing about treating your reverb in this way is that it can be treated as a totally separate entity. Imagine this new layer like a secondary oscillator in a synth patch. You can modulate or process the additional sound source without affecting the original. This gives you a great deal of control while retaining total clarity. This is awesome when working with a key element in your mix as you won't lose any impact during processing.



Of course, you can treat anything using this method but sounds with long sustains or a continuous groove work especially well. Think musical loops, synth lines and vocal grooves here. In this case we've set up a simple send/return routing for the reverb effect.



When working with multiple effects on a reverb return it's often better to go with a patch that is oversized in nature. Here a classic algorithmic emulation is used to produce a very large hall effect with a tail that is perhaps longer than you would use in the mix.



Once your reverb is set up, go ahead and insert a resonant filter plug-in on the return. You can now sweep the filter frequency and automate the results without affecting the original sound. The original character of the reverb can be left intact if the automation is correctly timed.

Layering Multiple Effects With Reverb

When you want to step up to something more advanced you can try mixing multiple effects with your reverb and bouncing the results



➤ If you are planning to process a reverb return with several effects you might want to consider using a very dry percussive sound. Here a clean drum loop is used with a nice simple groove. The extra space will help us to retain a clear mix, even after processing.



➤ Here we start off with a heavy plate reverb; it has a gated quality and a short decay time. This was selected to bring out the transients of the drum loop but also to be combined with further spatial effects.



➤ To open up the reverb effect, delay can be used. Often the best delay effects are those that employ some form of modulation. In this case a filter is modulated by an LFO and is treated with the entire stereo delay effect.



➤ Now we have opened up the short plate reverb with delay we can add even more dynamic movement by using modulation effects. Phasers are perfect for this and using high feedback settings, coupled with a slow modulation rate, a psychedelic edge is imparted which tends to work well with most genres.



➤ High-pass filtering is one of the most valuable tools for cleaning up low-end mud and it works especially well when combining multiple effects in this way. Here a filter is dialled in at around 250Hz and the result is then exported 100% wet.



➤ The wet export is now mixed with the original dry loop. A compressor is placed on the new audio to ensure that there are no wayward transients popping out of the mix. This will make the whole thing more uniform and therefore much easier to mix.

Frozen Reverb

One of the best ways to twist reverb into something that defies reality is to push decay times to the max. This gives you an effect that cannot be created in reality – the results then sound familiar but simultaneously surreal. The fact that the actual reverb tail is nearly endless is also a bonus here as it opens up new possibilities for sonic manipulation. When set correctly, your reverb tail should be perfectly sustained, allowing you to treat it almost like a synth pad. The real difference is that you can send any sound in your mix to it to produce an instant dynamic effect.

Some reverbs have longer decay times than others so it's well worth looking out for plug-ins that are capable of producing tails of 20 seconds or more. Obviously, if you are working with a faithful recreation of a specific piece of hardware you might find it falls short in this area. Some of the best reverb plug-ins for creating these larger than life effects are unique products, with original design. UVI Sparkverb and UA's DreamVerb allow you to dial in ridiculously long decay times.

Another angle of approach here is to use a plug-in that has a 'freeze' function. In some ways this can be even more useful than a longer decay

setting. A freeze function allows you to grab any section of your active reverb tail in real time and add continuous sustain. At the point it is activated, your reverb will continue to sound and never decay. Frozen reverbs can be ideal for further processing since they are very predictable as their level does not change over time. The freeze function can, of course, also be activated via automation or MIDI.

Once you have created your endless reverb you can start to add extra touches by adding further processing. Filtering works especially well here – try adding a low-pass resonant filter and sweeping the frequency using automation. Filtered reverb tails can beat any pad hands down and often sound much more unique.

Reverbs with long decay times or freeze functions are ideal for further processing





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Combining reverb with other effects

One of the fastest ways to transform a vanilla reverb is to process it and then process it again. Just because you have a reverb set up as an insert or placed on an auxiliary return, it doesn't mean that that has to be where the story ends. Extra plug-ins can be placed after the reverb to create all sorts of interesting combos.

Stereo delay is perhaps one of the most obvious options here as it often complements reverb very well. It adds extra width and movement, and often elongates the effect without sounding too intrusive. It can be the perfect combination for those looking to create washes and smooth transitions. Try combining short room reverbs or

gated effects with long delays. The contrast between the decay lengths can create awesome rhythmical patterns.

In addition to delay, just about any modulation effect will work

something a little more prominent, experiment with phasers and flanging. Expect intense movement when using this combination and be ready to deal with unexpected level changes.

If you do have any problems with excess level when coupling effects, you might want to try using dynamics processors. Compression and limiting should help control wayward peaks. Place these at the end of your chain for the best results. You shouldn't need much gain reduction to get the job done but this sort of control will make the whole thing a lot

easier to mix.

Dynamics processing doesn't have to be just a corrective solution here. Married with sidechaining, compressors and gates can breathe new

life into a reverb effect. Try triggering a sidechain activated gate with a percussion sample and you'll instantly add movement to your mix.

Stereo delay works well with reverb, adding extra width and movement

perfectly placed before or after your reverb. Chorus, for example, is perfect for adding random shimmering effects to long reverb patches. If you prefer

REVERB TIPS & TRICKS

Experiment with as many different spaces and reverb types as possible. By exploring the possibilities you are much more likely to hit the space that perfectly complements your sound. Going with the default preset is almost never going to give you optimal results.

Vary the length and intensity of reverbs throughout your mix. Contrast between spaces will help build a more interesting and compelling mix. Use everything from close ambience through to large plates and halls. Try to avoid using the same reverb send for everything.

Process, process then process again. Never be afraid of going too far here. Use your 100% wet exported reverb signal as a foundation and then go as far as you can. This is like adding colour upon colour; the end result will move further from the original but may become more interesting as it does.

Go heavy on the mix. You can afford to mix your wet signal much heavier than you would in a traditional mixing or tracking scenario. Remember, you aren't just trying to create a realistic, transparent space; you are attempting to produce something original and unique. Get creative and push the envelope.

Creating A Reverse Vocal Reverb

Reverb and vocals are a great combo but throw some simple editing into the mix and you can up your game

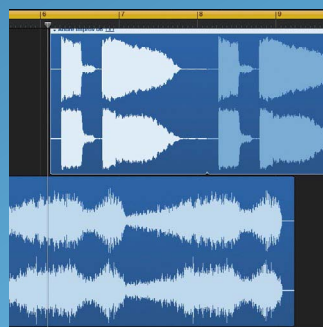
When processing vocals there is nothing better than a lush reverb to bring out the performance. There is something about the stereo expansion of a plate reverb to the ethereal quality of a hall patch that makes a solid vocal shine. Sometimes, however, a vanilla reverb is just not enough and your project may demand something a little more impressive. Reverse reverb is an effect that has been used for some time to complement specific vocal passages or even entire performances. It actually ends up sounding a lot more technical than it is to create. In this instance we show you one way to create the effect inside a DAW with nothing more than a single reverb plug-in and a vocal sample. You should find that the whole process takes very little time and the results are very easy to mix.



➤ The best way to start is to choose the reverb you want to reverse. This is usually an amplified version of the patch you would use in the mix. Think longer decay times and stronger wet mix. Here we are using a long algorithmic patch.



➤ Once you have settled on the patch you plan to use, export the results as a 100% wet mix. This means you will end up with only the reverb signal. This can be exported back into a new audio track for further editing.



➤ Now simply reverse the new audio you just imported. This will need to be shuffled around until it is timed perfectly to rise to every phrase in the vocal. Once in time, mix to taste and engage the original reverb but with a reduced wet mix.

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BUMBLEBEE



The high-res (96 kHz/24-bit) Bumblebee USB mic is ideal for any Mac/Windows voice/computer application (Skype, songwriting, etc.). Features include internally mounted condenser element, three switchable patterns, zero-latency headphone monitoring with volume control, mic gain control, and pop filter.



BEELINE



Better microphones deserve a better cable. The Beeline XLR cable features a quad-conductor, spiraled design that greatly improves common mode noise rejection compared to twisted pair cable designs, while its supple construction lays flat and is easy to coil at the end of a session.

Bounce, edit and save



If your chosen reverb plug-in doesn't feature its own EQ controls, you can insert an EQ plug-in after the reverb on an auxiliary buss

Whether you are working with frozen reverbs, 100% wet exports, or just a return with multiple effects, the best thing you can do to enhance the creative process is save your work as you go. This may sound obvious but this isn't just a case of more 'back up your work' advice; when working with such a dynamic effect you'll probably want to preserve each stage of development.

If you are working with an export of a totally wet reverb signal, it's a good idea to bounce it in its original form. This way you can use the result as a starting point for further experimentation. The same goes for channel strips with the perfect reverb patch or combination of effects. Save these in their initial state and repeat the process for any alterations you make. You'll thank your past self in future projects! Having multiple versions of the same patch can be a real lifesaver, plus they are often very different.

How to... Create A Rhythmic Gated Reverb

➤ When hooking up a sidechain routing compression is often the first thing that springs to mind but gates can do wonders for your reverb return. Place a sidechain compatible gate (usually your DAW's stock option) straight after a wet reverb, then route a suitably percussive instrument to the gate's sidechain input. When the threshold of the gate is altered you should hear your new reverb-based groove appear. If the results are too random you can program a percussion part to solely trigger the gate. This gives you much more control over the output and the new part doesn't even have to be present in the mix.

How to... Make A Dynamic Reverb Return

➤ Heavy reverb effects with long decay times often sound amazing in isolation, but they may just be too overbearing in the mix. Let's say you are hit with this problem but you simply refuse to dial down the effect... There are ways for you to have your cake and eat it. Imagine a vocal being processed by a very large hall effect; when the vocal is playing back it may be swamped by the large verb. Insert a sidechain capable compressor after the offending reverb and feed its key input with the vocal being mixed. The reverb will now 'duck' when the vocal is playing back but will breathe in-between phrases.

How to... Use Reverb With Low-End Instruments

➤ Reverb often doesn't play well with low frequencies. If you've tried to process a deep kick drum or sub bass part with reverb you'll know that things get muddy very quickly. Although this is to be avoided if the sound has a mix of frequencies, you may be able to treat part of it with reverb. Try using aggressive high-pass filtering on your reverb return and isolate this to your problem sound. This will enable the reverb to act on the higher frequencies in your sound only and leave the low frequencies dry and intact. This is an essential tool for using reverb across a busy mix with a number of full frequency sounds.

How to... Use Delay To Make Pseudo Reverb

➤ Try employing a delay as a pseudo reverb generator. Using very small (or short) delay settings and high feedback amounts you can closely mimic a basic spring reverb. Although this won't sound incredibly realistic, it certainly will do a good job of producing what could be perceived as heavy early reflections in a very hard space. The main advantage of working with this sort of effect is that you have complete control over the decay time using the feedback control, and by altering the delay time you can create mind-bending special effects simply not available with a standard reverb.

Advanced Frozen Reverb Technique

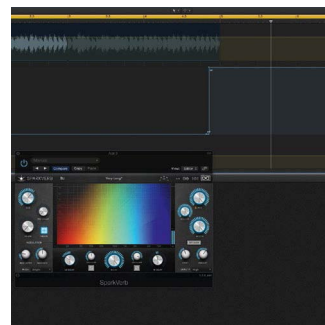
If your reverb plug-in sports a freeze feature you might want to try it out. This is arguably one of most impressive reverb effects out there



➤ We'll be hitting some pretty intense reverb effects here and freezing the decay. With this in mind, a reasonably dry sound has been selected with some filtering applied to round off the edges. This should make for a more pleasing effect when extra processing is applied.



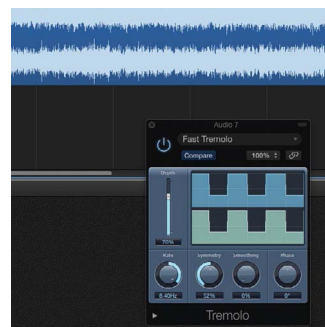
➤ Some reverbs can produce almost endless effects, even without a freeze function being applied. UVI's Sparkverb is a reverb capable of some truly massive sounds and luckily it also has a freeze function. You can hear the very long reverb patch used at this stage.



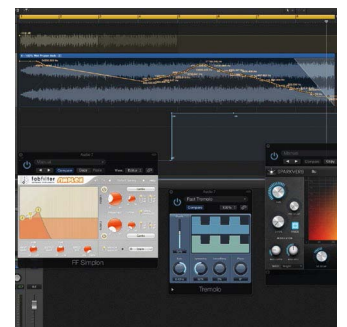
➤ Now it's time to freeze the reverb. Experiment with hitting the freeze function at different points in the sound. In this case it worked best as the sound peaked just before the end of the loop. The action was automated and tweaked for perfect timing.



➤ At this point you can export the output of the reverb in its frozen state. Make sure that you have the mix control set to 100% wet and bounce the output; while doing this also mute the original sound. This gives you a great ambient sound bed.



➤ Once you have the wet reverb as an audio file, you can literally process it in any way that you want. In all honesty pretty much anything will sound great here, but here tremolo was used to create a new groove.



➤ The amount of processing added here is up to you but often a second layer works very well. Filtering added an interesting quality to the sound here; once swept with automation the groove started to come to life.

Understanding Different Reverbs

Convolution

Convolution reverbs use a recording of an actual space called an impulse response. This initial recording is often taken using a test tone or click as the source. The resulting recording (and some clever maths) is then used to create a realistic reverb. It has been argued that these reverbs are some of the most realistic there are and they have even convinced listeners they are in the actual space being mimicked. These reverbs often inflict a lower CPU load than traditional effects but do take up a lot of disc space. They can also be

quite expensive due to the amount of development involved.

Convolution reverbs are probably best if you are looking for absolute realism and a lower CPU load.

Algorithmic

Algorithmic reverbs are the mainstay of studio tech. The majority of plug-ins and digital hardware that create reverb effects use this sound creation method. Essentially what we have here is a CPU crunching numbers and code to create an approximation of a realistic space. Mileage here will vary as some companies (Lexicon, TC Electronic, UVI, Sonnox etc) have absolutely mastered the art of writing algorithms, while other offerings may not be so stellar. The real plus point here is that the plug-ins contain no samples so are small in size. Often if the algorithms are well optimised CPU usage can also be modest.

Algorithmic reverbs are best for everyday use as they are pretty much commonplace in most DAWs. They are easily installed and can produce pretty much any form of reverb.

Plate

Plate reverb has some similarities to spring reverb in that it uses a mechanical apparatus to produce the reverberation effect. Large metal plates are hung in narrow spaces, audio is then fed into the space and the resulting reverb is captured at an output stage. For plate reverbs to work well, large amounts of space are needed but the sound created can be stunning. Although the real thing can only be found in truly pro installations, some excellent software recreations are out there now.

Good plate reverb emulations can sound stunning and work very well with just about anything but are most famous for their use with vocals and organic instruments such as piano and guitar.

Spring

Spring reverbs were the first hardware reverbs and used an actual physical spring within a cabinet to create the illusion of a physical space. Although this is now far from the most realistic form of reverb, it has tons of character and is still used in many studios. Spring reverb has a simultaneously metallic and analogue quality and is widely used for guitar, vocals and synth processing. There are some awesome spring emulations out there and you may even still find working spring reverbs housed within guitar amps.

Recording Real Spaces

> It's pretty obvious that the most realistic way to create a space is to record one! To do this you either have to go to the space and record the sound you want in your mix or send something from your mix (in real time) to a set of speakers that plays back in a space and in turn is recorded. This may sound pretty complex but it is actually the way it's done in many studios.

Dedicated, or unused rooms can be utilised just for this purpose. A set of speakers will be placed in the required space and a pair of high-quality stereo microphones will pick up the resulting reverberation. This can then be fed back into the mix – you are essentially using the room as a very large effects unit.

Recording real spaces is the ultimate way to create your reverb effect. It is as real as it gets, but it will require some legwork and high-quality kit.



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Jean-Michel Jarre

Having sold 80 million albums worldwide, there is little that synth legend Jean-Michel Jarre has not achieved during his illustrious 43-year career. **Danny Turner** discovers the concept behind his new album, *Electronica*

Famed for his stunning live concerts and the multi-million selling album *Oxygène* of 1976, French composer and electronic pioneer Jean-Michel Jarre is still going strong. Having studied under visionary musicologist Pierre Schaeffer in the '50s,

Jarre has a unique and fascinating insight into the unfolding history of electronic music, and has continued that legacy of experimentation throughout a career spanning five decades.

This year, Jarre reveals *Electronica*, a huge project that sees him join forces with an army of collaborators whose own forays into electronic music have played an inspiring role. The first album, *Electronica 1: The Time Machine*, is released this autumn, with a second volume to follow in April 2016. Meanwhile, Jarre has plans to take it to the road for another live spectacular.

FM: Can you remember coming across your first synthesizer?

Jean-Michel Jarre: “Yes, actually the real shock I had was my first contact with electroacoustic music when I was a teenager. I went to work in a studio centre in Paris headed by one of the major figures of original electronic music, Pierre Schaeffer. I remember my first electronic music instrument, because I have it here. It’s called the Coupigny GRM and I used it recently in a track I did with Air. For me, it was so exciting to approach music for the first time, not in terms of notes but in terms of sounds. And what I got from Schaeffer, Pierre Henry and all those people who created everything as we know it, is the idea of processing sounds – that I could shape my music, shape the sounds and mix the colours as a painter would.”

What was your first foray into the synth world?

“My first synth was the Putney VCS3 from EMS, and I remember it was very symbolic for me. I used to play in local Rock bands, but sold my guitar and amp, went to London to visit Peter Zinovieff – one of the founders of EMS, and got my first own synthesizer. This was like a dream come true because I could do whatever I wanted. If I had to keep one synth it would be this one, because it’s an absolutely unique synth and a pretty solid piece of hardware.”

Did you see electronic music as the future?

“Absolutely. When I had the VCS3 in my hands I was convinced that electronic music would become the major genre of music, because electronic music is not like Rock or Punk; it was and is a new way of approaching music composition, production and, today, distribution. When the Moog, Moog System 55 and VCS3 were released, you said to yourself it’s 2001 Space Odyssey or Arthur C. Clarke science fiction, where people are giving you a vision of the future. But after 2000 we suddenly lost our hope vis-à-vis the future. I think that, at the beginning of the 21st century, we have to reinvent the future. If you take the movie industry, the vision today is to take Marvel characters and put them in the future. It’s

strange that all our parameters are not towards the future but the past, as if we’re a bit scared about it.”

When Synthpop exploded in 1979, everyone was doing Pop songs with lyrics – you never considered adapting to that style of music?

“When Electronic Pop or Rock started in the UK it was through Pop or Rock songs, whereas in continental Europe it was much more linked to traditional instrumental music; long pieces without lyrics and more in the tradition of Classical music. The difference I would make between people such as Tangerine Dream, Kraftwerk and myself is that, in Germany people had a very cold, robotic approach to technology. Tangerine Dream were leaving the stage at the end of their concerts and letting the sequencers work on their own; a statement to say that machines are a predetermined concept. I always had a more impressionistic approach to sound, coming from Ravel and Debussy. When I did *Oxygène* I was obsessed that no sounds should be exactly the same; you would die if your beat was identical to another. I was more interested in trying to create a link between experimental music and Pop music, but not with lyrics. I always thought that music is the most interactive art form, so why give a precise image to your music? For example, the two of us in this room are listening to the same piece of music, but we have different images in our mind, and I love this type of interaction with music.”

When digital technology came along, did you embrace it as eagerly as you had analogue?

“In terms of instruments, I think that electronic music went through some difficult times. It’s linked with the CD actually – the phenomenon of leaving vinyl and thinking that CD was the Holy Grail of technology, yet we know today that it was worse than vinyl, and MP3 is worse than CD, which was the 78 of the digital era. It’s the same with the Japanese digital instruments. When the Yamaha DX7 was out, everybody thought that this was the future and analogue instruments were behind us. Everybody said it’s great, because you have presets, you can do whatever you want, but you were not as free to create the sounds you wanted in an intuitive way. Digital spent 15 to 20 years trying to compete with the warmth and sound of analogue, but only in the last five years with plug-ins like Diva, Dune, Monarch, Omnisphere and the Native Instruments ones, is there a real new way of competing with the analogue Moog, Memorymoog or ARP 2600.”

In what way are plug-ins competing with analogue, other than merely replicating them?

“I think that the human brain is a fantastic chemical product, but you can cheat it. Like with cinema you see an image moving at 24 or 25 frames per second, but it’s actually a series of stills going so fast, you feel it’s a movement but it’s not. It’s exactly the same with digital; we now have so many ones and zeros that the human brain can hardly tell the difference. I always thought exactly what you thought, that because electricity is going through things you can’t replace it. It is true and will always be true, but why

do you necessarily want to do the same? It's funny how, for marketing and nostalgia, all the interfaces of plug-ins are trying to imitate vintage instruments, but now I think it's time to have something else."

In terms of digital software, you've been quoted as saying, "the lack of limitations is very dangerous". Can you expand on that?

"Absolutely. I feel that any art form is made of limits. In the '50s the speed of the 78 meant you could only get three-minute Elvis Presley songs, so the single format was created. When LPs came along, people

Did you deliberately limit yourself?

"I just had the VCS3, the Eminent String Synthesizer, an ARP Solina, RMI Harmonic Synthesizer and a Korg MiniPops, that's all – and an ARP 2600. I mean you could spend a whole life with this, but the danger today is that since the beginning of this conversation 100 new plug-ins are probably available on the internet, and by the end of the day they will be history because they will be replaced by 500 others. This kind of vertigo that the market is creating generates the idea that you're always late with technology, but at the end of the day, the only

stems and transformed later in the final mix stage. I really did invest in 5.1 systems from the beginning, and it was a good exercise for me because I could not even find a sound engineer able to mix what I had in mind. But nobody is interested in getting 5.1 at home for a very simple reason – 5.1 works when you are in the middle, but rarely is anyone sitting in the middle of a room. It's like 3D. I was one of the first to do concerts in 3D but now I can't stand 3D in movie theatres. The fact that you need glasses means that you lose 60% of the light. The real 3D for movies will be when you have no hardware."

At the end of the day, the only interesting thing you can do is going to come from yourself, not the instruments you use

like Pink Floyd or myself were able to do a piece of music 20 minutes long. Now, because of Native Instruments' Massive plug-in, Skrillex and Dubstep exists. So technology is dictating the style, not the reverse. My advice to a beginner would be to choose a plug-in you like and, as an exercise, stick with it for six months. Don't explore anything else, but explore it to the maximum and you will see how you can express yourself in such an efficient way."

interesting thing you can do is going to come from yourself, not the instruments you use."

When you wrote *Aero* in 2004, it was the first time anyone had released an album for 5.1 surround systems. Did it succeed?

"I think that project is one of the rare albums to be originally conceived in 5.1, because you have lots of things in 5.1 that are basically coming from stereo

Are you still experimenting in 5.1?

"For my new album, *Electronica*, you will have available some audio 3D bonus tracks. It's actually a new technology that I am working on, without any app or

hardware or silly Blu-Ray 5.1 that nobody listens to anyway. It is quite a complex algorithmic system, where you can create a real surround environment. I think this is important because, whatever we think, we are still in the dark ages of sound, listening on tiny, tiny speakers on our smartphone. High-definition sound is not a luxury; we are born with HD ears, so we should also have that equipment."

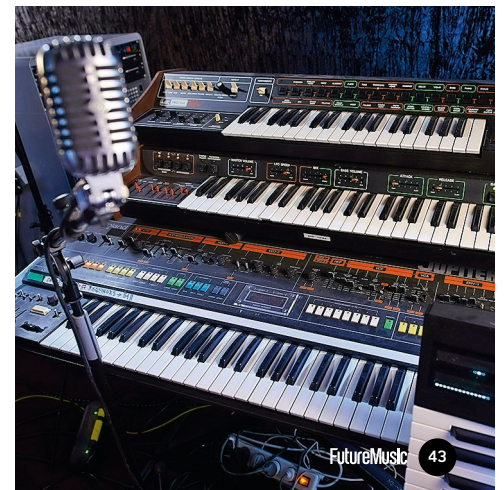
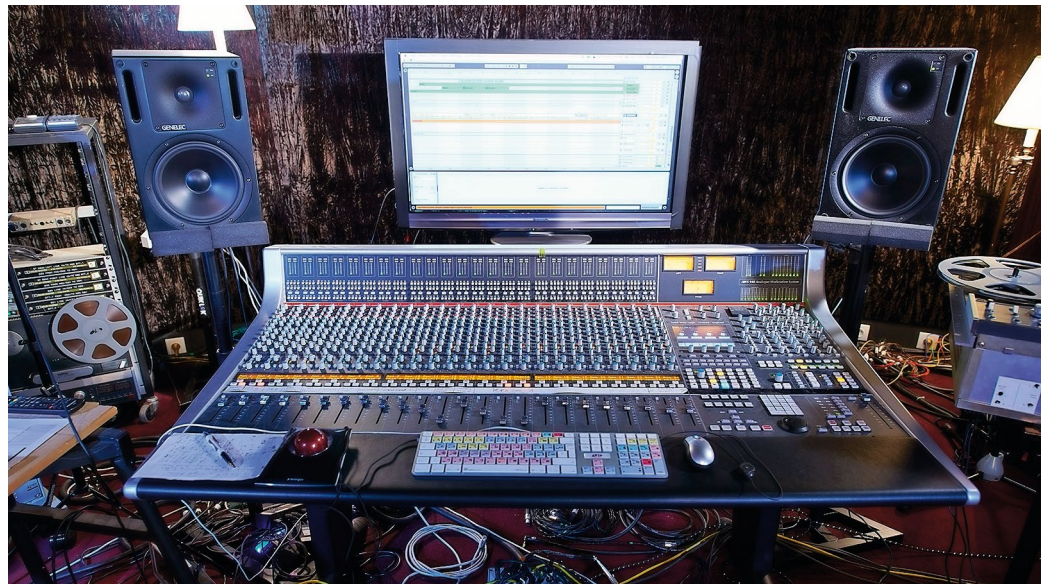
Will 3D audio change how we listen to music?

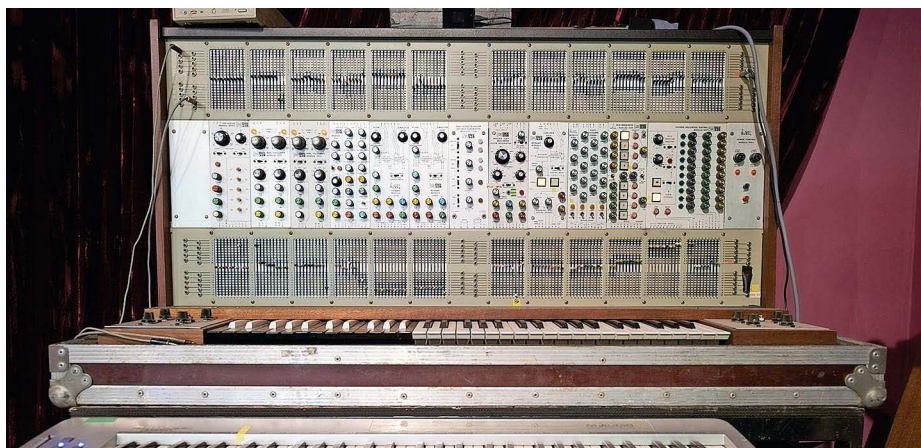
"In terms of our sound environment, we were in mono a long time ago, then a very clever guy invented stereo in the middle of the 20th century. But stereo is not natural; it's a fake system with a phased point to give you the impression of space, but this is not actually what you find in nature. With this audio 3D experiment that will be accompanying the project, we can clearly see the difference between the standard stereo version and a totally different approach to listening to sound. I would really like to develop this so that young producers and composers can make music in a totally different way."

***Electronica* is your first studio album in eight years. Why the delay, and what was the ideology behind the album?**

"The project became much wider than I thought and that is the reason why it will be a little bit like Kill Bill 1 and Kill Bill 2, with the second volume being released in April 2016. It took me a lot of time to do this project because I wanted to make my next studio album a true collaboration with people who have been a source of inspiration to me in the past – artists who have been linked directly or indirectly to the electronic scene for decades. The concept is that we think we are connected to the world, but we are not talking to our neighbour anymore. I wanted something that was the opposite to the trendy way of sending files to the other side of the world and not even talking to the other guy who will do a vocal or bassline. With the idea of physically travelling all over the world to meet people, I realised that, as musicians, we are quite isolated and it's very rare that you can start a project from scratch together."







Who are some of the artists you have teamed up with on your travels?

“I travelled to Germany to meet with Tangerine Dream, took a car to Berlin to meet with Boys Noize, to London to meet Pete Townsend, Fuck Buttons and Little Boots, Bristol to meet Massive Attack, Brooklyn to meet with Vince Clarke, and Los Angeles to meet with people like Moby, David Lynch and John Carpenter. It was really to try to connect in

suddenly I said okay, we are going on the wrong track and did something entirely different, and that was it; we finished the track very quickly.”

With the mixing process, was there a crossover in technologies or did you finish it all yourself?

“I mixed a lot of it in LA at Paramount Studios and also in Paris. I was quite concerned as, at the end of the day, it’s a Jean-Michel Jarre album, so how could

Tools; lots of studios are complaining that the maintenance costs more than the maintenance of the rest of your studio, and the fact that it’s heavy. What I liked so much about Ableton Live 8 is that it’s really for DJs, but in terms of audio quality, Ableton 9 is one of the best-sounding DAWs I’ve ever heard. When you do a bounce on Pro Tools you are losing something, but absolutely nothing on Ableton Live if you know one or two tricks. And also for flexibility; when I was travelling I did everything on a MacBook with a 1 terabyte drive and two 1 terabyte SSD external hard drives and it was perfect.”

Do you use Ableton purely as a sequencer or do you use the software plug-ins and VSTs?

“I’m a big fan of the VSTs from Live. I’m also using a lot of other audio units and VSTs apart from Ableton Live – and you can say the look of Ableton is not the sexiest in the world, but they work very well. Even compared to plug-ins from other companies, the Glue compressor is great and the reverb and EQ is great, and not too greedy in terms of CPU. I used them a lot in the mixing, processing and even production.”

Do you mix on an SSL desk, not in the box?

“It’s a very interesting question because I started using the SSL a lot, but along the way I started to use it less and less. Even ten years ago I would not consider using the mouse to do the job, but on this album I used the SSL for recording and some pre-mixing at the beginning, but all of the final stages I did in the box.”

When you start on a project, what is your go-to gear? You have so much...

“What you see here is not necessarily the gear I’m using all the time. I like to change a range of gear depending on the project and depending on the track. So you could come back in a month and the

instruments around me will be fairly different. When I look back at this project – which has been massive in terms of production, the biggest I have been involved with in my life – I used external analogue synths and plug-ins in equal part.”

It’s a Jean-Michel Jarre album, so how could I create a unity between the work of Massive Attack, Pete Townsend, Fuck Buttons or Air?

a different way, to share emotions and experience experiments in the studio, such as in Paris with Air, who also came to my studio here. I had no idea whether people would accept, but they all said yes.”

How did you approach the composition?

“Before I went to meet with people, I composed a demo thinking about the collaboration and what they could add, but also leaving enough space for them to complete the track. Looking back, I’ve been quite astonished at how they have been very respectful of what I gave them, trying to really go into the concept as an experiment for them. In some cases, we changed the track entirely. For instance, with Robert Del Naja of Massive Attack, he was quite keen but it took months of going nowhere. So

I create a unity between the work of Massive Attack, Pete Townsend, Little Boots, Fuck Buttons or Air? All these collaborators have an instantly recognisable sound. You listen to 30 seconds of Moby and you know it’s Moby. I was in the studio with him and he was playing a simple E minor – three notes like everybody can do – and it was Moby; and he told me it’s the same when I was playing some chords. I started with Pro Tools, but sometimes had 90 or 100 tracks, and that created some difficulties. So I had to try and get less because, as we know, less is more.”

Was this the reason that you switched to using Ableton to complete the project?

“Yes, because I think these days it is the best for what I want to achieve. I’ve been really fed up with Pro

Which are your favourite analogue synths?

“My favourites are the ARP 2600, the Memorymoog, the Eminent Solina, the Synthi AKS and VCS3, and also the Swarmatron, which is more recent but something I really like. I like synths like the Korg Micro-Preset – the old one, nothing to do with the MicroKorg – and lots of drum machines. In the big studio, I have an ARP 2500 and I also used the Fairlight CMI for the project with Air.”

Why did you return to the Fairlight?

“When we talked I said, okay, why don’t we do something that is more than a track by Air and JMJ? One track visiting all the generations of instruments, starting from the first way of doing sounds back in



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the '50s, even tape loops. In those days, we had no sequencers, so to make a loop we used sellotape. If you have 120bpm for two bars, you could calculate the length of tape of an eighth or fourth note, add your bass drum or snare recording and by cutting the physical length of tape make a physical loop, put a mic stand in front of you and press record. That would play the loop infinitely and was how the first loop was ever made. So we started the track like this and then moved to the first Modular Moog, the first analogue monophonic, the analogue polyphonic Elka Synthex and Memorymoog, the Fairlight CMI and the E-mu Emulator II. Then we used the Roland D-50, Korg M1, some plug-ins, and the last sound of the track is done with the iPad. We didn't do everything in that order, but in the track we have all of these instruments, and the challenge we had was that everything should sound coherent."

Is it possible to play this album live?

"Yes, I'm thinking seriously about starting touring next year. We have a lot of instrumental tracks, which are not a problem. Tangerine Dream is special because Edgar Froese passed away a few weeks after this track, so this is the last track from Tangerine Dream. A track like this or Fuck Buttons, and other tracks from the second album, are not a problem. Lots of these artists are also using their vocals as an instrument but not purely as a singing performance, so it's not that difficult to do it, and some of the collaborators will join me on stage when they can."

When you're playing live in front of three million people, what are the emotions you're feeling – is there a disconnection?

"It's strange what I'm going to say, but I feel more and more that the performance experience is a kind of love affair between two entities, the audience and whatever is happening on stage. Sometimes it's more intimidating to be in front of 200 people than a big crowd in a stadium, or even bigger, as suddenly it just becomes one entity. When you are in a club with a small audience you are much more exposed – but it's not a matter of disconnection; I think you can really create a very strong emotional link with a big crowd. I remember the moment in Moscow when I did that concert in front of more than three million people. It was the night of Princess Diana's funeral, and I knew her and we were all quite emotionally affected by this. I had this track that I knew that she liked, so I decided to dedicate it to her and suddenly all of the crowd, not saying one word, were just lighting candles. Moscow is not London – it's far away, culturally and geographically – so to see that crowd dancing uncontrollably then stopping, this is exactly the magic of performance. It was such an emotional shock that I couldn't play for one minute. So I would say that it can be the reverse of disconnection, suddenly it's one entity all together, sharing the same moment emotionally." **FM**

WANT TO KNOW MORE?

Electronica 1: The Time Machine arrives 16 October via Music Affair/Sony <http://jeanmicheljarre.com>



Synthi AKS

"This made the sound I used lots in *Oxygène*, a sine wave with an LFO imitating a female voice – a more tame version of the theremin. The cool thing with the cheap keyboard is you can do glissando you can't do on a normal keyboard."

Fairlight

"I used this on my track with Air to get a strange lo-fi, looped choir effect. This is the first sampler ever made. You choose your sound with a pen; it's quiet Doctor Who/Star Trek style technology."

Virtual Sequencer

"This is a software version of my first sequencer. It was a hardware matrix with pins, with the notes on the X line and the events on the Y. You could make sequences of 64 notes. We did the virtual version of it in-house, with a touchscreen. This is currently triggering the Memorymoog."



Watch the video here: <http://bit.ly/fmjmjvideo>

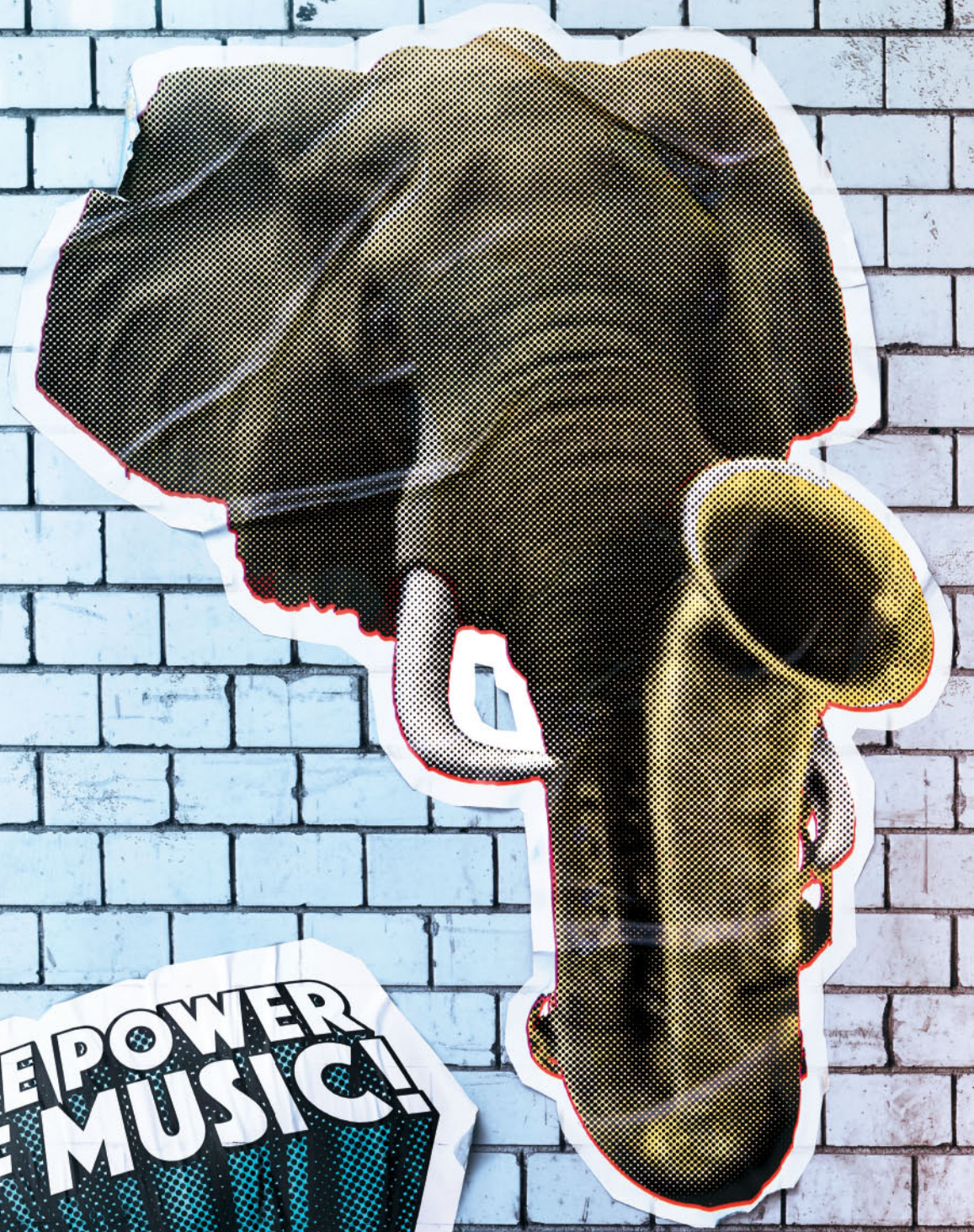
Moog Modular

"This is a fantastic piece of equipment. I use it a lot for brassy sounds. It has unbeatable filters and oscillators, and a sequencer which is very fun. The sound is really unique."

EHX Small Stone

"This model is from the '90s, but the first is from the '70s and very rare. It has a softer phase sound, which I like very much."





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Miguel Campbell Free Falling

Outcross Records, 2015

Leeds-based producer Miguel Campbell's breakthrough came in 2012 with the release of *Something Special* on Hot Creations. With its clean, upfront vocal and laidback, old-school feel, it marked Campbell out as a creator of classy, timeless club music. The years that have followed have seen Campbell release a handful of tracks, both solo and as one half of MAM, while steadily building a reputation as a highly skilled DJ. *FM* caught up with him to find out about his latest release, created with vocalist Beccs Lott.

Basic foundations

"When I first decide on starting a track I usually tend to look at a beat. Because I've made so many tracks in the past I tend to think



Watch the video here: <http://bit.ly/fmtrack297>



“I try to keep things really clean and simple with my music; I don’t go overboard with the amounts of tracks and things. I have a few tracks in respect to my

drums, we have the bass and we have the Rhodes. When I first started out producing I used to make music in a similar way but it just didn’t sound right. I used to add lots and lots of different sounds trying to make it sound better, really compensating for how thin the music sounded. I tend to find a lot of it is down to sound selection – choosing the right sound for the right scenario.”

of different songs that I’ve made and I’ll get the basis of a beat from one of the tracks. This particular track I used a couple of samples from sample CDs and from records that I’ve had in the past. I had a beat sent to me by one of my artists – Minota, a guy from Paris – and I used that as the back bedding for the beat. I also used the [Native Instruments] Maschine.

“Generally I’d sit and play around and get a beat sounding how I like it and, once I’ve got that, I’d generally focus on the musical elements to the track. For this particular track what I started with following the beat was the bassline. Once I’d dropped the bassline, it instantly brings that [classic House] feel.

“I’ve used the Scarbee Jay-Bass from Native Instruments Complete; it gives you a nice realistic tone. It sounds really cool; on the upper ends you have all of the different kinds of string noise, so you can make really realistic sounding basslines. I think for some of the basslines for tracks of mine and my partner in MAM, Matt Hughes, we tend to use a mixture between synthetic basses and realistic bass. A lot of the time if you have a realistic bass tone it takes away the noisy elements that you need. One of the things that we used to always do was just use a low-pass filter on really big, fat synth sounds. As you adjust the resonance you can get the Daft Punk-type tone. But for this particular track I decided to use a bass

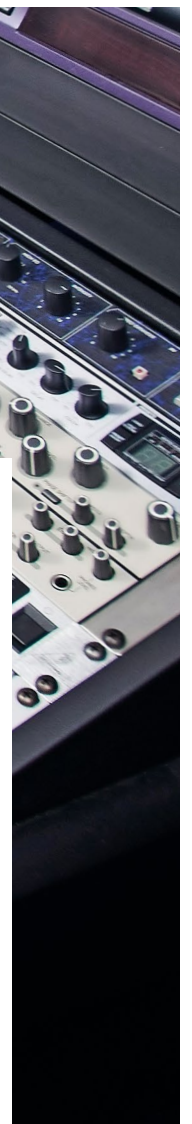
with a nice Fred Falke sound to it. I was really inspired by the Fred Falke video we watched on *Future Music*.”

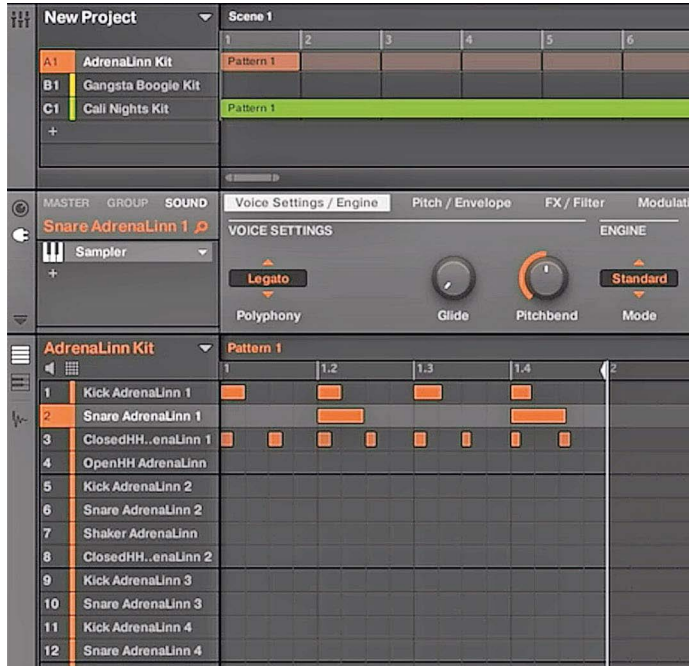
Processing the vocal

“When Beccs came to record the vocals on this track, I think I’d sent to her four or six ideas, and we recorded vocals on all of them. She thinks of certain things and I help her write some of the lyrics, to make them feel cohesive with the feel of the music. This is very typical of how we usually work together.

“For the processing of the vocals – similarly to *Something Special* and *Not That Kind Of Girl* – I tend to go for a real dry and upfront sound. Even when remixing, if people send me stems for the vocal and they have the reverbs and different effects on the stems, I tend to get rid of them and just use the dry vocal with a very small amount of reverb.

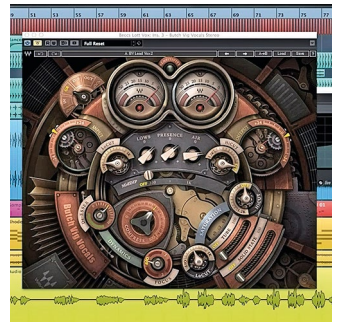
“For this particular track here I used some of the Waves plug-ins, the gate and compressors, just to take away the silence in-between the vocal lines. I also used another interesting processor, the Butch Vig Vocals from Waves. When I checked out that particular plug-in, I was really impressed by the sound of it, because it really brings out the dynamics of the vocals. Then I basically pumped all of that through one of the Native Instruments





CREATING CHORDS

“Once I got the bassline down here it was important to try and find the key structure and progression. For the chords in this track I used an electric piano patch from the MiniNova. I just added a little bit of tremolo and modulation to give it some movement and make it a little bit more dynamic. For the actual chords I added to this track I used the MIDI out function of Maschine.”



reverbs, the RC24, just to give it a little bit of a less dry feel, but it's still really upfront and 'karaoke' sounding.”

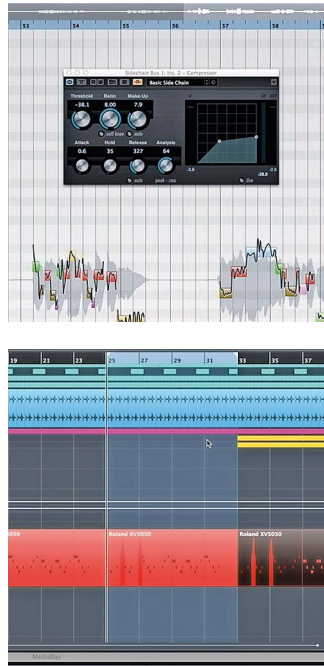
Draw an arrangement

“I've always found it reasonably easy to get a basic arrangement down. If I ever struggle, I once read something in *Computer Music* magazine that said to draw a picture of what you foresee the arrangement will look like. The way I arrange – I start with the drums and the different elements and bring them in one by one – it's quite easy to draw as blocks on a piece of paper. Then, without even listening to the song, you can go about arranging it so that it looks that way. When I first started producing I used to make 55 minute tracks because my screen was zoomed out that much. But once you have down the basic arrangement it's much easier to go about finishing your song by thinking 'alright, where does that work and where doesn't it work?'. I think one of the worst things you can do is sit there with just a four-bar loop on the screen going over and over again. I've done it myself; if it sounds wicked you'll sit there for 12 hours and it'll never go anywhere. It's really important to think about the structure. Even if you use the same layout you used in a previous song, or something you've come up with with a friend, just think of the original concept and then you can flesh it out.”

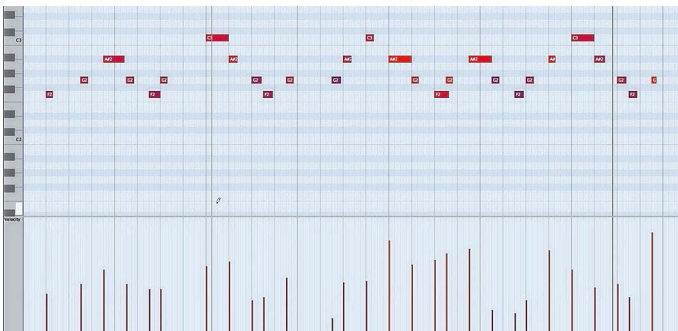


MASCHINE

“I’m not really a skilled keyboard player, however, since purchasing Maschine I’ve found a function whereby you can set the pads to play different chords for you. It makes things really easy and, if you do that, it’s really just a case of finding the root note of the song, setting the scale and then it kind of does it for you. It’s a really interesting thing that’s been helping me with my music for the past month or two. I did have a few piano lessons and learnt the difference between major and minor, and learnt how to play chords and things. However, because of the way Maschine calculates it, I come up with chord progressions that I would never otherwise play, or at least it would take me another five to ten years to learn how to play those particular chords.”



“Back in the day when I used to use my PC for my music, I’d find that the presets weren’t as good as what you could come up with yourself. But these days I’m playing around with presets more and more, certainly in dynamics plug-ins, and I’m really impressed with the results of some of them. I think the best thing to do is try them out and then tinker with the knobs on the ones you like.”



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vMOTI, *Lion (In My Head)*

See Dutch Electro House producer MOTI break down the synths, drums and vocal processing behind his 2014 club smash *Lion*.



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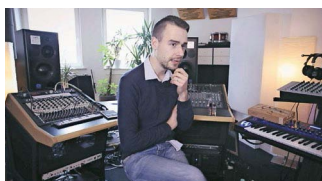
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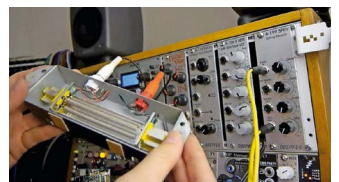
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This month: We visit UK duo My Digital Enemy in their Brighton studio to watch them build a track from scratch.

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Roland Aira Modular Effects Modules

£245 each

The Roland Aira range expands with four hardware effects processors. **Bruce Aisher** gets tweaking

INCLUDES AUDIO

vault.futuremusic.co.uk

WHAT IS IT?

Four new programmable digital effects processors that take in delay, bitcrushing, glitch looping and distortion

CONTACT

Who: Roland
Tel: 01792 702701
Web: www.roland.co.uk

HIGHLIGHTS

- 1 A good helping of audio and CV in/out sockets
- 2 High resolution analogue-style knobs
- 3 Expandable via software using programmable sub-modules

Roland's Aira onslaught continues, and this time in the form of the four effects boxes. As with all the other elements in the Aira range, these utilise digital processing (at a sample rate of 96kHz) and come armed with audio interfacing capabilities courtesy of their USB port.

Like the recent System-1m, the units also feature a plentiful supply of analogue ins and outs that embrace both audio and CV control, and the ability to integrate comfortably into a Eurorack modular system. As we'll see though, these units potentially promise more in terms of processing than is obvious from the front panel alone.

The effects on offer include Bitrazer – a bitcrusher, Demora – delay, Torcido – distortion, and Scooper – looper/scatterer. All four have almost identical front panels, with each unit dominated by two large Moog-style knobs. Next to each is a smaller knob to adjust the

amplitude of external CV signals (plugged into the adjacent 3.5mm socket). The associated LED's brightness is used for visual feedback. A couple of sub-parameters get their own mid-size controls. These can also come under external control, but this time any CV scaling needs to happen before arriving at the unit. Two switches provide simple additional parameter or bypass on/off features, with a couple of mini-jack inputs for Gate control.

Things are rounded off with global Volume, two mono inputs and outputs and the mysterious Remote In. So, from the outset it's clear that these units go

further than most other digital effects when it comes to routing and control.

As with the System-1m these boxes arrive with their own PSU for desktop use, but you'll also find a Eurorack power connector and four screws for racking. As such, the only connector on the rear is for USB connection to your computer. As with all other units in the range, this handles both MIDI, audio and system updates. The boxes themselves can also be used for general audio interfacing duties, though once again the 96kHz sample rate is fixed and Roland are not especially clear about what the ten in/out audio ports on your computer are actually routed to.

None of this is explained in the two-page semi-generic owner's manual – in fact, nearly everything about using the units is given only cursory explanation – and scrambling around on the Roland website only provides piecemeal clarification. I understand that digital kit updates often push manuals out of date pretty quickly, but Roland's approach certainly doesn't help you get the best out of a new box of tricks.

Delaying tactics

Demora is a digital delay that, like all the units, can work as a stereo or (dual) mono processor. The two main controls are for delay time (which goes up to a more than respectable ten seconds) and



Remote In

An interesting touch is this innocuous-looking mini-jack audio input that allows you to control and reprogram these Airas from iOS and Android devices via their headphone socket.

CV Inputs

Each of the Griffer controls has an associated CV input. These can be used for controlling many of the internal parameters, and like audio there's a very flexible approach to routing.

Audio Inputs And Outputs

All audio connectivity is on the front panel (on mini-jacks). The two mono inputs can be routed and processed separately if required, so in theory you can build two independent audio processors into each unit.



Big Knobs

These knobs are very 'analogue' in both look and feel. They have a 24-bit resolution to minimise stepping and can all be reassigned (with the exception of Volume).

Rec/Play (Scooper Only)

The Scooper (a concatenation of Looper and Scatter we presume) loses a couple of knobs and gains a Record/Play button. Scattering is applied only to the recorded loop.



SPECS

- CV Input Level -10 to +10 V
- GATE Input Level +3 V
- Controls
- GRF 1 knob (DIST)
- GRF 2 knob (TONE)
- GRF 3 knob (TUBE WARM)
- GRF 4 knob (DRY/WET)
- GRF 5 button (LO BOOST)
- GRF 6 button (BYPASS)
- VOLUME knob
- Connectors
- INPUT 1, 2 jacks: Miniature phone type
- REMOTE IN jack: Miniature phone type
- OUTPUT 1, 2 jacks: Miniature phone type
- GFR 1-6 jacks: Miniature phone type
- USB port: MicroB type (Audio/MIDI)
- DC IN jack

Dimensions
106.6 x 128.4 x 58.3mm
Weight
320g

feedback. Two other knobs control Width – for skewing left-right delay times and creating ping-pong delay effects from a mono source – and wet/dry balance. The two buttons default to effects and delay Hold, which freezes the delay buffer for perpetual repeats.

For those not familiar with delays that have 'real' controls, you are really missing out. Tweaking the delay time in real time also alters pitch, taking you from sensible repeats to insane wobbliness in a few steps. Patching an LFO signal into the delay time CV input takes care of some of the tweaking for you, and works brilliantly with more unusual wave shapes. Smaller delay times and gentler modulation delivers a nice chorus effect. Push the Width control and you get stereo chorus. If you don't have a separate LFO module, then you can dip into reprogramming your unit with one of 15 sub-modules that can be added via software (see *Aira Modular Customizer*).

Given that in its factory-state this is a very clean-sounding digital delay, you

Aira Modular Customizer

The Aira FX are digital units posing as (analogue) hardware, which can be reprogrammed using software that has building blocks designed to look and feel like hardware.

One of the standout features of these effects boxes is the ability to create more elaborate effects processing chains via the Aira Modular Customizer software. This simple graphical environment allows you to reconfigure each unit by

patching in up to six sub-modules (from a library of 15). These take in modulation, filtering and mixing as well as clocking, gating and conversion tasks and expand the scope of the units substantially.

Modules can be reprogrammed from Mac and PC via USB or iOS and Android devices using their headphone audio routed to the Remote In jack on the Aira. Patches can be saved in software

(or as playable/uploadable audio files).

It's great to have these custom features, though I would have loved to have had a few extra hardware controls, so not to override the existing parameter mapping. The layout of the Aira front panel software graphic is slightly different to the hardware and knob positions do not update from unit to software, making things a little less straightforward than they might be.

the start in a far more targeted way. That said, the Demora is a solid and flexible delay effect.

My 303 goes to 11

The Torcido is a distortion processor that claims to conjure up the 'classic

and Tube Warmth. There is noticeable brightening of tone as the Tube Warm knob is turned up. Having a Wet/Dry control is useful for adding some subtlety to the distortion process, though the potentially massive level differences between distorted and dry

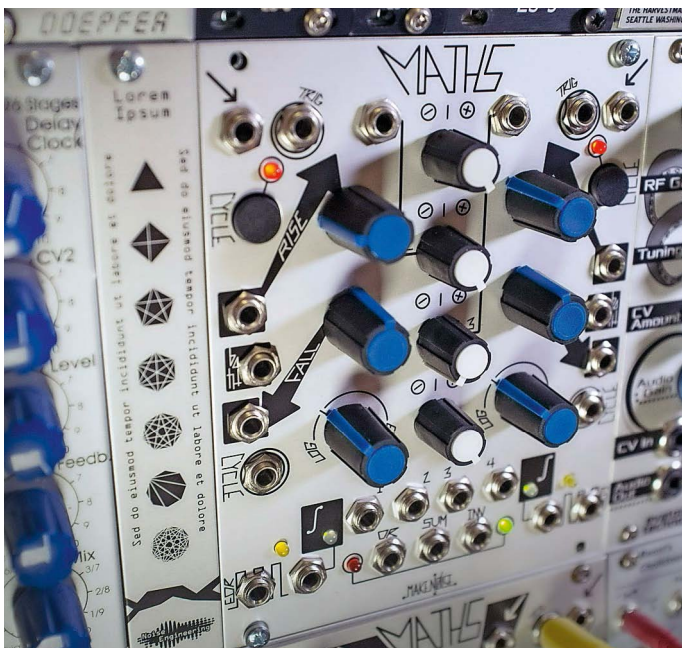
signal mean that only a slight twist of this control can cause massive changes. Despite the much-touted 24-bit controls having over 16 million steps of resolution,

Tweaking the delay in real time can take you from sensible repeats to insane wobbliness in a few steps

will need to explore this feature fully to coax anything vaguely retro out of the unit. My analogue EH Memory Boy Deluxe, which also has a CV control, is decidedly muddy in comparison, though all-digital units like the Strymon El Capistan have this area covered from

Roland sound'. No specific gear is mentioned here, so I assume this is a reference to certain well-regarded Boss guitar pedals? Controls are provided for the amount of Distortion (though this will depend very much on input level), Tone (a simple tilt EQ), effects balance

some stepping was in evidence here, which was rather disappointing (though it did lessen slightly after a system update). An auto-levelling option for better matching between input and output could be quite useful for this type of effect.



INCLUDES VIDEO

Back To School

Let's look at some interesting (and useful) things a MATHS can do...

At the back of the MATHS manual is a treasure trove of patch ideas. There are many fantastic and deep applications to discover by self-patching a MATHS back in on itself. But, if you've been watching our modular tutorial videos, you'll inevitably spot MATHS accompanying the module on demo. MATHS' simple yet critical function generators and adjustment tools make it essential in everyday use. For example, our RF Nomad shortwave radio module doesn't have a fine-tune dial – by itself, it's very hard to tune it precisely to a station. But the attenuverters in MATHS add the missing functionality. Sound boring? It ain't when you need it. So what else are its 'greatest hits', functionally speaking, in our experience?

MATHS Lessons

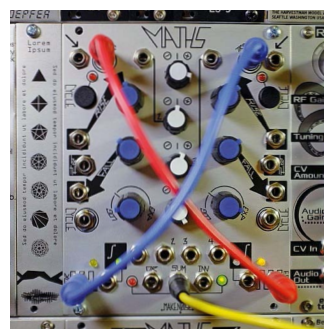
Make Noise Music's ubiquitous lightning-bolted 'function generator' is a darling of Eurorack, but can be bewildering on first glance. Let's open our copybooks to Chapter 3.1415926...

What sounds like the most boring module ever is actually, arguably, one of the most important tools in many people's racks. It was there in the initial set of modules we bought when we first got into Eurorack, and over time we sold and replaced them all... except MATHS. And despite its rampant popularity, the most natural question on anyone's lips when they first see one is... What the hell does it actually do?

It's like this. It's exciting to buy filters and oscillators, but when you're sat in front of the modular actually using them, you'll find yourself needing to control them in ways you can't. Perhaps you need to invert a CV or shape it; or you need an LFO or a sub oscillator to fatten your VCO; or you want to delay the onset of a musical event; or you want to add portamento to otherwise stair-stepped sequences; or you want to turn a gate into an envelope, or vice versa. MATHS can do all this, and much more. We've seen before that utilities 'unlock' your other modules. Well, MATHS is arguably the king of utilities.

MATHS is essentially comprised of two 'AD' envelope generators, which can cycle like LFOs (with variable contour shapes, at rates from 25 minutes to 1kHz – bass VCO speed), with CV-controllable attack and decay, plus two channels of 'attenuverters' – controls which freely attenuate or invert an input (and which function as voltage offsets without anything patched in). You can also actually patch signals into those 'AD' channels, and shape audio or CV signal using the attack and decay controls – plus we have mixing, and an 'OR' logic output, so that we can combine signals in different ways. Lastly two gate outputs emerge when the two AD generators reach their 'end of rise' (aka attack) and 'end of cycle' stages respectively. Simple tools, but in use... highly useful.

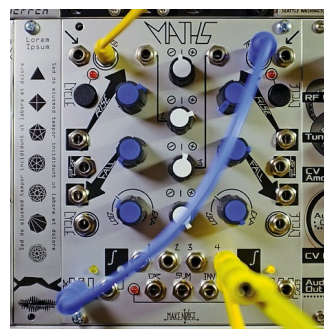
In the words of its maker, Tony Rolando of Make Noise: "I was looking at the Serge DUSG, Buchla 281 and 257 modules, daydreaming about using them together. I was experimenting with adding and subtracting control voltages using Doepfer's polarising mixer, envelopes and LFOs. I achieved fantastic,



> Self-Patched Rhythm: Self-patch the respective EOR and EOC outs to the Trig inputs on the opposite channels. Briefly on/off Cycle a channel to start the module going. Now adjust Rises/Falls using Sum or OR output for rhythmic modulation.



> 'Many Hands': Multiply an empty MATHS attenuverter channel to control two (or more) filters patched in series. Now you can set their relationship individually, using MATHS as a 'global' control to sweep them all simultaneously, keeping their offsets the same.



> Delayed events/Clock divider/'Hold'-enabled env trigger: Patch a gate/trigger into 'Trig' input on Channel 1. Cycle off. Adjust Rise timing (and Exp/Log knob) and 'End of Rise' out becomes a handy delayed trigger to use elsewhere, or to trigger Channel 4.



> Handy Slew: Input a sequencer into Channel 1 or 4's input. Use the Rise/Fall controls and Exp/Lin controls to add portamento. Patch in a Gate instead to turn what was a simple on/off gate into an adjustable CV-controllable ASR envelope.

complex results with two or three simple function generators, adding and subtracting them from each other. I was also using comparators in order to achieve the End of Rise and End of Cycle pulses required to re-create the 'Quadrature' mode from the Buchla 281.

"I was envisioning MATHS as a place where your control voltages could meet, mingle and mutate into variations of themselves. In a small modular system you might have

limited modulation sources, but if you lag, add, subtract, invert, scale and cross modulate them together, you create new and interesting control voltages that share a common source.

"MATHS is our best-selling module. Though it is a simple concept, the two-stage function generator is very powerful, allowing you to have several unique musical gestures happening which are all related to one another in some way."

Fehrplay

Jonas von der Fehr's bangin' big room prog stylings have seen him endorsed by the likes of Eric Prydz and deadmau5. **Tim Cant** catches up with the arp-loving Norwegian for some fehrly steamy knob-centric chat

Since debuting in 2009 with the cheeky, piano-tinged Big Room Prog stomper *Wejiouna*, Jonas von der Fehr's career has gone from strength to strength. He's scored releases on Pryda Friends, mau5trap and Armada, remixed

Röyksopp and deadmau5, and has been supported by everyone up to and including Pete Tong.

Much of Fehrplay's work is doused in cascading synth melodies, and the heady sounds of euphoric Trance are clearly an influence on his epic take on progressive House. We tracked Jonas down, both on the White Isle and in his NYC studio, to discuss synths, discover how he makes his tracks, and find out what Joel Zimmerman is really like.

FM: Hi Jonas, how's it going in Ibiza?

JF: "I've just got here!"

What are you up to?

"I'm playing Ushuaia for A State of Trance on Thursday. That's the second time this summer, which is pretty cool. It's good fun, and then I get a couple of days to chill and see some other DJs play."

Any DJs in particular?

"Maceo Plex tomorrow I reckon. He's at Amnesia and I haven't seen him play live in a couple of years so that would be great!"

Let's kick off with a bit of background. How did you get into making music?

"My parents were into music. There was all this music in our home. I started playing piano, and I got my first computer when I was 12, and my first software was eJay! The one I used the most was Dance eJay. It was great; I made a whole album on eJay! Obviously it's just dragging samples around, but it was a lot of fun. From that I progressed onto Fruity Loops, which was a big change because you could make your own samples. Then it was Reason, and then Logic which is what I use now."

Are you predominantly 'inside the box'?

"I would say so. I do use some outboard gear and some synths, but it's mostly for bussing and master bussing stuff. Obviously, hardware is expensive. I have a great SSL X-Logic Stereo Compressor, which I use on my busses and it's amazing. It just glues everything together! I use Neve preamps which are great on vocals and bass, just to give them a bit of hardware drive. And honestly, I think most plug-ins these days emulate hardware perfectly, except for when it comes to saturation and distortion. You just can't get a good distortion in software – it's impossible. It just sounds digital however you do it. That's my opinion at least. That's why I really like hardware distortion – you can just drive it, push it, and it just sounds so nice.

"That's definitely changed how I work a little bit, because it takes more time when you're producing. You have to record everything through outboard gear, and if you change your mind later – which I do

quite a lot – you have to do it again! But it's worth it in my opinion."

Have you developed any workflows that allow you to replace these sounds more quickly?

"Yes definitely. Waves has this SSL compressor plug-in, which is supposed to emulate the one I have in hardware. It doesn't have that warmth, which is why I'm using the outboard hardware, but when I'm working on my laptop I'll put it on the places where I know that I'll use the actual compressor later. And the same a little bit with the Neve preamps; I use Waves Scheps 73, which is basically just a preamp and you can drive it a little bit."

What other ways do you apply saturation to your mixes?

"I really adore the plug-in Vintage Warmer 2 by PSP; I think that's great as well. I try not to get it too saturated or distorted, but it just gives it that extra kick. I especially put it on my kick and bass busses to work its magic, just for a little, subtle effect. I also use a lot of Logic's effects."

What other hardware do you use?

"I use a few synths. I had an Access Virus TI which I sold about six months ago – it was a bit too Trance for me. It was good for me a few years ago when I was looking for that very progressive sound. Now I'm looking for a more retro sound. I'm saving up to buy the new Prophet-6 which I've just tried and it's unbelievable. It's actually between the new Moog Sub 37 and the Prophet-6 really. The price is crazily higher on the Prophet, but I spent four hours on it last time and it's amazing, so maybe it's worth it."

What is it about the Prophet you like so much?

"Well first of all anything you make with it sounds good. I just had a feeling that you don't even need to process anything; all the sounds are just top-notch. And the creativity of it is amazing. I like the fact that there's no digital screen on it or anything. But the Moog has amazing bass sounds so that's important.

"I've used the Little Phatty for a few basslines, and what I love about it is that you just automate it while it's recording. It's very inspiring to use hardware in that way. I'd love to use more hardware, but everything in time I guess. I don't actually own a Moog. I just borrowed it from a friend; a lot of them have Little Phattys. I wish Moog would come up with a proper soft synth themselves. We can dream!"

What software synths are you into?

"I use the Arturia pack all the time, which has all the classics like the Moog, the Prophet, ARP 2600... those are my go-to synths. They're kind of unstable though, and you have to have a USB key to use them. I use a lot of the Logic synths like ES2, ES M and ES P quite a lot, and they don't use a lot of CPU.

"I've always struggled with Logic on every Mac I've ever had. I always get crashes once I'm far along in a project. It just crashes and crashes and the CPU overloads. I tend to have way too many channels: I have up to 100 channels in most of my tracks! That doesn't mean they're really complex, it's just a lot of

layering. One pad could be six or seven pads, one clap could be seven caps, you know? It's not a good workflow, but it's always just been the way I've done things, so whatever works! I envy people that don't have to do that.

"I love the Korg M1. I've got to say it's the most beautiful-sounding soft synth I've ever had – it almost sounds like the real thing! It's quality, and it doesn't crash. Other than that I use some of the u-he synths – ACE for example is really good – and I'm trying to get into Xfer Records Cthulhu. It's an arpeggiator and chord generator, and it's pretty fun, but it's still kind of Greek to me!

"What's funny is after watching *Interstellar* I got hooked on organs! So I went to find the best-sounding, proper pipe organ there is, and I found this one from someone called Milan Digital Audio called Hauptwerk. It's a 40GB library of just two organs! The sound is unbelievable. It's kind of funny as I don't think a lot of people know about it, but it's completely insane. I'm working on quite a few new tracks with that in it. You don't really hear that pipe organ a lot in club music, so I'm going to try it out!

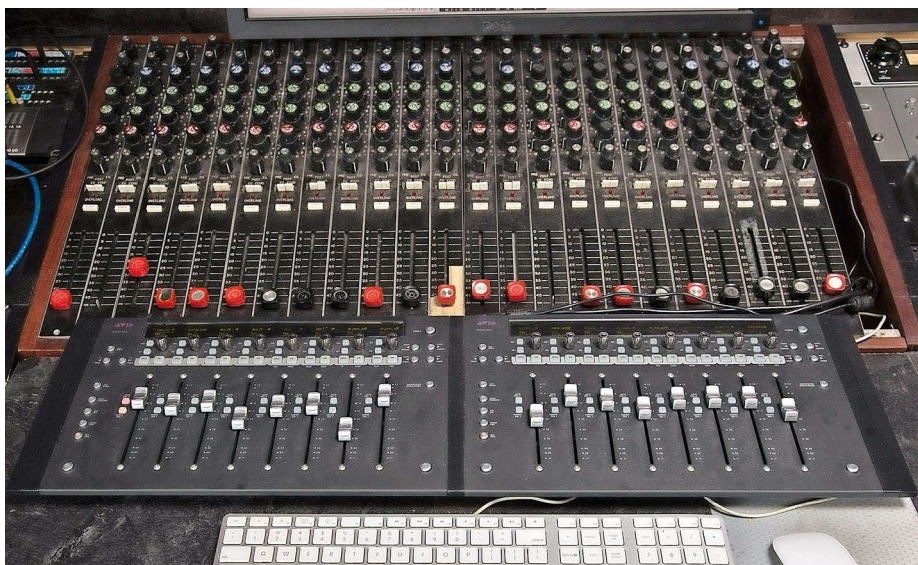
"I do have Sylenth1, but I've tried to stay away from it because it's something that everyone uses."

What do you use to make supersaws if not Sylenth1?

"I don't make supersaws a lot any more, I tend to use Sylenth for a normal saw, especially if I'm making risers and pitch effects and stuff like that. I just try to stay away from the bass sounds basically. You just know everyone is going to have those sounds, and I also think its sound isn't completely amazing. It sounds a little bit thin, and very digital, but maybe that's just psychological... I don't know! I like the modulation options, but from a preset standpoint I'd stay away from it. That's where I'd go to Arturia and use the ARP 2600 or the Jupiter for example."

Any other plug-ins you're feeling right now?

"There are a lot of sidechain plug-ins out there now, and they're all pretty simple in my opinion, but



was it an accident; were they using something like Cthulhu? I know a lot of people who use it, and that's great. Coming up with melodies – something original, something that really strikes you – is the toughest part.

"My process starts on the piano. I'll begin with the breakdown and I'll play chords. I tend to have two parts in the track. Say you've got a breakdown that's melancholy, which then breaks into the riff or

synth will be arpeggiated on top of that... So you kind of cover that chord in a groove. Then you can find a different chord that sits nicely with it on the piano, then do the same change in the track. I think that's a cool way to work, because first you find a chord melody, and then you implement that into the track."

How complex are the chords that you'll use during your breakdowns?

"Yeah that's a good question, because I don't really know the theory behind them any more. I used to when I was younger, but that's all gone now!"

So you're really just jamming away on the piano?

"Oh absolutely. The process is very long and difficult because there's no right or wrong answer, It's just trial and error. But that's what makes it so rewarding when I get it. A good example of this is a track called *I Can't Stop It* where the breakdown chords have no theoretical meaning to me whatsoever – but it sounds alright, you know? But it took me two weeks just to nail that chord progression properly. There are at least a few chords in there that have eight notes playing. I'd benefit from doing more theoretical training, but it just doesn't sit with me

I love the Korg M1. I've got to say it's the most beautiful-sounding soft synth I've ever had – it almost sounds like the real thing!

Vengeance have one called Multiband Sidechain. It lets you split the band with a crossover frequency, and a percentage for how much you want to process each band. That works brilliantly on leads and stuff like that. I don't think many people know about it because I haven't seen it a lot of people using it."

Melody plays a big part in your music. How does your composition process work?

"When I hear a track and I think 'oh god, that melody is amazing', I wonder if the creator has come up with the melody all by themselves –

the lead which is kinda angry, or in some way contrasting with that breakdown. That's what I struggle the most with, but it's so satisfying when you get that combination going you know. Let's say I start off with a simple groove, then I'll just sit and jam with chords on the piano.

"A pretty fun thing I tend to do with stuff sometimes is to find one chord that sounds wicked, like a really angry chord or something, then you break that chord up into different elements in the track. So, you'd pitch some of the percussion to one of the tones, the darkest tone can be the bass, then a



Tell us how you approach your remixing...

"I don't think I've ever remixed a track without a vocal in it, so I'll start with the vocal, have it running and then play chords in the background on my piano. When I've found some chords I like I'll put them in at the right tempo. I'm working on a remix right now which is a fucking pain. It's for Ministry of Sound – they want me to remix this track where the original tempo is 105bpm and it's an acoustic track, so it's not even a fixed tempo! So first you need to get the vocal at a fixed tempo, then you have to time-stretch it to 125bpm without it sounding artificial... It's such hard work! It's taken me more time to do that than do the remix! But anyway, I approach it by jamming along to it. Some of the most fun I've had doing that was remixing Röyksopp's *Sordid Affair*. I think I went through five different melodies, literally almost the finished product, but I was like, 'nah, I can do it a little bit better!' Then every time I did something I was like 'fuck yeah!' but the day after I was like 'naaaah'. Eventually, I got it. That was a lot of fun you know, and that's why I like working with vocals because it's a great way to inspire a track, you get loads of ideas rather than starting from scratch."

really! But I think a lot of people make great music without knowing the theory behind it.”

How do you make your beats?

“I’ll usually start with a nice kick drum, and I’ve got some cool kick libraries that I love. I try to layer the kicks, but that can give you a lot of problems because, as soon as you start layering a kick in headphones, there can be gaps in its frequencies. You’ll mould a track or a mix in your headphones around that kick, and then it’ll sound really crap when you get it into the studio and you have to

like a drum or something and then go full-on with the Decapitator. I’ll just have that in the background and mess around with its automation to get some texture in there.

“Most of the time it’ll start with a kick, bassline and a snare, because those are the fundamentals of a track. When you’ve got them you can just mould everything around that... That in itself could be enough to get people raving. I usually buss those three things together, because I want to have those three things glued together as much as possible and just smashing in your face!

sometimes, to get that really pumping sound. There was one track I made called *Renegade* on mau5trap, it was like -14dB, to really let the kick be out there.

“So first I sidechain the bass with the kick to take out some of the frequencies in the bass where the kick has its prominent energy. Then I’ll find a snare which will usually be a simple, snappy snare, and I would layer that later with claps for the stereo image. But to begin with I just want that snappy, mono snare, like a 909 snare basically. I’d put some saturation on that snare to make it sound a little bit

more grungy; that’s where the Vintage Warmer comes in useful. On the buss I’d start with the C1 Compressor from Waves. It’s really, really tight when you get it right. Then I’d put the Vintage Warmer on. Some people argue you should put saturation before the

compressor – sometimes it works better, sometimes it doesn’t. From there it’s just a matter of maybe EQing a little bit, and sometimes I’ll slap a limiter on there just to get it loud. Then I like Sausage Fattener, really subtle, just at maybe 3% or something, because it can make a radical, radical change when it kicks in. So by then it’s got a lot of processing on it, and that’s enough sometimes you know! Sometimes I parallel compress it as well, send it to a

I’ll start with a kick, bassline and a snare... I want to have them glued together as much as possible and just smashing in your face!

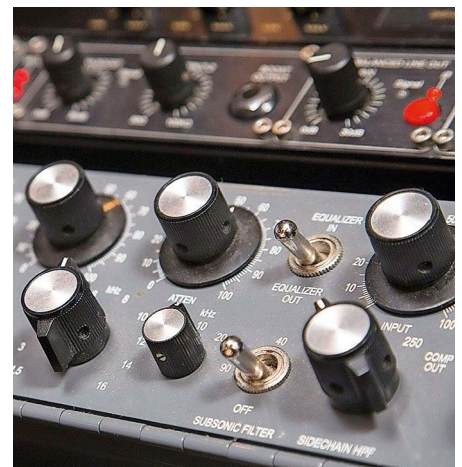
change everything. So I tend to start with a kick, and then add basslines and grooves and things that are easy to do in headphones. I love to experiment with grooves. I’ll maybe pick something from a percussion set like a bell or something like that, and add loads of delay effects that are kinda weird.

“Soundtoys are my go-to creative plug-ins. Crystallizer, EchoBoy and Decapitator are so much fun to work with. To make atmospheres I’ll just loop

Then you can just layer things around it like lead synths and everything.”

Do you still sidechain bass to kicks even though you’re bussing them together?

“Oh yeah, I’ll still definitely sidechain the bass. I always have to, just to get it pumping. I’ll sidechain the snare a little bit as well to get it snappy; I always sidechain the fuck out of basslines. I go -12dB





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What inspires you?

"It took me some time to actually realise, but being outside of the studio is more inspiring than being in the studio: you're always looking at the same screen, the same four walls. When you have the opportunity to be on your laptop and look at your surroundings... to go to a café and watch people... I didn't do that with the intention of getting inspired, but I made stuff that sounded better and had more spark. My process now is that I'll start an idea outside the studio; I'll go to the café and drink ten lattes for a whole day and just sit there and work.

"Then when it comes to the mixing part you have to be in the studio, there's no doubt about it. When I get to the point that it's about 60% done, the arrangement will be kinda done, then I'll go to the studio and do the rest there. If I feel like there's something missing, I'll just go outside of the studio again and try and get a little bit inspired. For me the most inspiring thing is travelling. If I've had a good gig I'll be buzzing afterwards, and some of my best ideas have definitely come from that plane ride afterwards."



different buss, and then really, really smash the shit out of it. I'll have that little bit on the top, then EQ out the bottom-end. I've struggled for years to get that buss perfect, and I think I have it now. I've taken away more stuff from that buss than I've added, because all you need is an EQ, a good saturator and a good compressor."

You have a lot of musical elements in your mixes... That must require a lot of sidechaining?

"Yes. All the time. I tend to think of it like this: the closer the sound is to the kick, the more it needs to be sidechained. So if something was at 10kHz, I wouldn't sidechain that as aggressively as the bassline for example. You want it to sound floaty. If I have a lead that's covering a whole lot of frequencies, I'll split it up and I'll sidechain the lower parts more than the higher parts. When you sidechain things too much – which I think a lot of producers do these days, especially in the EDM scene – it loses its dynamics, and its personality.

"You know I don't tune my kicks too much; I know I should but I think it's more important to get a kick that sounds wicked. Sometimes, when you tune it, it'll lose its energy – especially if you tune it a lot. It starts to lose its punch. I'll come up with melodies in a particular key, and I'll listen to the kick and the melody to make sure they sound good together. I'll put a tuner on the kick sometimes to see what key it's in, and rather than moving the kick I'll tune things up or down so they're in key with it."

Speaking of EDM, commercialisation is rampant in the Dance scene right now. What can be done to improve the quality of the music?

"I think people need to be more open, and I think blogs need to take more responsibility in writing critical reviews. People need to be more critical, radio DJs need to play less of the commercial crap because they think they have to. Stand out a little bit more like deadmau5 does! He's extreme, obviously, but a little bit from everyone will do good. If your favourite DJ says, 'I'm fed up with all these ghost producers,' you'll listen to that."

Joel Zimmerman remains a controversial character. What's working with him like?

"I can't say I've talked to him that much. I met him a few times, and you know what, he's not the guy that he is on Twitter. It's become a thing where that has become such a big part of him as an artist, being the guy who speaks the truth about stuff. I really, really enjoy that. Sometimes it's a little bit overboard – but other than that he's a very nice guy; he gives you time and everything. It's very cool to be part of mau5trap I can tell you that. I didn't think all this was going to happen five years ago when I went to my first deadmau5 show ever!" **FM**

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Apple Logic Pro X 10.2

A significant upgrade to Apple's flagship DAW

With the arrival of Version 10.2, Apple's purchase of Camel Audio falls into place, as Alchemy is now added to Apple's growing list of Logic's Software Instruments. This is particularly significant, however, as it's just possible that Alchemy's inclusion will ultimately go on to replace the long-standing EXS24 instrument which, contrary to many users' wishes, wasn't radically overhauled when Logic Pro became Logic Pro X.

Alchemy is a hugely powerful instrument with multiple synthesis, resynthesis and sampling capabilities. As Apple's version included here allows you to import the EXS24 sample library, either in per-sample or whole instrument form, it's possible that the EXS24 is now entering the final stage of its existence. Only time will tell.

Alongside Alchemy's arrival, Logic Pro X 10.2 also introduces a raft of creative and administrative features designed to make pro audio making more streamlined. Let's explore...

An Overview Of Alchemy

The arrival of Alchemy as a new Logic Pro Software Instrument is significant for a number of reasons. Firstly, it's the latest in an ever-expanding range of high-quality musical instruments. More significantly, however, it may have huge implications for the future of Logic's quite long-in-the-tooth EXS24 sampler. As there will be a huge number of Logic users who have never seen Alchemy before, here's an overview of its capabilities.

Alchemy was developed by Camel Audio, which was purchased by Apple earlier this year. The version of Alchemy which ships with Logic Pro X 10.2 is a new incarnation which has changed dramatically in appearance since Camel Audio presided over it. Its functionality remains similar, however, with the instrument capable of a wide range of sound-making and sound-shaping options.

It's a hybrid instrument, offering multiple synthesis types including additive, spectral, virtual analogue and granular, while it also offers sampling and re-synthesis features. Alchemy provides four sonic layers, each of which uses one or more of these synthesis/sampling engines, before each layer passes through a range of editing possibilities. Then, the layers combine for further 'global' processing, with filters and onboard effects among the options.

However, Alchemy is also capable of extremely fluid sonic treatments, with a dedicated Performance Control section which allows you to morph between different parameter snapshots. Imagine a 'full frequency' sound and then imagine a second sound which employs a low-pass filter to scoop out all high-frequency content. As you morph from the original sound to its filtered brother,

you'd hear it change progressively, depending upon how 'close' you were to the original or filtered treatment. Alchemy goes much further, offering eight alternative snapshots of a core sound, each of which can configure a huge number of parameters (much more than mere filtering alone). You can use this Performance Controller using your mouse, the Logic Remote app, or any other external controller, to drag a sound from one side of its personality to the next, with a huge range of sonic variations available at every turn.

This is actually a great place to start learning about some of Alchemy's capabilities and is made easy thanks to the three-window approach Apple have taken within Alchemy's GUI. The first provides the Browser, where presets can be selected in columns, with Category, Sub-Category, Genre and Timbre charts to help you narrow your search. The Performance Control section is available at the bottom of this window but it's more focused via the Simple tab, where you can morph sounds, as well as make changes to key parameters including filter and effects settings. Finally, there's the Advanced tab, where you can roll your sleeves up and configure or build an Alchemy patch from scratch.

QUICK TIPS

1 Download the additional content offered. Not only will this provide you with all of Alchemy's library data, it'll add new loop content to Logic's loop browser.

2 Update the Logic Remote app on your iPad, as this will let you drive Alchemy via remote control. Much more effective than using your mouse.

3 You can choose a specific Software Instrument as you add a new track, by selecting your chosen instrument from the drop-down menu. This saves loading an empty channel strip and then assigning an instrument.

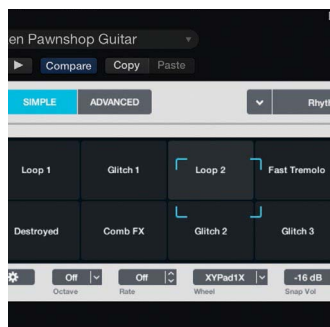
First Steps Exploring Alchemy

Alchemy is new and for many users it'll be a first look at this comprehensive and capable instrument. Here's a beginner's guide...

Alchemy is capable of extraordinary sounds and, accordingly, it's also capable of highly advanced functionality. As a result, it might deter new users but, as ever, Apple have attempted to make its learning curve as shallow as possible. Alchemy's main browser window is designed to be as immediate as possible but you can even choose sounds without opening the GUI, if you prefer to use Logic's Inspector for this task instead. However, beginning to make sounds your own is as easy as clicking on the Simple tab inside Alchemy, which restricts sonic variation to the pad of alternative sonic snapshots and manipulation of other key parameters. Things do become more complex in the Advanced tab but for those first few steps, follow this path.



➤ Select a new Software Instrument and load Alchemy from the drop-down menu. Click Open Library to open Logic's Inspector, from which Alchemy presets can be selected. Better still, click to open Alchemy's GUI for a dedicated Browser with preset columns.



➤ Once you've explored a few presets, click on Simple in the top left-hand corner. This gives a smaller window of key sound-tweaking parameters. Explore morphing your sound through snapshots on the left-hand side and see how these affect parameters to the right.



➤ For detailed editing, click Advanced. In the top left-hand corner, you'll see the four sound sources making up the global patch. Click Global and tweak settings which will affect the whole sound, or click one of the source letters (A, B, C or D) to configure that layer individually.

4 If you're working with movie files and saving a large session as a Project, it'll quickly become huge if the project accesses several movie files. Now, you have the option to move movie files out of a project directly inside Logic.

One Of Alchemy's Sound Layers

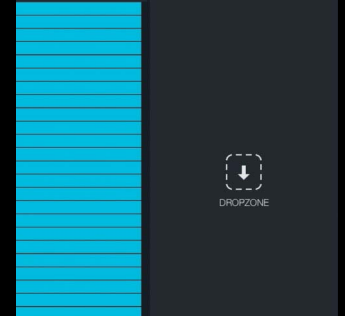
Alchemy offers a number of synthesis and sampling approaches, so start by focusing on the capability of one layer...



Watch the video here: <http://bit.ly/fmpg297>

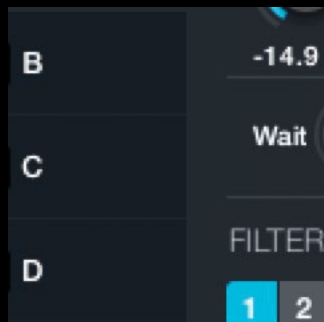
03 >

To load an audio file, click on the 'source' drop-down menu next to the On button for your selected Layer. Here, you'll launch a navigation Browser, so choose a sound from Alchemy's own library, the EXS24 sample library or a new audio file. Drop new files on the Drop Zone to the right.



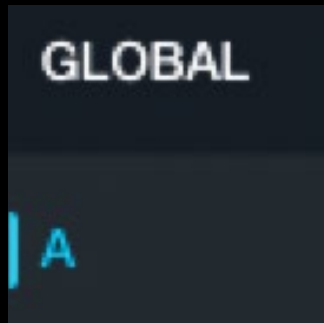
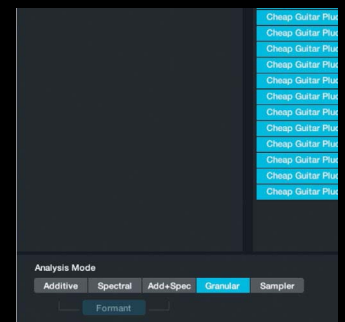
01 >

Set up a new Software Instrument and select Alchemy. Click on the Advanced tab and, in the top left-hand corner, click on layers B, C and D in turn. In each of these, de-select the On button to switch these off. This will leave A as the only active layer.



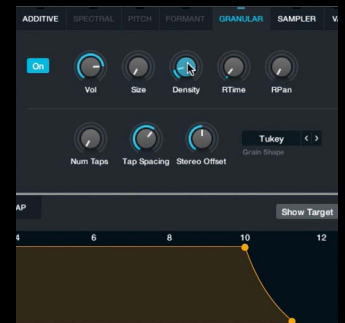
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You can also decide how imported audio will become available for use here, by choosing the Analysis Mode in the bottom left-hand corner. Want straightforward, mapped playback of a drum kit? Pick Sampler mode. Want something with greater scope for sound design potential? Try Granular or Add(itive)+Spec(tral).



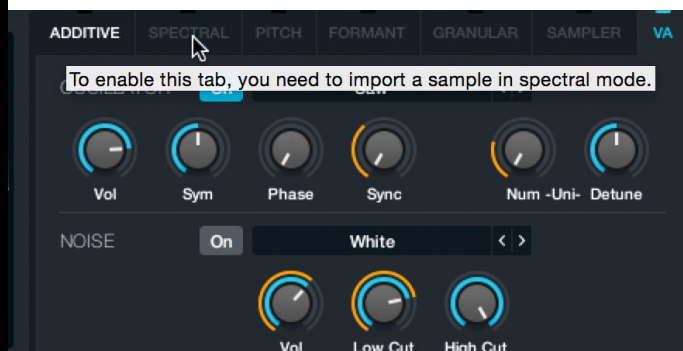
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Once you have confirmed your selection, you'll return to the main edit page for this layer. Here you can configure parameters specific to the Analysis mode you've chosen in the upper right-hand corner, and more general ones in the upper left. Below, configure LFOs, envelopes and more.



02 >

Alchemy features a range of synthesis types, one or several of which can be used on a source sound. You can decide which type(s) to use by clicking on the tabs in the upper right-hand corner. Some may not work automatically, as they might require audio file import.



06 >

When you've made a layer you like, return to Layers B, C and D to set these up. Thereafter, balancing layer volumes and configuring global settings, including filtering and effects routing, is easiest within the Global tab.

How to... Choose Your Own Track Icons

➤ If you've yearned to be able to swap Logic's track icons for your own images, you'll be delighted to hear that the wait is over. Control-clicking any track icon launches a menu window from which you can easily choose a replacement icon or, from the Custom menu, add new image files to allow any picture to become an icon. Better still, those images are retained by Logic, so you don't have to add the same image over and over again on a per-project basis but, instead, you can start to build a Custom folder of your own. By selecting a number of tracks simultaneously, you can change all of them via a single operation too.

How to... Drop Samples Into Drum Machine Designer

➤ While Drum Machine Designer's core samples have seen the creative juice flow for many, for others, the lack of sample import has been a problem. Version 10.2 addresses this by letting you drag and drop the samples of your choice onto Drum Machine Designer's pads, opening its capabilities up to new worlds of sound. Better than mere sample import, however, is the fact that any imported sound continues to benefit from the Smart Controls which allow you to warp a sample's pitch, envelope settings, per-sample bitcrushing and all of the other sonic treats on offer.

How to... Share Your Projects With Gobbler

➤ If you're looking to share Logic Pro projects and files with a collaborator, Logic Pro X 10.2 offers a new, inbuilt solution thanks to a tie-up with Gobbler, who offer 4GB of cloud storage for free. You'll need to sign up for a Gobbler account and download the software which will deposit a 'G' symbol in the menu bar of your computer. Then, you'll find a Gobbler option in the file menu, which you can use to coordinate your backups. Inevitably, for projects making heavy use of data-munching audio files, the first transfer will be the largest, but then Gobbler uses an intelligent system which only updates files which have been modified.

How to... Read Copied Black Text

➤ If you use the Note Pad in Logic Pro, you'll know that Logic's default text colour is white, as the background in Logic is dark grey. This is fine, until you copy and paste (usually black) text from another application. Until now, Logic hasn't adjusted the text colour, meaning that, initially, any copied text will be unreadable, until you manually change the text colour. Logic Pro X 10.2 changes this, so that the pasted colour will be white, by default. Similarly, the colour pane chart for adding colours to regions now contains a Default option, which will revert regions back to their 'original' colours.

Instantly Reverse Audio Files

Reversing audio files is so commonplace in music production these days that the fact that Logic has always required this to be an offline function seems a little antiquated. Fortunately, Logic Pro X 10.2 addresses this by adding a Reverse option to the region editor in the Inspector. This means that, with a single click, you can take any recorded or loop browser audio file and reverse it.

It's important to stress that this works on a per-region basis rather than a per track basis, so with a few judicious chops, you can take a beat loop and reverse a single beat of it, while retaining forward playback of the rest of the loop. This is great news, as it saves the hassle of having to create a new audio region for any 'copies' of a loop. Formerly, as reversing an audio file would reverse all duplications of it too, too many workarounds were required for reverse to be an easy production trick to add. Not any more...



No more offline editing for audio reversing – now it can be applied on a per-region basis to any audio file

Next Issue: Push – Part 2

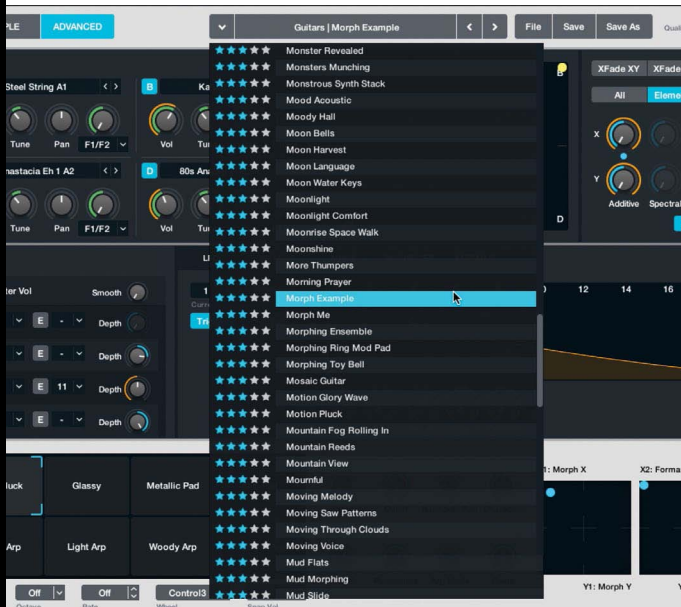
We dig deeper into the capabilities of Ableton's excellent Live controller. Available October 22nd.

Explore Alchemy's Morph Options

Start with the preset Morph Example to begin to understand how morphing can make Alchemy's sounds fluid and evolving

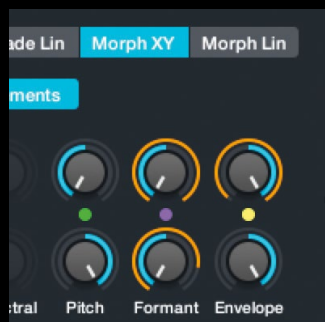
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Many of Alchemy's presets contain morphing characteristics – you'll be able to see these at a glance, as the Transform window will be full of descriptive terms. But the Morph Example preset has been specifically configured to demonstrate this capability in Alchemy, so it's a good first patch to load.



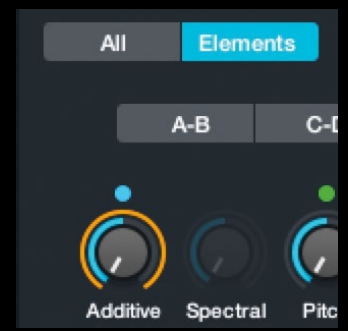
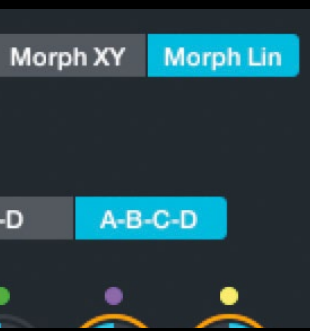
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Morphing works by crossfading between sound source parameters, so to hear best results, you'll need at least two sources to be active. Then, click on the Morph button below the Sources list and experiment with one of the Morph modes in the upper right-hand corner.



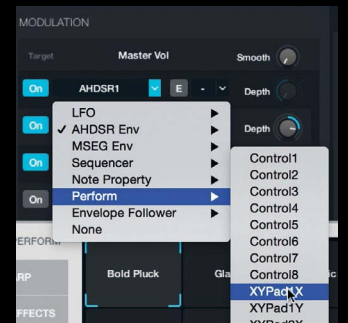
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These modes employ morphing capabilities in different ways, either prioritising all four sides of an ABCD square with X and Y plane options, or moving in a more linear way between sound sources along a single axis. Each active sound source can be viewed in Elements to show Transform pad movement.



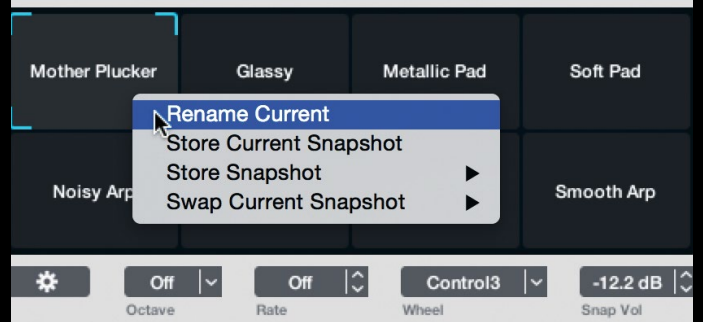
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You can use the Transform pad to see how parameters are manipulated as they morph. You can also add further sonic development in the Modulation section above, which lets you choose target parameters and select the Depth of their effect.



05 >

When you've made sonic changes you like, you might prefer to rename the individual squares in the Transform window. Control-click each of these in turn before typing in your name changes.



Synkro

Manchester-based producer Joe McBride aka Synkro thrives on limitations. Despite budgetary restrictions, **Danny Turner** discovers how Synkro's lo-fi studio set-up is no obstacle to producing a modern, expansive sound



Relying on software has its drawbacks, as Joe McBride learned when a data crash wiped out years' worth of samples and sounds that he'd admittedly become over-reliant on. Faced with months of resampling and recovery, his decision to adopt a new way of working, absent of hard drives and data banks, proved to be inspirational. The result is his debut Synkro album *Changes*, which pays testament to his newfound love for cheap hardware synths, alongside a more simplified approach to using software. This method of working not only allows McBride more intuitive control over the tools of his trade, but has taught him that sophisticated technology is not the only route to achieving a sophisticated sound.

FM: You were a drummer initially; what was it about electronic music that appealed to you?

Synkro: "When I was in high school I was in lots of bands, but none of the bands wanted to do the kind of stuff I wanted to do, so it got to a point where I got tired of working with other people to be honest. It started out with rhythmical experiments on a computer, then I gradually got more and more into Drum 'n' Bass. The first gear I bought was some basic Alesis monitors and a MicroKorg. It was the wooden side panels that appealed to me. I didn't know what it did when I first got it, but that was what my image of a synthesizer was in the beginning. I didn't know the difference between digital or analogue, I just wanted a keyboard I could make electronic sounds on, and to be honest it's a pretty good starting point – I still use it now. It does so much; I think a lot of people that have the MicroKorg don't even realise the potential it's got. The main thing I use it for now is running audio through the vocoder; it's got a really sick delay."

Why has it taken so long for you to release your debut album, *Changes*?

"I guess it's taken me a while to get a group of tracks together that I'm happy to call an album. I've attempted albums several times but they've always ended up being broken down into EPs, because either I wasn't happy with them or the label wasn't. It's just a question of my own confidence really, but I didn't want to rush it. I think it's really important for young artists to develop over a series of EPs; too many are looking to get a record deal and whack out an album before they've even developed their sound. I wanted to have something that I'd be proud of in a couple of years' time, not just a couple of weeks. I started working in a different way. The ideas started coming together and I started hearing similar themes in some of the tunes, which was probably due to some of the equipment I was using as well – I was putting a lot of work into a few bits of gear that I bought, which was actually quite challenging."

Did you find that having a minimal gear set-up encouraged creativity?

"Yeah, completely. Towards the end of last year I had

a pretty bad hard drive crash and lost loads of samples and projects – everything basically. It took me a few months to recover from it; gathering up all my hard drives and trying to piece together all this stuff I'd lost. But it got to a point where I thought, it doesn't matter – I've been there, I've done that, and most of the stuff I'd lost I'd already put out on records anyway. I ended up giving up and starting from scratch, and basically rethought my whole way of production. I scrapped the idea of using sample packs and presets or VST instruments; the whole album was built out of hardware synths and Simpler in Ableton – that's my go-to tool now."

Was the album's conception influenced by artists you've namechecked – for example, Boards of Canada and Burial?

"Boards of Canada are a massive inspiration to me, along with the early Warp records stuff like early Nightmares on Wax, Aphex Twin, obviously, and people like Christ., who was a member of BOC but left. In fact, his music resonates with me even more. I'm from the outskirts of Manchester; it's where I grew up, so people like Autechre, Skam Records and Gescom have always been a massive inspiration to me, from their artwork to the technicality of their music. I've spent years trying to analyse how they do what they do, but you can probably hear that more in my Akkord project, which is a lot darker and more focused on minimal, Industrial Electronica and Techno. I give a bit of space for Synkro to be a bit more light-hearted. It's not as intense and has more elements of autonomic Drum 'n' Bass; it's mutated into something different altogether."

A lot of producers struggle to relax listening to other music, but you're a real electronic music lover, tapping into genres from way back...

"I'm like obsessed with early electronic and soundtrack music. I just came back from a little tour in Canada and my bag was half-full of records; it's an addiction that I have that's kind of got out of hand. Big influences from that era are Tangerine Dream, Klaus Schulze and Ennio Morricone. There's a label based in Manchester called Finders Keepers who have just reissued a bunch of pretty important soundtracks to a load of crazy '70s films by a guy called Alejandro Jodorowsky, like *The Holy Mountain* and *El Topo*. Like you said, I'm not overly trying to analyse things; I'm amazed at how everything that we think is now fresh has already been done 20 years ago by some guy that's got overlooked. A good example is Peter Namlook, who's unfortunately passed away. You listen to a lot of modern electronic music and say, 'oh wow, it's so technical', but if you listen to what Namlook did 20 years ago he's been there and done that. I can't believe that people haven't got the thirst of knowledge that I have to find these gems."

***Changes* has quite a cinematic feel to it. What themes and emotions are you exploring?**

"I try to keep the music as natural as I can, with as little editing or over-processing as possible. A lot of the melodic parts are all synth jams that I created

using my Roland Juno-6, a Roland SH-101 and the Yamaha QY700 sequencer before I gradually started tracking into Ableton and putting percussive elements on top. I tried not to be too clinical with the sounds, but just go straight to the first sound that I heard. For example, the QY700 just has a bunch of really basic drum sounds, but if you get the EQ and mix levels right you can make them sound pretty special. A lot of people wouldn't believe some of the drum sounds on the album are just general MIDI sounds with a bit of processing. This goes back to my hard drive crash, just working in the moment and using whatever's in hand. If I've only got one kick drum in front of me, I'll make it sound how I want it to sound. I'd rather try to make it more natural and spontaneous than go through 300 presets trying to find this 'magical' kick drum."

You've found a place for some vinyl samples. How are they sourced and what do you think they bring to the production?

"I've always been drawn to vinyl samples, some of my first EPs were just straight-up bootlegs that I'd ripped from old dub records that belonged to my dad. I love sampling vinyl; again, it's part of the whole trying to find sounds that no one else has used before but exist on records. I love all the early electronic stuff from film soundtracks and the BBC Radiophonic Workshop, and I collect a lot of the BBC sound effects records. I love obscure records, just for sampling purposes – I think they bring warmth to the track. There's a big trend of people using vinyl crackle in electronic production when they don't even own a piece of vinyl. When you hear a vinyl crackle in my tune, it's usually because it's come from vinyl. It goes back to the Jungle era; people like LTJ Bukem, Photek and Source Direct, all those records come from other records, through an Akai S1000, 2000 or 950 sampler. I like paying homage to the original production techniques that got me into this game in the first place."

Do you build sample libraries to use later or create stuff on-the-fly?

"I will have sample days where I'll sit down and go through loads of records, put some aside and mark certain things on them, like whether one is good for strings or has a nice pad or kick on it. But more often it's about picking up a record, dropping the needle and seeing if you can find a little part in that record to start a tune. Instead of being really clinical and anal, like it's not in the right key blah blah, just take it and make it into something. I think a lot has come from having the Juno. It's the first model they did so you can't save any presets on it; it's just a keyboard sound generator, and that's rubbed off on my whole production in general. It's like, first-take, go and record – even if I mess up there's usually a chord that I did that's really nice."

In today's world, is sample clearance something you have to think about?

"I'm always bringing it up with labels [laughs]. With certain records it's like, 'look guys I've got to let you know, it's got this, this and this in it'. A lot of the time



I try and take it as far away from the original as possible, and in my mind if it gets pulled up, fuck it, they can have the money. If anybody in electronic music has anything bad to say about sampling they might as well give up, because that's how we got here now; the whole industry's built on samples. I'm easy with it. If someone wants to pull me up on a sample, claim the rights to the track and take all the royalties, fine, well done for spotting the sample. That's another thing I love, spotting cheeky little samples – it's like trainspotting, part of the game."

Does that include field recordings too?

"Of course, yeah. I do a lot myself but also have a friend who's quite obsessed with it. He's got an old-fashioned cassette dictaphone with a stereo mic, plus you get the warmth of the cassette as well. I'm looking to invest in one myself, the whole raw, analogue cassette vibe is similar to vinyl – the little bits where it ducks out and sounds shitty is kind of what makes it nice. Someone was asking me recently what recorder I used and I just use my iPhone. I know it's really low quality, mono and I'm not getting any stereo imaging, but, for me, it just captures the place, time and mood that I'm in. I just find myself getting my phone out and recording a minute's worth of ambience, wherever I am. As soon as it hits a minute I'll press stop, because a minute's enough for me to create a decent loop that's not overly repetitive."

The vocals in the album appear to be a mix of sample-based and full vocal contributions...

"Yeah, the track *Body Close* is a girl from London who goes under the name of Lyves who's pretty new. She actually contacted me way before the album was conceived and said she'd love to work on a track. I said if you've got any ideas, feel free to send them over and she sent me this really rough track with the *Body Close* vocal on that had already been recorded in a studio and sounded really tight. So I rebuilt the track around her vocal. In a way it worked like a remix; I put a new beat down, reworked all the melodies and rearranged the structure of the vocal a bit. The label really liked it because it fits in as a vocal track and the whole thing came together nicely."

How do you blend the analogue-based samples with the purity of digital software so there's a seamless crossover?

"Previously, I was using the standard Akai tape deck, but I've just bought a Tascam Portastudio 4-track, so if something sounds too clean or digital I'll just run it through tape and resample it. I've also got a Korg Monotron Delay, so I'll literally run stuff through that – they're only £35. They do a filter version and a synth version, which are a bit pointless, but the delay is really cool; just run stuff through it and it sounds really noisy and raw. If I throw a Korg Volka kick drum through the Monotron delay it just sounds like the rawest tape saturation or compression, but



you're literally just throwing this kick through a cheap circuit chain, and it's all to do with how cheap and basic the circuitry is. To be honest, I'm not using any sounds from the computer as I'm resampling my own synth sounds and vinyl, so I don't come across the problem you speak of too often."

From what you're saying, you'd think the album would be almost '70s-sounding, but it's actually very clear and modern...

"I'd like to give a massive thanks to Matt Colton, my mastering engineer; he really brought the album

the track, but how Matt managed to bring that little bit out that was lost in the mix and enhance it amazes me. I was super-happy with it."

Do you have any other hardware-based synths?

"I've got a Roland JX-8P that I use quite a lot for basslines and a couple of Casio keyboards, including a HT-700. It's a vintage synth from the '80s with a RAM Card and some really cool presets, and I have some cheap analogue delay guitar pedals that, again, I use to give the digital sounds a bit of rawness. I'm now on the lookout for a Jupiter and a Yamaha DX7,

Was Ableton always your choice of DAW?

"I just like how quick and intuitive it is. I started on Cubase but it got to a point where it was too slow. I did a collab with a friend and he was like, what sequencer do you use? I said Cubase, so let's use that because I'm not comfortable with Ableton – but he said, trust me, you won't wanna use Cubase after we've done this. He was right [laughs]. I scrapped it and got Ableton and have never looked back. I wouldn't advise any other sequencer; just the amount of stuff you can do on it, and how quick and easy it is to use. It's really helpful with the creative flow; you're not tripping over stupid technical processes or getting lost in the menus, it's all right there in front of you."

Do you use any of Ableton's plug-ins or audio effects?

"Not really; I use audio effects plug-ins a bit but, again, only a really minimal selection. I've really been getting into the Max For Live granular plug-ins, which make my analogue synths sound absolutely mental. They make the most basic sounds ridiculously complex just by taking them apart and throwing them back together in a random order. There's this one called Granular To Go, which is meant to be one that you just put on and hope for the best, but if you actually get your

It doesn't matter what you use, it's how you use it. If you find any form of MIDI keyboard in a charity shop or bargain bin, get it

alive. Before I sent it to him, it sounded a little bit flat and didn't have as much as space in it, but it came back sounding lean, modern and polished. I don't know what they do or how they do it, but they just work miracles. I never really let mastering engineers mix my stuff, they are literally just mastering it, but it amazes me how much separation they can do with a stereo audio file. They can bring out the highs and lows and it sounds like they've had the stems of

which is kind of cliché, but I haven't got any FM synths. The synths I have are quite basic whereas the DX7 would be a bit more of a challenge in being able to manipulate sounds, as I know it can do some complex bell sounds and strange harmonic sounds. I usually try to get those sounds by processing the shit out of more natural sounds using reverb, delay and distortion, but the DX7 can give me some pretty freaky sounds without having to over-process."

head around it you can make it do what you want it to do. I also use the Max for Live LFO plug-in a lot, Audio Damage Kombinat, which is quite an old distortion unit, and the TAL delay plug-ins. I'm a big supporter of free plug-ins and lo-fi. I don't buy into the new fanciest, does-a-million-things plug-ins, I'm more down with keeping it simple. I won't wait for the next 'thing' to come out and spend two grand on it; I'd rather stumble across something in a charity shop."

Would that be your advice to people who don't have much of a budget?

"I don't think you need all the latest gear and loads of money to make something sound how you want it to, or to even sound super-futuristic. Again, learning the history of artists like Autechre, when you look at their gear list some of the stuff that they were using was the most basic at the time. To me, it says that it doesn't matter what you use, it's how you use it. If you come across any form of MIDI keyboard in a charity shop or bargain bin that can make sound, get it. If you're waiting around to buy the next Octatrack to make your sound perfect, you're never going to get there because that bit of gear isn't going to make your sound do that, you are. Same with guitar pedals; I just went into a shop and got the cheapest ones on the shelf. Sure there are limitations with timing and they don't go one way as far as I'd like them to, but all it means is you have to adapt and work around the little problems and not see them as end-game problems."

What's your approach to playing live or DJing?

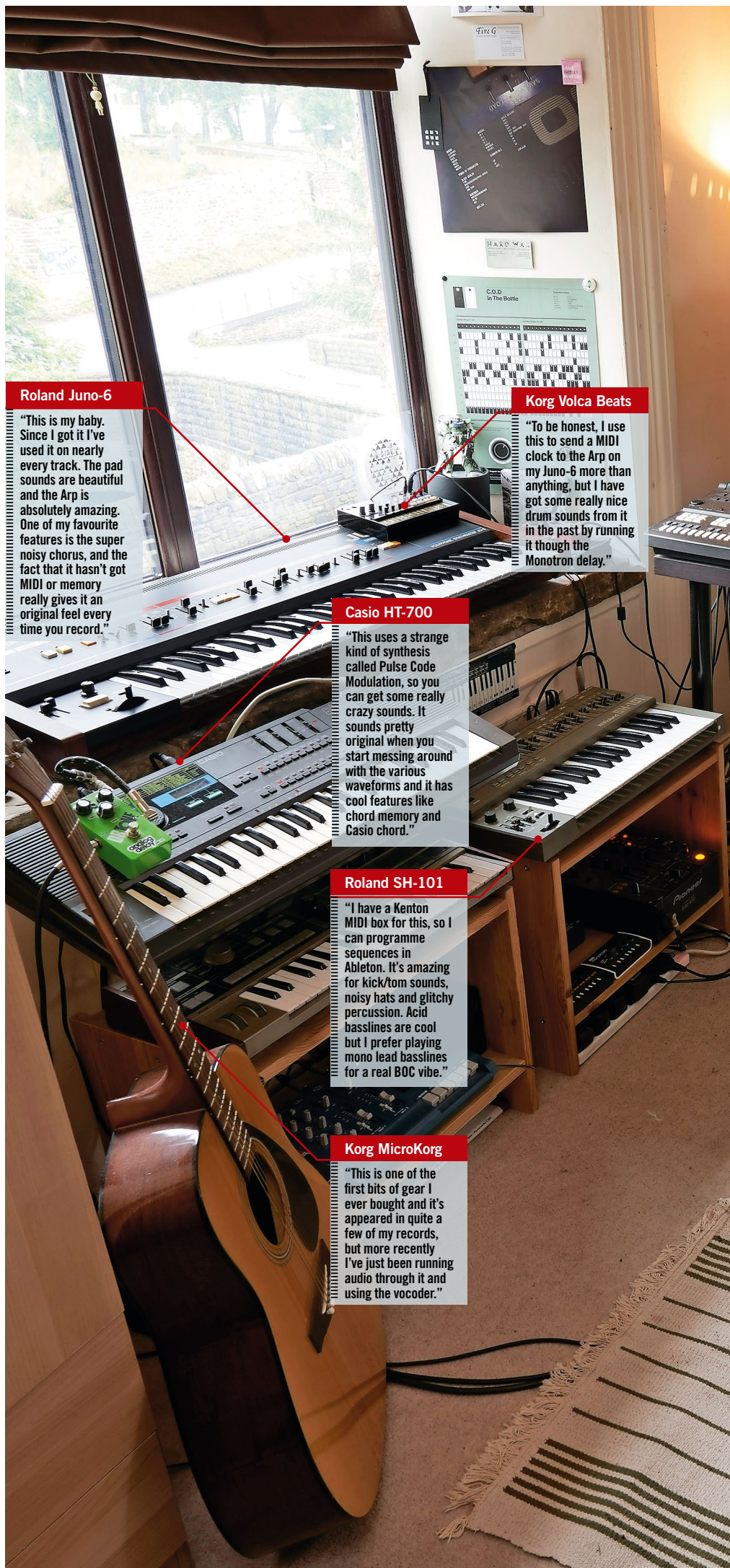
"For my Synkro stuff, I mainly do DJ sets and always play other people's material. If anything, I get complaints for not playing enough of my own stuff. Because I'm super-overcritical and also love music and have a load of records in my bag that I haven't heard a million times before, in a club situation I'd rather play someone else's tunes. It's about trying to find that middle ground of being able to play those songs of mine that work in a club environment and playing general club music that I'm really feeling at the moment or from artists that I support."

Do you use Ableton for playing live too?

"Yeah, we've used Ableton with a couple of hardware synths, guitar pedals and a mixing desk with send effects and everything, but I'm increasingly scaling it back. I'll use Push in a live situation, which is pretty helpful for launching clips and stuff, but I don't use it in the studio. I've done live shows with Akkord and I've got another project called Kiyoko, which is like a downtempo, ambient thing, where we've gone out with synths, keyboards – virtually the whole studio – which I wouldn't advise as it gets tiring. You also end up leaving half your studio at clubs, and by the time you get home all your leads are missing. It's like, next time I'm just going to use my laptop." **FM**

WANT TO KNOW MORE?

Synkro's debut LP *Changes* is out now on Apollo Records. For news, release info and DJ dates head to <http://www.facebook.com/synkromusic>



Roland Juno-6

"This is my baby. Since I got it I've used it on nearly every track. The pad sounds are beautiful and the Arp is absolutely amazing. One of my favourite features is the super noisy chorus, and the fact that it hasn't got MIDI or memory really gives it an original feel every time you record."

Korg Volca Beats

"To be honest, I use this to send a MIDI clock to the Arp on my Juno-6 more than anything, but I have got some really nice drum sounds from it in the past by running it though the Monotron delay."

Casio HT-700

"This uses a strange kind of synthesis called Pulse Code Modulation, so you can get some really crazy sounds. It sounds pretty original when you start messing around with the various waveforms and it has cool features like chord memory and Casio chord."

Roland SH-101

"I have a Kenton MIDI box for this, so I can programme sequences in Ableton. It's amazing for kick/tom sounds, noisy hats and glitchy percussion. Acid basslines are cool but I prefer playing mono lead basslines for a real BOC vibe."

Korg MicroKorg

"This is one of the first bits of gear I ever bought and it's appeared in quite a few of my records, but more recently I've just been running audio through it and using the vocoder."

Simpler In Ableton

"Simpler is definitely my go-to instrument in Ableton. I don't really use Ableton for VSTs, but the sampling capabilities are amazing. I don't think there's any need for an external sampler when you're working at home as the Drum Racks, Simpler and Sampler are all really solid and easy to use."

Adam A8X

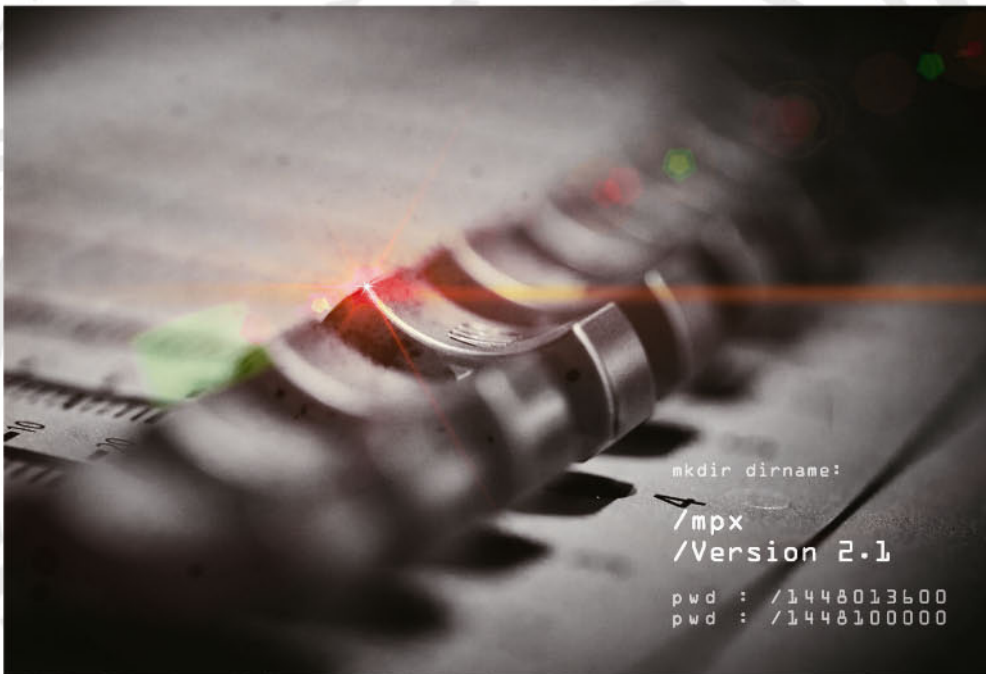
"My friend Jack (Bering Strait) got a pair of A8Xs and I got used to the sound working on Kiyoko material, so I decided to step up. I used Alesis M520 monitors for years and they were great, but since I switched to these a couple of years ago I haven't looked back."

Yamaha QY700

"This is such a cool bit of gear. One of my dad's friends let me borrow it a few years back as he didn't know how to use it and I haven't put it down since. It's appeared in a lot of my tracks and has some really nice general MIDI sounds. I love the choir sounds and lo-fi 808 replica kit. I have actually made a few tunes entirely on this as it's a standalone unit, but I like to use Ableton to sequence as it's much easier than menu-hopping on the tiny screen."

Roland JX-8P

"This is a really great synth but it's sometimes overlooked as it's quite hard to programme unless you have the controller. But there is a really good iPad app that does the exact same thing and a great Max for Live patch that allows you to edit/sequence all the hidden parameters. It's great for pads and BOC-style leads."



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HIGHLIGHTS...

88 UAD 8.3 Plug-Ins



92 Focusrite Clarett 8Pre



94 Korg iM1 for iPad



96 SubPac S2



Sequential Prophet-6 | \$2,700

The spiritual successor to the Prophet-5 is finally here! **Dan 'JD73' Goldman** checks out if it's the real deal...

INCLUDES AUDIO AND VIDEO
vault.futuremusic.co.uk

WHAT IS IT?

Six-voice analogue polysynth built in the Prophet-5's mould with VCOs, VCFs, VCAs, poly-sequencer, arpeggiator, solid modulation facilities and high-quality effects

CONTACT

Who: Dave Smith Instruments/Sequential
 Tel: (415) 830 6393
Web: www.davesmithinstruments.com

HIGHLIGHTS

- 1 It sounds warm and silky, and has that vintage vibe we all love
- 2 Knob-per-function ethos and enough modulation facilities onboard to add serious movement and interest to sounds
- 3 Snappy envelopes, wide range and musical filters, tasty effects



Despite DSI undoubtedly making some fantastic synths over the last few years, there has been a conspicuous hole in their line-up left by the original Prophet-5. While the Prophet 08 was its nearest true successor, its DCO-based architecture meant that, although it could nicely emulate the vintage sound (and sound much more modern too), it was an altogether different beast. I dare say if you'd surveyed synth heads a few years back asking what synth they'd most like DSI to make, it would be a unanimous shout of 'a new Prophet-5 with VCOs'. Well, fast forward to 2015 (some 37 years after the Prophet-5 launched) and we now have the Prophet-5's spiritual successor – the Prophet-6.

To say I was a little excited about trying the P6 is something of an understatement; in fact it had me drooling in anticipation! The P6 arrived in a rather boring brown cardboard box but, once out of its temporary home, the P6 revealed itself to be a thing of beauty with its walnut end pieces and trim – it certainly looks like a legit Prophet-5 successor. One important thing to note is the Sequential badge. Most of you will know that before Dave Smith Instruments, there was Sequential Circuits which produced classic analogues such as the Prophet-5, T8 and Pro 1 (among others). In 1987, Sequential was sold to Yamaha and no more Sequential branded products were made and, up until a few months back, Yamaha still

owned the Sequential name. However, this changed when Dave's friend Ikutaro Kakehashi (founder of Roland) suggested to Yamaha president Takuya Nakata that Yamaha give back the Sequential name to Dave – Mr Nakata agreed! Hence, we now have a Sequential badged Prophet-6.

Small footprint

The P6 is a sturdy instrument weighing in at 20lbs, although it's surprisingly compact due to its shorter four-octave keyboard. The chassis is metal and also hinges at the back for easy access to the innards. Power comes in via a kettle lead, as you'd expect on a premium instrument. One great thing is that the voice cards in the P6 are all in separate sockets and can be removed easily

Effects
 A new VCO polysynth with built-in, high-quality, 24-bit/48kHz effects is an enticing proposition! Two effects are available simultaneously per patch and can be tweaked in real time using the dedicated dials.



VCOs
 Dave Smith has designed all-new discrete VCOs for the P6 and they sound right on the money. They're precise yet have that vintage mojo that us synth-heads love!

Screen And Preset Buttons
 The three-digit red LED screen shows the preset number and more besides. There are 500 preset and 500 user slots and John Bowen's original Prophet-5 presets are included too.

Keyboard, Pitch And Mod Wheels
 A great-feeling 49-note semi-weighted synth keyboard is included with velocity and aftertouch, along with red-backlit pitch and mod wheels. The keyboard's range can be instantly extended using the transpose buttons.

down the line for replacement/service if necessary – a clever move by DSI which should help ensure the future longevity of the instrument. The top panel is laid out clearly in a P5-style with the graphics silkscreened directly onto the panel and the switches are a mixture of later-style DSI push buttons and P5-type selectors with LEDs. These all feel sturdy and should stand up to long-term abuse on and off stage. The plastic/rubber-coated/silver knobs will be familiar to owners of the Prophet 08, Pro 2 and P12, and feel good with a nice amount of resistance, though there is some play in them.

Back to the keyboard for a moment. The four-octave design keeps the footprint small which is useful for smaller spaces and makes the P6 easy to transport. Undoubtedly, some players will prefer a five-octave keyboard (and personally speaking I would have liked

Effects

The P6 features two 24-bit, 48kHz effect processors. The effects are newly designed and when off, provide true bypass so that the pure analogue signal path isn't adversely affected. Processor A provides bucket brigade delay, digital delay, chorus, and two phaser types, while processor B provides the same, plus hall, room, plate and spring reverb emulations.

The quality and musicality of the effects is impressive all round and they really enhance the already great tone of the P6, plus the delays can be



sync'd internally or to MIDI clock. You can also tap the sides of the P6 to get authentic spring reverb rattle! Further, each effect has a mix level control and two real-time dials, each with their own display where different parameters can be tweaked. For

example, the spring reverb has tweakable tone and decay parameters, while the chorus has rate and depth; it's all very intuitive too. Finally, there's a handy 'pan spread' feature that spreads the six voices across the stereo field. Lovely!

The keyboard is massively playable and buttery, and the velocity and aftertouch response near perfect

an extra octave, as I think five is perfect for a performance synth) but most of the time, four octaves is sufficient and chances are the P6 will be part of a multi-board rig on stage at least, thus you'll not always require two hands on

deck simultaneously. When you do require that extra range you can use the very fast octave switches or connect an external MIDI board. For soloing and most two-handed duties, four octaves is fine and I've never had an issue soloing

semi-weighted synth-action keyboard is massively playable and buttery – it's perfectly balanced for playing fast and accurately. The velocity and aftertouch response is also near perfect allowing smooth and predictable modulation

on my Moog Voyager which is only three and a half octaves. Food for thought!

Feels good
Feel-wise, the



Modulation

Modulation options include an audio-rate LFO, two snappy envelopes, the mod wheel, aftertouch, pedals, velocity and a 'polymod' section with several destinations. Oscillator 2 can act as a secondary LFO.

VCFs

The P6 includes a four-pole resonant low-pass self-oscillating filter and a two-pole resonant (static) high-pass. They can be combined to form a band-pass filter, extending beyond the P5's original scope.

SPECS

Oscillators: 2 new discrete VCOs per-voice, Continuously variable waveshape per oscillator, Variable pulse width, Hard sync, Triangle sub-octave generator (oscillator 1) per voice, Low frequency mode (oscillator 2), Keyboard tracking on/off (oscillator 2), Oscillator slop

Mixer: Oscillator 1, 2 and sub-osc levels, plus white noise

Filters: Two-pole resonant, high-pass filter with velocity, Four-pole, resonant, self-oscillating low-pass filter, Velocity and bi-polar amount controls plus full and half keyboard tracking controls

Envelopes: 1x filter ADSR, 1x amp ADSR

LFO: Five wave shapes + noise source, Clock sync (internal or external MIDI clock), 5 Mod destinations

Poly Mod Sources: filter envelope (bi-polar) and oscillator 2 (bi-polar), 5 Destinations

Aftertouch: channel aftertouch with bi-polar amount, 6 destinations

Clock: Tap tempo, BPM control, MIDI clock/internal sync

Arpeggiator: 10 timing divisions, Up to 3-octave range, Up, down, up/down, random, and assign modes

Polyphonic sequencer: 64 steps with rests/ties, Transposition when holding record/pressing a note

Effects: Stereo analogue distortion, Dual, 24-bit, 48kHz digital effects, Delay sync, True bypass

Performance controls: Full-sized, semi-weighted, 4-octave keyboard with velocity and aftertouch, Backlit pitch and mod wheels, Transpose controls, Hold switch, Polyphonic glide, Unison mode with configurable voice count, Live panel mode, 500 user and 500 factory programs (10 banks of 100 programs each)

Connections: Left/mono and right audio outputs, Headphone output, MIDI in, out, and thru ports, USB, Low-pass filter cutoff pedal input, Volume pedal input, Sustain footswitch input, Sequencer start/stop footswitch input

Dimensions
813 x 323 x 117mm

Weight:
9.5kg

builds but response can be further tweaked in the global settings if needed. There are performance controls in the shape of standard mod and pitch wheels but alas no P12/Tempest style touch-sliders, though I can see DSI have chosen to keep this synth firmly in the P5's mould so there's nothing that strays too much from the original.

One of the biggest draws of the P6 is the aforementioned knob-per-function, zero menu-diving ethos. This is very much a 'use your ears not your eyes' board and I really welcome the lack of visual distractions which keeps you focused on the sound. However, the basic three-digit LED display means there's no patch naming and you have to remember your sound by number (much like a Nord Lead 4), though an

editor is available from SoundTower for a modest outlay which will help you organise, name and dissect patches. Finally, 'live panel' mode is accessed by turning off the 'preset' button. I hope the bank and 'tens' buttons become operational as patch up/down buttons (they are already labelled as 'increment/decrement') which will speed up patch selection greatly.

At the top left is the P5's famous 'polymod' section which has now been augmented to address the additional high-pass filter (the P5 had just a low-pass) plus there's an additional dial labelled 'shape' which modulates the waveshape of Oscillator 1 for adding movement to sounds. Below this is the new digital effects section and to the right, the great-sounding analogue

distortion that has become a feature of recent DSI synths.

Under the effects section is a single audio-rate capable MIDI-syncable LFO – yes there's just one LFO but with the polymod section and the fact that Osc 2 can act as a secondary LFO, there's enough in the way of modulation to keep things interesting. The LFO has five main shapes (plus a noise source selected by choosing 'random' and turning 'frequency' fully clockwise) and these can be sent to up to five destinations including the frequency and pulse width of both oscillators and to the amp, LPF and/or HPF. The 'initial amount' dial controls the amount of LFO modulation sent to these destinations and when set to 0, the LFO modulation is controlled by the modwheel, with the amount of modulation dictated by the mod wheel's position.

Vintage vibe

Now the sound! Dave has gone back to discrete VCOs, VCFs and VCAs for the P6 and they really sound excellent with that vintage vibe! The two newly designed oscillators are pretty much dead on pitch from the word go and stay solidly in tune (as you'd expect). If they do drift out due to sudden external temperature changes (unlikely), simply hold the preset button and 0 to run the calibration procedure. Unlike the P5, each oscillator now has a continuously variable waveshape from triangle through to square/variable pulse (much like current Moogs) enabling a wider range of tones than the P5's hardwired (though simultaneously available) waveforms. With such stable VCOs onboard Dave has included his famous 'slop' parameter which induces natural sounding oscillator drift – just a small amount can really liven up proceedings and add extra movement and vintage-style detuning to the P6's otherwise stable sound. I think this is a good compromise and I'd rather have

Who needs a P6?

Here are three situations where a P6 could come in very handy!



> If you already have an old polysynth or Prophet-5 that's unreliable. The P6 has that classic sound you love with modern functionality/reliability.



> If you're after the vintage polysynth sound for studio/live work but don't want to risk buying a vintage polysynth, the P6's killer sound will more than fill the gap.



> If you want a new polysynth that can cover a broad range of classic analogue tones authentically and reliably, including solid basses, drums/FX, pads and leads.



Connections

Round the back are a headphone socket, stereo outputs, MIDI ports, USB (for updates and MIDI) plus pedal sockets for sustain, volume, filter cutoff and for starting the sequencer.

super-stable (albeit still vibey) VCOs and be able to dial in any desired level of drift with 'slop', than have completely unstable VCOs that are a headache (like my Memorymoog for instance!). There's also a digital white noise source too.

Sonically, the P6 is to my ears the most authentically vintage-sounding DSI polysynth to date and it sounds nicely different to the P08, Pro 2 and P12 – it has a very wide sweet spot and it's pretty hard to get it to sound bad! It's definitely the legitimate heir to the P5 in many respects and it excels at present leads, punchy/deep basses, nicely defined yet warm evolving pads/atmospheres, sync leads, synth brass/comping patches and huge unison solo sounds. There's also chord memory, a great sounding four-mode portamento/glide function and a versatile mono-unison mode where you can stack up to six voices.

The LPF (taken from the Pro 2) and HPF sound superb and the envelopes are super-snappy – great for making punchy basses that can even give Moogs a run for their money (it's definitely easier to make great sounding

Sequencer And Arpeggiator

A step sequencer and arpeggiator are included and they come in very useful! Obviously as the P6 is monitimbral there's no splitting/layering available, and thus, the sequencer only has one track, although you can record polyphonically (up to six notes per-step) and you can add rests or ties too using the tens/increment button. Bear in mind that, as there's only one track, if you use up all six voices on a step, you won't be able to play over the top on that particular step, and further to this, there's no knob-movement recording, though there is keyboard-led transposition which is great.

There are 64 steps available in total and ten



timing divisions which apply to both the sequencer and arpeggiator (including 8ths, 16ths and 32nd notes, with triplet and swing settings). Both the sequencer and arpeggiator work great for making loops and backings and they really come into their own when synchronised to MIDI

clock as part of a wider live/studio set-up; there's also a trigger jack for triggering the sequencer (or arpeggiator) from a pedal/audio source.

Finally, the arpeggiator has five modes (including up, down, up+down, random and assign) and it can be latched by simply pressing the 'hold' button.

It is the most authentically vintage-sounding DSI polysynth to date – it's pretty hard to get it to sound bad!

basses on the P6 compared to the P08 and P12). Also, with the triangle sub-oscillator dialled in, you can really feel the extended lows. The P6's frequency range is huge, ranging from earth-shaking subs through to punchy high-mids, sizzling tops and piercing out of control warbles (especially when the filter resonance is pushed). Also, the high-pass resonant filter (though not self-oscillating) really opens up the sound sculpting possibilities and acts as a band-pass when combined with

the LPF. I should also mention that unlike the P5 (which had no velocity or aftertouch) you can send velocity to both the filters and amp too which is a big improvement.

A future classic

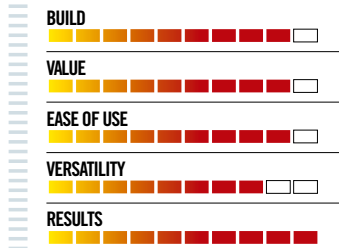
When you then add in the 64-step polyphonic MIDI (and audio) syncable sequencer, the great-sounding digital effects, MIDI control over most parameters, USB-MIDI communication, alternative tunings and above all that

killer sound, the P6 is surely destined to be a future-classic. Thankfully, there are very few downsides to report and, although an audio input and CV ins/outs would have been nice, the P6 certainly carries forward the torch of its vintage predecessor admirably. Obviously, as a premium self-contained discrete VCO/VCF polysynth it's not cheap, sitting just below the flagship P12 price-wise (and feature-wise it's more streamlined than the P08, Pro 2 or P12); nonetheless, it's surprisingly versatile and sounds a million dollars – I think for most of us, that's the bottom line! **FM**



Wood/Metal Chassis
The P6 is a solid piece of kit with a metal chassis, metal back and control panel – its design owes much to the P5. Walnut sides/trim complete the vintage look.

FutureMusic VERDICT



Building on the P5's legacy nicely, it adds modern features but retains the all-important killer sound.

ALTERNATIVES



Nord Lead 4

£1,349

Yes it's virtual analogue but it impersonates real analogue very well indeed. 20-voice poly, two oscillators per-voice, 49-note keyboard (no aftertouch), arpeggiator, two LFOs, FX and extensive modulation/morphing options.

www.nordkeyboards.com



Roland JD-XA

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Roland's new synth combines a great sounding four-note polyphonic analogue engine with a 64-note polyphonic digital engine, plus comprehensive multi-effects, multi-track sequencing/arpeggiator and deep modulation facilities. A beast of a synth!

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HIGHLIGHTS

- 1 The BX20 has a sound like no other modelled spring reverb
- 2 The Tube-Tech EQs complete the 'channel strip' set
- 3 Ampeg SVT bass amp great for shaping bass tones of all types

PRICING

AKG BX20: **\$199**
Ampeg SVT Bass Amplifier Bundle: **£179**
Tube-Tech EQ Plug-in Collection: **£239**



Dark and rich

The control set for UAD's BX20 is fairly straightforward. It can be used in mono or stereo configurations, with the option to link its two channels in the lower section. There are independent controls for Bass and Treble, with a low cut filter completing the tone-shaping tools. Elsewhere, the upper section contains a pre-delay control offering times from 0ms to 250ms, while there's a dry/wet dial to control reverb levels and an additional Wet Solo option for auxiliary buss purposes. Most importantly, however, you can choose between two 'tanks', which reflect the spring containers of the original hardware. Each of these features its own discrete sound, so you have the option to choose one (a) or the other (b), or to combine their sounds via the a/b setting.

UAD's clone features a clever approach to emulating the BX20 sound, using impulse responses sampled from the original hardware which are then further shaped using synthesis. The result is extraordinary, with a rich tone which manages to create reverb tails which melt beautifully into a mix, even with long reverb times (of up to 4.5 seconds). It's billed as an 'Indie' reverb and, of course, it sounds wonderful on guitars, which manage to find a place of their own whenever the BX20 is enabled. However, it's equally capable when fed a variety of other sound sources, adding a pleasingly dusty quality to drums (either over a whole buss or on individual kit pieces) and synths too. Alternatively, if you're drawn to soulful, aching vocals such as those of Amy Winehouse or Beth Gibbons, this could well go on to become a go-to reverb choice. Don't be fooled by its seemingly small feature set; this is a hugely configurable reverb with a wide range of musical applications.

Bass in the place

The Ampeg SVT Bass Amplifier bundle provides two discrete plug-ins: the SVT-VR and the SVT-3 Pro. These aim to capture the tone and power of the hardware they replicate and they offer a configurable feature-set which will be familiar to anyone who has used Brainworx's other amplifier models for the UAD platform.

The amp section of the SVT-VR provides emulation of the hardware's 300-watt tube design alongside its 8x10 cabinet to produce huge, powering sounds. The amplifier provides two channels, with each featuring its own Normal or Bright

UAD Version 8.3 Plug-Ins from \$199

UAD Version 8.3 offers a clone of the coveted AKG BX20 Reverb among other goodies. **Jono Buchanan** springs into action...

AKG's BX20 spring reverb was a zenith for the company in the late '60s. Employing a mechanical and electronic design, it became famous for darker ambient and spatial treatments which have proved popular with producers looking to bring dense

sonics to their productions. Indeed, those selected to discuss UAD's latest clone give you some idea as to where this reverb will have entered your musical consciousness. Adrian Utlej (Portishead), Joel Hamilton (Pretty Lights) and Peter Katis (The National) all boldly endorse it on UAD's website.

option, so you can configure independent treatments before comparing and selecting the one of your choice. The first channel features three-band EQ, with an ultra-high switch varying the amount of treble output. Equally, the mid-range band can be selected at three alternative frequency settings, with bass roll-off also user-configurable. By contrast, the second channel offers a two-band EQ.

As is becoming traditional with Brainworx software, the amp is enhanced by an FX section, which can be toggled on/off via the FX Rack button in the plug-in's control section. This provides a Noise Gate and Filter in its bottom left-hand corner, both of which are effective for reducing amp noise if things get out of hand. Meanwhile, the bottom right-hand corner lets you choose from a variety of cabinet settings and recording chains, which pair cabs to modelled microphone recording channels. There's also a Power Soak option to attenuate cranked treatments



There's masses of bass-focused sound-shaping possibility on offer in both Ampeg emulations

to socially acceptable levels, dramatically increasing the amount of rasp you can usefully work with.

Similar recording chain solutions are offered for the SVT3-Pro, which is

slimmer in appearance but equally capable of sonic hugeness. The amp here provides EQ dials at the Bass, Midrange and Treble stages, with a

five-way selectable frequency dial for the Mid band. There's also a nine-band graphic EQ available here for further sonic shaping.

All three new additions to the UAD product line are welcome. This is perhaps most true for the AKG BX20 clone which upholds and enhances UAD's reputation as a world-leader in bringing the sound of vintage and rare hardware into the 21st century. The Ampeg emulations offer a wonderful sound too and further strengthen the partner relationship between Brainworx and UAD. The Tube-Tech EQs have been available natively for some time but for those not yet in possession, having these run from UAD hardware makes sense. Without question, all have a lot to offer your mixes. **FM**

FutureMusic VERDICT

BUILD [Progress bar]

VALUE [Progress bar]

EASE OF USE [Progress bar]

VERSATILITY [Progress bar]

RESULTS [Progress bar]

Something for everyone in UAD's new set of emulations – the BX20 clone in particular is stunning.

It's billed as an 'Indie' reverb but the BX20 can bring soul and character to any number of musical genres

TubeTech EQs

Based on two popular Pultec EQs, the PE1C and ME1B plug-ins come as a bundle in UAD V8.3. Alongside the CL1B compressor, these EQs complete a 'Tube-Tech channel strip'. The ME1B provides low frequency control with a stepped frequency selector at 200Hz, 300Hz, 700Hz

and 1kHz, offering a 0-10 gain boost at your chosen frequency. The Mid frequency offers dip, with settings from 200Hz to 7kHz, allowing for the overlapping cut/boost between these bands for which Pultec designs are so renowned. The High frequency provides boost from 1.5kHz to 5kHz.

The PE1C design provides both Boost and Attenuation dials for its Low and High frequency bands, with a separate Bandwidth control allowing you to slide between Sharp and Broad settings. Similarly, a global Attenuation amount lets you customise your desired amount of cut.



SPECS

UAD 8.3 includes: AKG BX 20 Spring Reverb, Ampeg SVT-VR Bass Amplifier by Brainworx, Ampeg SVT-3 PRO Bass Amplifier by Brainworx, Tube-Tech EQ Collection by Softube, Artist presets for Precision Mix Rack Collection, Improved firmware for Apollo 16 mkII

Thunderbolt Systems
Apple Mac computer with available Thunderbolt or Thunderbolt 2 port, OS X 10.8.5 Mountain Lion or later, 4GB HDD

FireWire Systems
PC: Windows 7 64-bit Edition w/SP1
Mac: OS X 10.8.5 Mountain Lion or later, 4GB HDD

UAD-2 PCIe Cards
PC: Windows 7 64-bit Edition w/SP1
Mac: OS X 10.8.5 Mountain Lion or later, 4GB HDD

All: Compatible VST, Audio Units, RTAS, or AAX 64 plug-in host DAW software

ALTERNATIVES



Audio Ease Altiverb 7

From 499 euros
Altiverb has reached version 7 with a host of IRs including those of the AKG BX spring reverbs. Of course, these algorithms are sampled rather than cloned but there's a lot more here on top.

www.audioease.com



IK Multimedia Ampeg SVX

99.99 euros
IK Multimedia's Ampeg SVX plug-in provides the guts of this classic bass amplifier, with a custom-ready feature set.

www.ikmultimedia.com



Tube-Tech Classic Channel

\$489
The Tube-Tech Classic channel provides native versions of the PE1C, the ME1B and the CL1B compressor for \$489 for the ultimate Tube-Tech combo.

www.softube.com

INCLUDES AUDIO

vault.futuremusic.co.uk

WHAT IS IT?

A significant update to FabFilter's mono/stereo compression plug-in

CONTACT

Who: FabFilter
Web: www.fabfilter.com

HIGHLIGHTS

- 1 Five new compression types are added
- 2 Redesigned interface makes applying compression even more intuitive
- 3 Comprehensive sidechain capabilities



FabFilter Pro-C 2 | £114

Following in the footsteps of an update to its Pro-Q EQ plug-in, FabFilter's compressor now reaches version 2. **Jono Buchanan** feels the squeeze...

SPECS

Compression styles: Vocal, Mastering, Bus, Punch and Pumping

Sidechain EQ section, with customisable HP and LP filters, plus an additional freely adjustable filter Hold (up to 500ms)

Custom knee, variable from hard knee to a 72dB soft knee

Up to 4x oversampling
Audition Triggering option
Range and Mix settings
External sidechain triggering

VST, VST3, Audio Units, AAX Native and AudioSuite formats (all both 64-bit and 32-bit), as well as RTAS (32-bit only)

System requirements

PC: Windows Vista and above, VST 2/3 host or Pro Tools

Mac: OS X 10.6 or higher, AU or VST 2/3 host or Pro Tools, Intel processor

As the first generation of FabFilter's Pro-Q EQ sounded so exemplary, it was a mild surprise to see its

capability adapted so dramatically in its second incarnation last summer. The results were successful, though, so it's perhaps more expected that the second plug-in to which FabFilter have turned their collective eye is the mono/stereo Pro-C compressor. It too now reappears with a shiny '2' at the end of its name.

Pro-C 2 offers many new features but the headline news is that the reworked interface now allows you to choose from eight algorithms or compression 'types'. In addition to the original Clean, Classic and Opto options, you can now select Vocal, Mastering, Bus, Punch and Pumping, whose intentions are self-explanatory in terms of the instruments/approaches they offer to process dynamics. Many of the design updates offered to Pro-Q 2 are adopted here too, with a re-sizeable

interface offering Small (still bigger than the original Pro-C's GUI), Medium, Large and Full Screen options.

Sidechaining has also been dramatically improved, with a sidechain tab opening up the lower section of the interface to let you take an unprecedented level of control over this aspect of your dynamics processing. Here, you can EQ the sidechain input signal to shape its character (before it impacts upon the compressor) and use a slider to easily control the depth of the sidechain's signal upon the source.

Pro-C 2 also introduces a look-ahead feature which allows for smoother results at the mix stage, though usefully this can be disabled if you need low latency response while tracking. Up to four times oversampling is now provided for even greater clarity and accuracy. The Knee capabilities have also been improved, with a more customisable approach. Knee is now fully variable from hard knee to a 72dB soft knee

which allows things to become much more saturated and vintage-sounding.

One of the best and most useful features is also borrowed from the Pro-Q 2. This features a 'headphone solo' button for each frequency band to allow you to focus on one frequency-related area in isolation. The Pro-C 2 offers a dynamic equivalent next to the Threshold button; pressing this allows you to hear the applied compression free from the source signal, effectively soloing the 'wet' portion.

The Pro-C 2 continues FabFilter's plug-in development beautifully. While the original version sounded wonderful, the new options and improvements take dynamics processing to new heights. **FM**

FutureMusic VERDICT

BUILD [Progress bar: 10/10]

VALUE [Progress bar: 10/10]

EASE OF USE [Progress bar: 10/10]

VERSATILITY [Progress bar: 10/10]

RESULTS [Progress bar: 10/10]

New features make this a stunning plug-in compressor with as much flexibility/capability as you'll need.

Lightning in a Sound Pack

Create your next track with **Beatport Sounds**



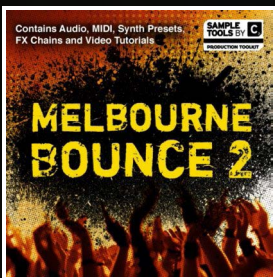
Hardstyle EDM Smokey Loops

An explosive combination of EDM and Hardstyle that contains five full construction kits, each one including a single song demo and all its audio components.



Deep House Ibiza Audentity

Audentity's *Deep House Ibiza* is bursting with rolling bass loops, warm summery chords, melodic synth loops, resonating pitched-down vocals, punchy drum hits, and loops.



Melbourne Bounce 2 Cr2 Records

From the producer behind *Melbourne Bounce*, this pack delivers 15 song-starter construction kits packed with top-notch audio, MIDI files, and synth presets.



EDM Cosmic FX Class A Samples

Class A Samples are back with incredible collection of 170 EDM Space sound FX! A huge collection of sound effects suitable for any genre from EDM, Bigroom, House, to Trap Deep, and Techno!



Techno Drums Hyper

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 **beatport** SOUNDS

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Focusrite Clarett 8Pre | £720

Focusrite come to dine at the Thunderbolt audio interface table with a new 18x20 model. **Jono Buchanan** pours himself a large glass of Clarett

INCLUDES AUDIO

vault.futuremusic.co.uk

WHAT IS IT?

A Thunderbolt audio interface offering high-quality preamps and conversion

CONTACT

Who: Focusrite
Tel: 01494 462246
Web: <http://uk.focusrite.com/clarett-range>

HIGHLIGHTS

- 1 Wonderful preamps, based on the famous Focusrite ISA design
- 2 Tons of analogue I/O with ample capacity for digital expansion
- 3 Bundled Red suite effects offer high-quality EQ and compression

SPECS

Supported systems: OSX 10.9 Mavericks or 10.10 Yosemite
Sample rates: 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
I/Os: 8 analogue inputs, 10 analogue outputs, 2 headphone outputs, Stereo S/PDIF In/Out, 8 channels of ADAT I/O, MIDI In/Out, Word Clock Out

Manufacturers have finally accepted that the Mac's high-speed port of choice is to be Thunderbolt, and

are now lining up with audio interfaces supporting this protocol. Focusrite's Clarett range promises four interfaces using Thunderbolt, with the 8Pre, on review here, offering specifications below the top-of-the-range 8Pre X but above the more compact 2Pre and 4Pre models. Perhaps mindful of the bundled software packages on offer from rivals such as UAD, Focusrite also include the Red 2 EQ and Red 3 compressor software, to give your effects library a quality boost.

Points of Clarett-ification

The 8Pre is a 18x20 interface and a quick tour of the front and back panel accounts for this generous specification. At the front you'll find the first two of the eight combi preamp channels, placed here for easy access when the unit is rackmounted. Focusrite's history as a preamp designer of repute needs no introduction and, as the design here is based on the legendary ISA preamps, the sound quality produced across all eight analogue channels is beautiful. Via the Focusrite Control Panel software, you can enable an 'Air' option for the pres too, which emulates the transformer behaviour of the ISA

design, providing a sweeter, brighter response to high-frequency content. 'Air' is available on a per-channel basis.

Round the back, you'll find the remaining six input preamps, as well as ten 1/4-inch line outputs. In terms of digital specification, there's stereo S/PDIF in/out, as well as an extra eight channels of digital I/O via optical ports, which speak the language of ADAT. You'll also find MIDI In/Out 5-pin ports here, as well as the all-important Thunderbolt connector. As with some rival Thunderbolt interfaces, no connection cable is included in the box. This trend is becoming frustrating; for this price, I think Focusrite – and their competitors – should be saving purchasers this additional expense.

The front panel provides ladder LEDs for the eight inputs and the monitor outputs, while the latter also features its own front-panel level dial, alongside Mute and Dim options. There are two headphone ports with independent volume controls, whose mixes can be configured via the Control Panel software.

Red army

The inclusion of the Red 2 EQ and Red 3 Compressor plug-ins is welcome, as they represent pleasingly faithful recreations of their hardware forebears. To stress, these plug-ins don't draw on

any processing power inside the 8Pre, but run natively instead, which means you can continue to use the plug-ins when your 8Pre isn't connected. The downside is that, of course, they will tax your computer's CPU. They both sound wonderful and are likely to be a substantial cut above the native plug-ins your DAW provides.

The 8Pre represents a solid and impressive audio interfacing solution from a company whose reputation for high-quality mic pres and pristine signal conversion will be enhanced by the arrival of this range. It's a breeze to use, with driver installation provided once your product has been registered.

Thereafter the Control Panel software is unfussy and helpful, while the unit itself allows you to drive the most important parameters – mic gain, phantom power enable (in two blocks per four channels), headphone port output levels and more – directly from the front panel. The Thunderbolt connection provides lightning-fast interfacing and, even with eight channels running simultaneously, latency is unlikely to poke its unwelcome head into your recording workflow. This leaves you with warm, crystal clear recordings courtesy of the sumptuous preamps and the option to further process these through two high-quality effects plug-ins.

The UAD Apollo 8p system is perhaps the closest competitor, with a balance between the higher cost of this set against the ability to run a raft of emulated plug-ins via its onboard processors. If you don't need that provision, the Clarett offers a winning combination of exceptional preamps and pristine audio interfacing. **FM**

FutureMusic VERDICT

BUILD	████████████████████
VALUE	████████████████████
EASE OF USE	████████████████████
VERSATILITY	████████████████████
RESULTS	████████████████████

Exceptional preamp and audio interfacing within a rock-solid Thunderbolt interface.



niche audio

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NEW

SUBLIME TECHNO

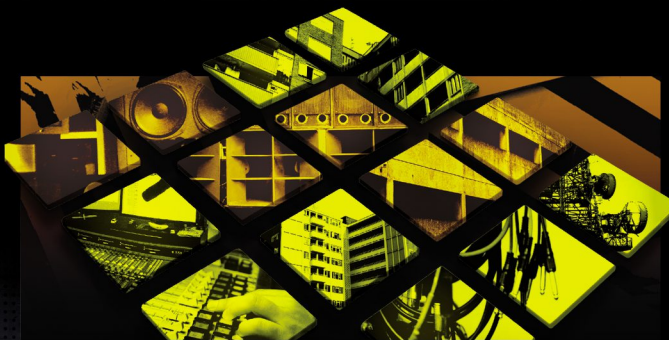
SUBLIME KITS FOR TECHNO PRODUCERS WORLDWIDE



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SHADOW HOUSE



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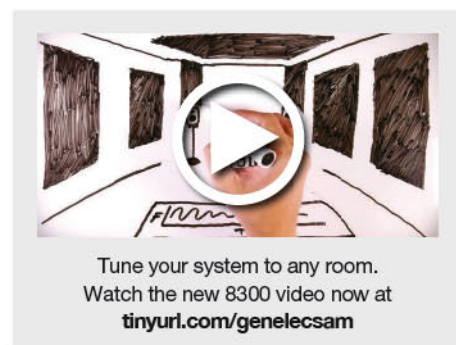
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AKG K181 DJ UE headphones | £99

www.akg.com

With their latest set of DJ cans, AKG are clearly looking to ape the lightweight malleability that has made Sennheiser's HD25s so ubiquitous behind the decks over the years. They're a set of headphones aimed squarely at the type of DJ who likes to keep their 'phones around their neck and occasionally lift a cup to their ear to check the mix. Frankly, the K181s are plain uncomfortable to keep on your head for long periods of time, but their light and flexible build makes it super easy to prop them up on your shoulder, and the 'mono' switch is definitely handy for beat-matching.

The frequency range is impressive for a set of DJ headphones, and the general sound quality is very good. There's a bass boost option too, although personally I find this just muddies things when you're trying to mix. On the downside, their lightweight build makes them feel less sturdy than some of their bulkier rivals. In all though, while they won't be to everyone's taste, these are an admirable set of DJ headphones at a good price. **Si Truss**

8/10



iZotope Spire for iPhone | Free

www.madewithspire.com

Multitrack recorders are nothing new on iOS devices, but there aren't too many free ones that offer great sound quality. Spire from iZotope is one such app. Drawing on technology developed by iZotope over the years, Spire automatically adds audio processing to your recording.

The app features a built-in limiter, de-esser, dynamic EQ and compressor, which are all applied to each track instantly. There's also a metronome, with tap-tempo function and voice control which is only able to start recordings.

Once your audio is captured, you can mix the tracks using an XY pad

for volume and panning, which is simple but highly effective. As soon as you're happy with the results, you can share your mix via AirDrop, text, email and even to the MadeWithSpire SoundCloud should you wish.

If you're looking for an easy 'scratchpad' for getting your ideas down, then Spire is an upgrade on Voice Recorder. One thing we would like to see in an update would be a trim function. You have to be quite precise with your recording start and end points if you're looking to create a loop. **Simon Arblaster**

8/10

Etymotic ER-4 | £180

www.etymotic.com

Etymotic's famous 'Christmas tree' earplugs slide snugly into the ear canal and, once pushed into place, deliver some of the best bass you can buy in-ear.



The process isn't exactly instant, or particularly comfortable for some, but the moment they're 'right' and the bass appears from nowhere it's a revelation. And their ability to isolate and cut out the outside world is second to none.

Most popular are their hf3 'iPhone' option which feature an in-line mic and buttons. This new ER-4 is altogether more serious with a very long, very sturdy, twisted cable and a new flatter reference grade response that makes mixing in-ears a reality. Highs are super bright and crisp with mid and low far less scooped than the bass-friendly hf3. This means a less 'exciting' but far more trustworthy soundstage for those that require reference grade in a tiny, sleek and serious package.

Daniel Griffiths

8/10

IK Multimedia iRig UA

www.ikmultimedia.com

Android devices and music making don't really go hand in hand, mostly due to a latency issue. Enter iRig UA: a zero latency, universal audio interface for Android 4.2 upwards.

The unit itself is at least twice the size of the HD-A and made entirely of

plastic. While portable, once cables are plugged in, there isn't enough weight to stop the interface from wandering about. The iRig UA comes coupled with Amplitude UA for free, which only features a few effects and amps, with more available as paid content. This version also looks to have been ported from an older iOS edition of Amplitude and doesn't sound as good as its current Apple-based counterpart, which is a shame.

If you absolutely have to have zero latency guitar modelling on Android right now then iRig UA is for you, as there isn't another universal solution available. What we hope is that more products are developed on the Android platform, offering more choice for users. It's still early days though. *Simon Arblaster*

7/10



Samplestate – Sax House Riffs | £19.95

www.loopmasters.com



Like Roger Sanchez and 'Little' Louie Vega before them, the Samplestate crew have called on the exquisite live musicianship of

teacher and player, Steve Bone, to provide saxophone riffs and solos for use in Dance music production. The four main sax variants (Alto, Soprano, Tenor and Baritone) have all been addressed thoroughly, played, and recorded, for your chopping, looping and sampling pleasure. And they come in at both 123 and 125bpm, and register in the classic keys of Dm or Am. There are hundreds of riffs on offer and, although tailored for House, they'll also fit on Funk and Breaks.

Roy Spencer

7/10

F9 Audio – Minneapolis Funk | £29.95

www.loopmasters.com



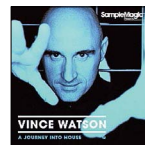
Much like Monster Sounds' Daft Funk sample set, this collection of cash-in loops has been designed for producers eager to sound like their favourite artists. But rather than helmeted French filter enthusiasts, F9 Audio have lovingly spun a tribute to the sound of Minneapolis' pint-size Pop pioneer, Prince. The type of post-Disco sleaze him and bands like The Time peddled in the '80s took over the charts and the clubs. And thanks to Mark Ronson rebooting them for *Uptown Funk*, more and more of you out there want to grab a slice of the action.

In place of Paisley Park's finest, F9 Audio have enlisted the help of famed bassist, Guy Pratt. The studio becomes a time capsule of the era as synths with epic names (Jupiter, Super Jupiters, Prophet, Oberheim etc) run riot through big bucks Neve gear, and vintage beatboxes like the Linn and 808 keep time. The results feel like you've stumbled on some forgotten master tape from a Funk-fuelled, peak time Prince jam. *Roy Spencer*

9/10

Vince Watson – A Journey Into House | £19.90

www.samplemagic.com



Taking time off from remixing, running labels, knocking out dozens of artist albums, and generally bringing a beautiful musicality to Dance music, Vince Watson has pulled out all the stops to bring you a corker of a sample pack. He must have had a hoot feverishly dreaming up loops in his extensively stocked studio, as the noted instrumentalist has whipped up a

hefty collection of tech-tinted grooves for you to play with. Top of the class are the deep, old-school, analogue basses, which demand to be noticed, as do the catchy synth loops and contents of the rich piano and Rhodes folders. Elsewhere, tribal drum loops and some very emotive strings and pads keep the bar of quality set high. Cheers, Vince. *Roy Spencer*

8/10

Rhythm Lab – MPC Beats: Drum & Bass | £7.95

www.primeloops.com



The early Jungalists took a lot of cues from the producers in Hip-Hop's golden era. They put their own spin on the sonics,

sure, but picked through the types of breakbeats their American counterparts dug, as well as the kit they used to program their drum finds. At the centre of this stood the Akai MPC, a drum machine that provided the backbone to many a Rap classic, and then Drum 'n' Bass anthem. Favoured for its sturdy trigger pad playability, and the unique crunch it added to beats, the MPC had a gift for adding a certain magic to any drum hit you loaded in.

The bods at Rhythm Lab have taken their cues from the forefathers, and compiled a collection of 65 tough and punchy Drum 'n' Bass breaks, wrung through one of these vintage machines. Tempos range from 165-175bpm and the variety is high. If you're sick of MIDI and digital drums and want that old-school punch, this pack is well worth a look

Roy Spencer

8/10

SPF Samplers – Monster Drum Hits | £7.43

www.soundstosample.com



Crafting your own individual drum hits from scratch is generally a pain in the arse, so most of us like to farm out the job to someone else. Step in SPF Samplers with Monster Drum Hits. Although it's compiled from existing packs (Underground Techno and Deep House 3), it's still a worthy purchase for those of you wanting a reliable stock of workmanlike elements to hold your productions together.

You get just over 500 hits for a bargain sale price, and they are solid to a man. They don't try and be too out there, or profess to be made by a hermit whacking a ladle against a tree for some new wonky timbre. They're just good, solid drums, which gel well together, and are guaranteed to make your next Techno or Minimal concoction punch above its weight in the drum stakes. *Roy Spencer*

7/10

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Techno Bullets Zmey

Introducing *Techno Bullets*! Choose from 651 pro samples including presets for Massive and Sylenth, exclusive FXs, drum hits, bass loops, and synth loops.



Riemann Kollektion 18 feat. Leghau Riemann Kollektion

Berlin-based Florian Meindl's sound design label Riemann Kollektion joins forces with French underground Techno artist Leghau to create a rough analog tool kit.



RIDDIM II Filthy Patches

The second installment in its best-selling sample series. Delivering brand new wobbly basslines, and deadly drum kits so you can craft the tightest dubstep tunes around.



Deep House Vocal Anthems Sharp

Deep House is definitely on the rise. *Deep House Vocal Anthems* delivers the essential warm, melodic sounds and soulful acapellas that crowds crave.



Secret Sounds Natura Viva

Italian dance duo Phunk Investigation guide you into their studio, sharing this exclusive sample pack that includes signature loops, pads and one shots (524 MB).



Techno Sound FX 99 Patches

This essential collection is back brimming with 100 *Techno Sound FX*.



Disco Funk 2 Cycles & Spots

These 10 Disco Funk starter sets deliver funky rhythm guitars, fat basslines, fresh melodies, and pulsing beats, giving you an inspiring mix of sounds to play with.

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sounds.beatport.com



Should I upgrade to Windows 10?

On the face of it, upgrading to Windows 10 should be a bit of a no-brainer if you're a PC user. If you're running Windows 7 (SP1) or 8.1 then you should be entitled to have it for free. What's more, if you decide that you don't like it, it's theoretically possible to go back to your previous version of Windows, so it doesn't have to be a one-way trip if you don't like it when you get there.

Furthermore, we've heard from some software developers that the new version of Windows features an

improved audio system that should lead to lower latency and better MIDI timing, though we can't actually vouch for these claims at this stage.

But then there are the caveats. Upgrading to any new operating system isn't without risk, especially if you rely on your computer and simply can't afford for things to go wrong with it. What's more, you need to make sure that all of your essential software and hardware is going to work with Windows 10, which at this stage isn't guaranteed.

At the time of writing, Steinberg were recommending that Cubase 8

Are Mini Keys That Bad?

Korg, Yamaha and Roland have all launched mini-key'd boards recently, but for serious keyboard playing mini keys are too small to play accurately. For synth duties they can be fine and some feel better than others (particularly Korg's three-quarter size keys), but it's all down to personal preference – try before you buy!



users should avoid the new OS because of "performance and timing issues". On the plus side, Cakewalk were reporting that the latest version of Sonar was compatible. So the lesson is, you need to check.

Of course, any initial problems will be ironed out sooner or later and, long-term, the fact that Windows 10 is free for a lot of PC users should mean that the majority of them will quickly get onboard and make things easier for software developers, who won't have to worry so much about multiple OS versions being in circulation. But if your system is currently working fine, the sensible decision is to wait at least a few months before you take the plunge.



Best-sounding sub £500 analogue poly?

Our first suggestion would be the often-overlooked Waldorf Pulse 2, which is a bargain at £375. It's fully analogue and allows up to eight-note (paraphonic) chords and it really does sound mighty fine! Other than that, the stupidly cheap (around £90) three-note polyphonic Korg Volca Keys sounds great too. Second-hand, check out the Roland Alpha Juno 2 or Korg Poly-800.

What's the best way to make electronic music without a computer?

It's funny: for years, people were looking for ways to delve ever deeper 'into the box' and get rid of more and more hardware; now, we're seeing a rush to create rigs that don't feature a PC or Mac at all. That said, one of the reasons people are turning to hardware-only set-ups is for the sense of liberation that they bring, so offering a prescriptive 'best way of doing it' sort of defeats the point. You may find joy in limiting your options and using just a few pieces of gear, or maybe your dream is to create a massive modular set-up.

One thing that's undeniable though, is that it's getting easier to take the computer out of the equation. You could do worse than start with one or two of Korg's Volca boxes, which can easily be sync'd together. The same can be said of Teenage Engineering's Pocket

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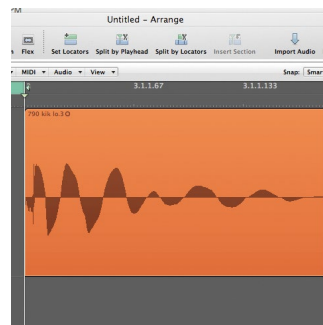
Keys in mono or stereo live?

➤ Stereo monitoring provides a more involving experience onstage and allows you to feel the benefits of stereo-panning (and other stereo FX) and true stereo samples. Or, you could always use in-ear monitoring for a more portable stereo solution that you can take anywhere. Mono still works fine though and will always give you a focused sound, though it's less involving/exciting.

Tightening Up Low-End

The bass and kick in my tracks always sound a bit flabby. How can I tighten them up?

Just as when playing live (when the drummer and bassist try to lock in with each other to give the impression of playing 'in the pocket' or 'tightly'), programming kicks/bass requires that same attention. In order to prevent 'flab' in the low-end, first off make sure your kick or bass samples are trimmed properly at the start and ends to avoid any delay and tail noise when a MIDI signal triggers/stops the samples. Also, choose which sound you want to carry the attack or low-end (bass or kick). Here are some further tips...



➤ First, cut your kick/bass samples accurately so there's no space before the initial transient. This will ensure that your sounds trigger tightly, right at the point of the MIDI-trigger note. Also clean up the sample end too to avoid any noise and to make sure the note-off is clean.



➤ Choose the kick or bass sound as the dominant force. This way you can decide which sound should carry the attack and which should carry the lows. Here we want the kick to carry the attack and the bassline the lows. we've high-pass-filtered the kick for this reason.



➤ To add more attack to the kick (and also to remove any attack on the bass sound that may clash with the kick's attack), use a transient designer/envelope-type plug-in. This helps tighten up the groove. Any flams between parts will vanish too.



➤ EQ out any highs you don't need in both sounds (which may be taking up valuable headroom), then insert a compressor on the bass sound and use the kick as the sidechain source to glue the bass/kick together more. You should now have a much tighter feeling groove!

Operators. Roland, meanwhile, have recently released their MX-1 Mix Performer, which enables you to bring all of their Aira devices (and your other hardware) together.

A more traditional analogue mixer might also be on your shopping list – look out for one with effect sends/returns so you can use external processors such as guitar stomp boxes – and you should also consider a standalone step sequencer. Arturia's BeatStep Pro is a particularly strong contender in this area.

Really, it's up to you: think about how you want to make your music, and buy your hardware accordingly.

Are Apple making a bigger iPad?

➤ Speculation surrounding the launch of a larger-than-standard iPad started pretty much as soon as Apple had released their smaller-scale iPad mini. A larger iPad wouldn't make a lot of sense to the majority of users, but for musicians the extra screen real estate would be handy, particularly now Apple have announced iOS 9 will have split-screen multitasking. What's more, there do seem to be rumours that a 12.9-inch iPad could be on the way this year, but we've heard this before, so we'll believe it when we see it.

88-Note Board For Tours?

➤ Travelling with an 88-note weighted board is difficult due to the size and weight. Instead, we would hire one at each venue, or grab a Roland RD-64 which is the most compact weighted controller/piano available. Or, go for a Nord Stage 2 EX HP76 which weighs just 27lbs.

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HARDWARE SYNTHS



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Sequential Prophet-6 | £2,199

Full Review: FM297

The Sequential name returns, and the Prophet-6 more than lives up to its heritage. Another future classic from Dave Smith.



Roland JD-XA | £1,549

Full Review: FM295

Greater than the sum of its parts. It can be a great analogue and a great digital synth, but combine the two and some real magic happens.



Dave Smith Instruments Pro 2 | \$1,999

Review FM284 A ridiculously versatile mono/paraphonic synth that anyone can happily get lost in. Without doubt a great investment.



Korg ARP Odyssey | £898

Review FM291 The compact new Odyssey captures the mojo and sound of the original(s) and the inclusion of all three filters, Drive and MIDI/USB enhances its appeal further.



Elektron Analog Keys | £1,449

Review FM278 A system capable of great results, though perhaps held back by some ease-of-use issues. However, it's built like a tank.



Waldorf Pulse 2 | £406

Review FM273 A huge improvement on the classic original Pulse, at a great price. A new classic in the making and we can't wait for the keyboard version. In a word – killer!



Moog Sub 37 | \$1,579

Review FM286 With a richer set of features and fewer operational hurdles than its predecessor, the Sub 37 is a superb and highly desirable upgrade to the Phatty family of Moog synths.



Dave Smith Instruments Prophet 12 | \$2,999

Review FM270 A deep yet intuitive synth that's killer live and in the studio. Inspiring and addictive.



Modal Electronics 002 | £2,995

Quite possibly the future of synthesizers. The all-British-made 002 adds functionality and modulation like nothing we've seen.



Korg MS-20M | £1,126

Review FM290 The MS-20 sound with expanded CV capabilities, FM, sync, filter switch and PWM input. The price might be a little steep for a kit, but it's still great – get one!

DRUM MACHINES



Elektron Analog Rytm | £1,199

Full Review: FM282

The Rytm sounds massive and is very flexible. It's inspiring and addictive, and the sequencer is hugely versatile.



Roland TR-8 | £379

Review FM277 Captures the essential tone of the original TR-808/909 but takes it firmly into the future. A must-have.



Elektron Machinedrum | £1,116

Feature-packed and inspiring to use, Elektron's beast of a drum machine is a definite modern classic, and still up there with the best.



DSI/Roger Linn Tempest | £1,608

Review FM248 Doubtlessly lives up to the heritage of the two names behind it – certainly destined to be a future classic.



MFB-522 | €280

A fully analogue drum machine with a real old-school feel to it. Fairly simple in design but great sounding – a Techno machine!

ABLETON CONTROLLERS



Launchpad Pro | £275

Full Review: FM296

Flexible and intuitive – the Pro is one of the most creative and inspiring controllers we've tried. A great tool for live performance too.



Ableton Push | €778 (inc Live 9)

Review FM265 Live 9 puts Ableton firmly back on track with its tough refinements and edgy new features. With 9 comes Push and it is a big part of the Live experience.



Akai APC Key 25 & Mini | From £80

Review FM284 The Mini is all about buttons and faders. The Key 25 is a great keyboard/clip and scene launcher combo that fits in a laptop bag.



Akai APC40 MkII | £290

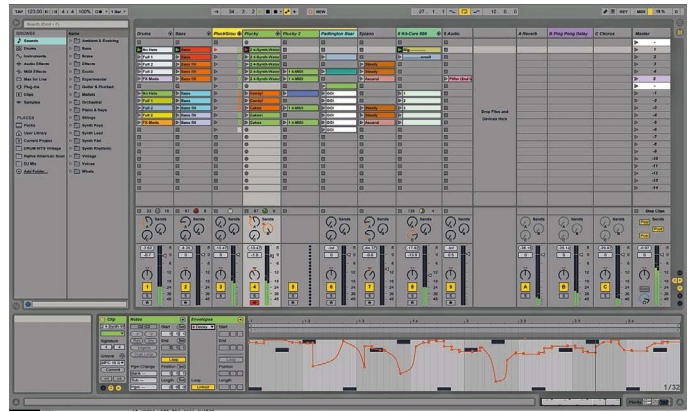
Review FM284 With a full RGB colour range, you can now recognise your clips by colour. Makes a big difference, especially live.



Novation LaunchControl & LaunchKey Mini | £79 each

Review FM206 Novation's Mini range makes it possible to have 'real' controllers you can use everywhere you go.

DAWS



FL Studio 12

From £64

Full Review: FM294

Despite bringing mostly functional updates, version 12 is great. Like fine wine, FL Studio improves with age and is a superb production environment for any level of user.

Ableton

Live 9 | £315

Full Review: FM265

The latest (free) 9.2 update is available now, and brings refinements to Live's warping engine and hardware integration.



Logic Pro X | £139

Review FM270 Version ten of the popular DAW revamps the interface and introduces some long-awaited MIDI effects plugs. And let's not overlook that price – wow!



Pro Tools 11 | £550

Review FM269 Pro Tools 11 sees much of the new tech from 10 finally bedding down and making sense. It's now caught up with other DAWs for fast workflow to match its power.



Traktion 6 | \$60

Review FM293 More comprehensive and well implemented than you might think, Traktion 6 is a well-rounded budget DAW worth trying.



PreSonus Studio One 3 Professional | £279

Review FM295 Studio One 3 is stable, reliable, and capable of satiating any music production need.



Sonar X3 | £419

Review FM275 A well-bundled package that features an audio-engine that beats some of its rivals on paper. Most certainly a heavyweight contender with enough extras to lure new users.



Steinberg Cubase Pro 8 | £448

Review FM288 A solid update, built on strong foundations, with some genuinely useful new features. If MixConsole could be tweaked further visually we would be almost entirely happy!



Bitwig Studio | €299

Review FM278 Bitwig strikes a great balance between power/features and usability/workflow. No matter which DAW you're currently using, you simply have to try the incredible Bitwig Studio.



Propellerhead Reason 8 | €369

The update to version 8 was more about interface and workflow improvements than new tools, but regular users are likely to appreciate this latest incarnation.

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SAMPLING TOOLS



Korg Electribe Sampler | £329

Full Review: FM295

Not the perfect sampling solution, but fun to use and a creative alternative to the ever-present DAW. It's great for live use too.



Elektron Octatrack | €1,240

Review FM244 Elektron's reimagining of hardware sampling results in a unique approach to sample-based composition and performance.



Korg Volca Sample | £119

Review FM286 It's not without its faults, but the Sample's workflow is exceptionally fluid. Possibly the most fun, flexible and inspiring Volca yet.



Akai MPX16 | £130

Review FM289 A great starter sampler and does basic sampling and sample playback well. It's easy to use and works as a basic pad controller over MIDI.



Native Instruments Kontakt 5 | £339

A good update rather than a mind-blowing one, but, taken as a whole, Kontakt is still the ultimate sampler.

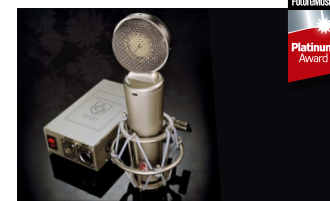
VALVE CONDENSER MICS



Sontronics Aria | £1,100

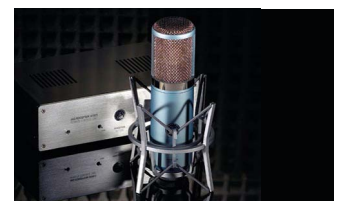
Full Review: FM278

The Aria delivers a silky smooth response with a touch of valve flavour thrown in for good measure.



Lauten Audio Horizon | £649

Review FM213 An all-purpose tube microphone? A rare and glorious thing. The Horizon is worth every penny.



AKG Perception 820 Tube | £520

Review FM219 A great way to get your hands on a tube mic from a respected brand at an affordable price.



Maroon Audio MT100 | £375

Review FM221 An impressive looking and sounding mic with versatile strengths at a competitive price.

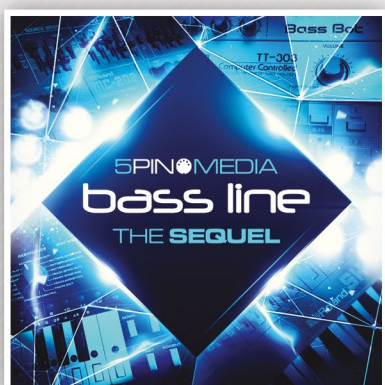


sE X1T | £275

Review FM281 Adding valve circuitry to the X1 offers a slightly different but pleasant tonal perspective.

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HACKABLE HARDWARE



Moog Werkstatt | £279

Full Review: FM287

The basic elements of the classic Moog sound in a hackable, accessible package, supported by a host of great online modding resources.



Akai Rhythm Wolf | £149

Review FM289 It's not perfect, but its clearly labelled innards make the Rhythm Wolf a good bit of kit to get creative with.



MeeBlip anode | £110

Review FM284 Completely open source and designed with hackers in mind, this little synth is a bass monster with a great filter.



Korg Volca Beats | £100

Review FM271 We love the Volcas anyway, but with a few mods they can be taken to the next level. Try adding individual outputs to the Beats.



Soulsby Atmegatron | £306

Review FM279 An interesting synth that cuts its own sonic furrow and can change identity with the press of a mouse.

COMPRESSOR PLUG-INS



FabFilter Pro-C 2 | £114

Full Review: FM297

New features make this a stunning plug-in compressor with as much flexibility and capability as you're likely to need.



UAD-2 Shadow Hills Mastering Compressor | \$299

Review FM261 Another highly-coveted hardware 'legend' undergoes a successful UAD transformation.



FabFilter Pro-MB | £139

Review FM277 Intuitive and flexible. If you've been frustrated by other multiband processors, reconnect here.



112dB Big Blue Compressor | £64

Review FM256 An amazing sound and an empowering set of features make Big Blue one of the best compressors around.



Slate Digital Virtual Buss Compressors | From \$99

Review FM270 A highly versatile and characterful set of stereo compressors which will enhance any genre.

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