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TRAKTOR 2
T2
INSIDE

NI's New DJ Kit
REVEALED!

**Eddie
Thoneick**

ON THE DVD Making 2011's
summer anthem with Erick Morillo

Dennis Ferrer

Inside the top DJ and House
producer's New York city studio

Blancmange

Why their new album has
been 25 years in the making



REVIEWED

Korg Kaoss Pad Quad
Focusrite VRM Box
IK iMic & VocaLive
iZotope Stutter Edit
Elysia Alpha Compressor
Korg microKey & microPiano
SonicProjects Oberheim OP-X Pro II

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Welcome

Remember The Time



Perhaps more than any other single innovation the ability to 'elasticate' audio – be it beats, vocals or even entire tracks – has enabled a whole new wave of creativity.

Remixers can drag vocal parts kicking and screaming across musical genres and the wayward 'off day' performances of under par musicians can be corrected with a

few clicks. There's never been a better – or an easier – age in which to make music.

But given the wealth of tools for the job which is the best for you? Step up our *Ultimate Time-Stretch Masterclass* feature on page 36. It gives insight into the tricks at play, tips to try out and exhaustive comparisons of five major DAWs in action. And there's 66 audio examples on our DVD that let you hear the results for yourself. We think you might view your 'favourite DAW' in a whole new light.

Elsewhere in the mag we've got stunning insight (and seven video episodes on DVD) into the making of *Live Your Life* by Eddie Thoneick and Erick Morillo – sure to be one of this summer's House anthems. Then there's a trip around Dennis Ferrer's gorgeous NYC studio on page 62 and a trip down memory lane with arch Electro Pop pranksters Blancmange on page 74.

And don't miss all three of our major DAW tutorials complete with video on our DVD. Admit it. We spoil you.

Daniel

Daniel Griffiths, Editor
daniel.griffiths@futurenet.com

EXPERT CONTRIBUTORS THIS MONTH...

Marco Migliari
engineer, producer



Working alongside superstars in some of the world's best studios makes Marco our go-to-guy for software versions of the hardware he knows inside and out. Check out his Elysia Alpha Compressor review on page 100.

Jono Buchanan
engineer, producer



This month, DAW genius Jono begged us for the right to create 66 pieces of audio to document every facet of time-stretching in every major DAW. Who are we to deny a man his true calling?

Greg Scarth
music scientist



Knowledge beast Greg's massive *Knowledge Base* into the origins of Pro Tools is both nostalgic and informative. While his piece about 'modelling' isn't as exciting as you may first presume.

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FMDVD

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INSIDE STORY



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



This month's highlight is another gear-filled Studiofile. State of the Ark Studios in London has some rather special equipment, the highlight of which was the legendary EMI TG12345 console. This rarity even has the names of the Rolling Stones scratched into it from its days in Pathé-Marconis Studios in Paris! But that's not all alongside it is a side cart made up of TG channels from Abbey Road, used by the Beatles. A true slice of recording history.

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



DVD HIGHLIGHTS

Technique: DAW Video Tips

This month, get all of our exclusive Ableton, Logic and Cubase tips in full video

Eddie Thoneick

Get a full *In The Studio With* breakdown of how the track *Live Your Life* was made

Technique: Time-Stretching

66 audio examples that will help you navigate your way through the best of today's options for time-stretching audio

Studiofile

Get a sneak peek at one of London's hidden studio secrets with our video tour

From the Vaults: Funk, Soul & Balearic

1182 Awesome instruments, loops, hits and kits to funk up or chill-out your tracks

1182

Awesome instruments, loops, hits and kits to funk up or chill-out your tracks

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WAVEFORM RECORDINGS
EXPRESSIVE SYNTHS PT 1



 "Waveform continue their instrument-only series with 150 prime synth cuts featuring basslines, lead riffs, synth workouts and sustained melodics."

**FATLOUD
LA BEATS**



 “Urban masters FatLoud maintain their sterling start to 2011 with five all-new construction kits of authentic and hard-hitting West Coast Hip Hop beats, floor-shaking basslines, instrumentation and more...”

HY2ROGEN – BIG ROOM SONGSTARTERS 2



"Mainroom hellraiser Hy2rogen returns with 20 devilish dancefloor bombs in construction kit format, bursting with inspirational elements for Progressive and Tech-House producers. Also includes MIDI files and bonus drum hits."

Sample Techniques

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



Distortion duties

"We used a surprising amount of distortion this month, to really push the synths (both hardware and software) into some nasty places. Although we happily use distortion plug-ins, some times only a hardware stomp box will do.

"It never fails to amaze how different each small box of noise can sound on the same input signal. We have quite a collection of distortion (although it has to be said it's rare for an actual guitar to pass though 'em) and are lucky enough to have several hand-built ones made just for us by our sample-partner-in-crime Robbie Cyclick. Of course sometimes we'll dispense with the stomps altogether and inject a touch of warm grit by pushing the channel on our Mackie line mixer that little bit too hard."

LOAD IT UP NOW!

© Richard Ecclestone

GEAR USED



Dubstep
Groove Criminals
use: Roland
SH-101

"What's left to be said about this grey analogue gem of a mono synth? Brilliantly laid out and easy to program, its simplicity still has that pleasing ability to surprise. It can also sound rather filthy, especially when fed through a tasty distortion pedal."



Dubstep
Cyclick Samples
use: Sandpit
Basstown
Strangler

"This is one of the collection pedals I've made specifically for Sandpit Studio and is a total beefcake of a distortion that has been designed to rock the bass – and it does. The circuit is not a million miles away from the standard fuzz pedal set up, though this utilises standard silicon transistors instead of the softer, lower gain germanium transistors that give many fuzz pedals their character. The low end is massive and the distortion can easily tip into gated break-up for synth bass blasts even with a guitar. There is more gain available than is strictly healthy so it is also useful for flattening pedal, amp and preamp input stages. Monster."

THE MAKING OF YOUR UNIQUE FM SAMPLES...

Dubstepping Out

Wobbles to wibbles, get the Dubstep sound of now

This month's collection is a team effort. Both our sample creators have embarked on the mission of providing you with the most current sounds of Dubstep. We caught up with Groove Criminals in his sample bunker to find out exactly how you make those synth sounds.

"The nasty synth stabs were drawn from a wide variety of synths both hardware and software based and thrown through stacks of real and virtual distortion. The Korg Monotron deserves a shout out here as once again it punched far above its tiny

weight providing some truly filthy sounds." Although the current trend in Dubstep has turned away from its dub roots we couldn't resist firing up the tape delays (Roland Space Echo and Watkins Copicat) and spring reverbs to give you a collection of more Dub-influenced effects and percussive hits."

Lay it on thick

Speaking to Cyclick samples about his approach to get the nastiest sounds possible he had this to say "The basses and synth loops/lines

were made with a combination of the K2600, the Jen SX1000, BassStation and some soft synths.

Quite often, these were layered together after MIDI programming and mixed through a stereo buss for final compression and EQ, and sometimes a wee bit of extra filter sweeping and some amplitude wobbling."

As always these samples come with a very healthy collection of NI Kontakt ready instruments that mean that this sounds are just the starting point for your sound creating.

1,000
samples

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T2: Judgement Day

Traktor Pro 2 is here. So what's next for Europe's favourite DJ software?

Three years and two controllers since Traktor Pro was launched, NI have unveiled their next step for what is fast becoming a digital DJ standard. Unsurprisingly, Traktor Pro 2 isn't a far cry from its S4 alternative, released with the controller of the same name late last year.

If you missed that version, it brought new performance elements in the form of the Sample Decks and Loop Recorder. Loops could be instantly moved to any free Sample Deck for replay later in the track or set, with independent effects also possible. It was a logical progression for the quantised cue points in Pro, and opens up Traktor, not only for remixing on-the-fly, but for true four-deck performance in the form of loops, one-shots and effects to keep your set seamless.

It's not just the software that's had a reshuffle though, NI's line of Audio interfaces have also been redesigned, with more I/O and features than ever. We spoke to Friedemann Becker, Senior Product Designer of the DJ division at NI to get the full scoop:

FM: What's new in Traktor Pro 2?

Friedemann Becker: "We have revised the whole user interface to make it easier to intuitively see and use all important control features at a glance. This includes a new high-contrast colour scheme.

"The TruWave technology is part of this mindset. The new generation of Traktor also introduces the Sample Decks as well as a Loop Recorder that were up until now only available for Kontrol S4 users. We are also introducing the 'SoftSync' function, that allows using the sync features while maintaining the ability to use hands-on control."

What was the main feature request for Traktor 2 that you implemented?

"As with every new generation, our goal is to expand Traktor across the board. Of course the new creative features like the Sample Decks and Loop Recorder were a big part of the new design. The Kontrol S4 introduced these features in the context of an integrated hardware-software system and the new generation of Traktor now makes

them available for all kinds of DJs, including those using an external mixer and timecode control."

Can you explain how the new TruWave technology works and why it's better than before?

"TruWave analyses the spectral content of the track and displays the waveform in different colour shades accordingly. This allows you to not only differentiate between the distinct elements of the track, such as kicks, hi-hats or snares, it also lets you read the energy content of the track.

"Also, the subpixel waveform rendering significantly expands the zoom range, which makes it possible to go really close into your music, almost down to sample level."

Will there be a new mapping for the X1 to work with the new features?

"Sure, we will provide a whole new mapping for the X1 to control the new Sample Deck and Loop Recorder features in Traktor Pro 2. This way the X1 will serve even more so as the ideal complimentary controller for Traktor setups."

WANT TO KNOW MORE?

Make sure you pick up *FM* next month for the full review of Traktor Pro 2 and its new interface family. *FM239* on sale 14th April.



iOS Makes FL Studio Mobile

ImageLine innovate with first 'real' portable DAW

Penned as the fastest way to get ideas from your brain to your speakers, ImageLine are about to release their FL Studio Mobile app for iOS devices. This makes them the first of the big DAW makers to make an official mobile version of their work

Multi-track ideas can be created on the go and then loaded into the full version of the FL Studio for additional work. Announced feature highlights include 40 instruments, with another 50 available in the app store, five real-time effects, MIDI import and export, compatibility with

Line 6 MIDI Mobilizer, Akai Synth Station and Core MIDI, plus WAV export and transfer via Wi-Fi.

It has to be said though, it does seem strange that ImageLine are building this when for so long people have been asking for a Mac version of their full software. That said if you're already an FL Studio user then this portable solution will no doubt be a tempting purchase to make sure you never miss an idea ever again.

WANT TO KNOW MORE?

Keep your eye on *FM* for the full review and check out image-line.com for the full list of specs.



FL Studio Mobile looks set to launch on the iPhone, iPod Touch and iPad



Let It Sing

We've said it before – the vocal is a very important part of a track, but what do you do if you can't sing, don't own expensive equipment and/or don't have access to a rarefied recording environment? Don't worry: our sister magazine *Computer Music* is here to help with their brand-new *Vocals Special*, out now.

If it's natural, sweetly-sung parts you're after, learn how to record pro-sounding vocals in a bedroom studio and create flawless performances from sub-standard takes, using the power of today's software. If synthetic vocals are more your bag, follow the step-by-step tutorials showing you how to create classic and cutting-edge sounds, from daft robots to dark demons, ethereal angels, stuttered samples and more. Fancy a go at beatboxing in your bedroom? That's covered too. Plus, a massive mixing tutorial takes you through the fundamentals of balance, space, tone-shaping, dynamics, phrasing and sitting a vocal.

CM Special 46: Vocals is out now in selected WH Smith, Borders and Barnes & Noble or online at myfavouritemagazines.co.uk.

MUSIC TO OUR EARS

The FM Playlist

What we're listening to this month...



Prince Controversy

A recent encounter with a Linndrum made me dig this and other Prince classics out again. **Chris, Deputy Editor**



Midnight Savari Pinisi

Producer Ken Adhitya's remixes and originals are paving the path to summer, one double-clap at a time. **Declan, Production Editor**



ZTT The Art of the 12"

Worth the asking fee for FGTH's insanely overblown *Rage Hard: Young Persons Guide To The 12"* alone. **Daniel, Editor**



Jori Hulkkonen Man From Earth

If Arthur C Clarke made music, this is how it would sound – atmospheric and packed with synths. **Phil, Art Editor**

Preceptor Compressor Limiter

Generic Audio releases their debut kit and it's ready to be racked into your rig

It may not be the most creative of names for a company, but give us robust looking knobs and VU meters and we're already interested. Built to an extremely high standard, this 3U compressor limiter is aimed at ultra mastering quality components for a reasonable price. With a simple two in and two out balanced XLR connection, plus a sidechain input on each channel, the unit is a fairly standard design. But, with every component of this hand-made unit highly considered and a super high quality power supply, the sound is said to be massive with much lower unwanted noise and distortion than

other similar spec'd units. Special features of this full analogue unit include a tasty blend knob on each channel for instant parallel compression techniques. Plus, there's a Z switch for changing input impedance between 300 and 1200 Ohms for recording instruments and a high-pass filter for use on the sidechain input with six selectable modes (Off 40Hz, 80Hz, 120Hz, 200Hz, 320Hz). Currently the unit is on a 30% introductory discount at 1,925 Euros, so if you're interested in some meaty high end true analogue compression, this is worth a look. Review soon! Generic-audio.com

Safe As Houses

A small company from Leeds is creating some wonderful looking, feature-filled hardware

Boutique gear builders Safe Sound Audio have a new compact compressor titled the Stereo Toolbox dual channel/stereo compressor. Based around what they call their dynamic

tracking circuitry it makes the unit particularly useful at mixdown stage. Built to slot into the API 500 series racks, this little compressor is able to process both left and right or mid/side signals separately.

On top of that, with width control moving signals from mono, stereo to extra wide, stereo signals can have their mono and stereo parts compressed separately. Also because of the M/S, mono and stereo signals can have their levels tweaked without even delving deep into compression.

There's a high-pass switch for removing unwanted boom from the side signal or for controlling pumping in the bottom end of the key input. There's plenty to like and it looks like a useful addition if you're building an API 500 rack. safesoundaudio.co.uk

WANT TO KNOW MORE?

This is wallet-cringly expensive at £958, but we all know, quality doesn't come cheap. Review in *FM* soon.



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Q&A

Oliver Huntemann
Mason
Shlomi Aber
Catz N Dogz

Pioneer DJM-900 Nexus

Hidden beneath the shell of a simple looking DJ mixer is more top tech to take your DJ sets to the next creative level

Although the flagship DJM-2000 mixer was a huge hit with *FM*, it wasn't maybe as widely adopted by nightclubs and DJs as much as Pioneer may have liked. Thus, steps in the DJM-900 Nexus. Five years in the making, a super duper revamp of the DJM-800 has been launched, with a stack of new features.

The first thing you notice is the connectivity options of this mixer – with a built in four channel

24-bit/96kHz soundcard on USB, plus Traktor scratch certification so no external box is required when using timecode CDs or vinyl. The previous four effects have also been expanded to six – Space, Dub Echo, Gate/Comp, Noise, Crush and Filter – all still controlled by a rotary above each vertical channel fader.

Nexus I/O

The input and output circuits are the same high quality versions as found

in the flagship CDJ-2000 decks, and the Nexus also employs the same Ethernet DJ link connection as the 2000s, meaning this mixer will be able to talk directly to other connected decks on the Ethernet connection and share BPM and track information. This means the mixer can accept quantise information from tracks scanned in Pioneer's RekordBox software and can lock to the beatgrids by hitting the quantise button next to the effects section on

the right of the mixer. Useful, for instance, if the tempo is adjusted on the deck while a tempo-dependant effect such as delay is enabled on the mixer, among many other benefits.

There's also the brand new X-Pad for controlling the other effects section – see the annotation below. Other tweaks include increased build quality, with better faders and fader caps among other improvements that help to keep the mixer going during brutal sessions in the club.

New standard

It seems like it will probably take a while before every club you DJ at has the DJM-900 and CDJ-2000 setup as standard, but from this initial first look it seems like the DJM-900 Nexus will be the mixer of choice on many artists tech riders, and for people using DVS systems, it'll make DJ switchovers much more pleasant.

WANT TO KNOW MORE?

Pricing is expected to be around the £1,600 mark. Check next month's *FM* for the full review pioneerdj.com



The X-Pad

The classic Pioneer effects section on the right of the mixer has also been updated with additional effects and a new creative way to take control of them. Previously skipping between tempos on effects and rolls required users to tap the arrowed beat buttons. These are still present, but a new X-Pad enables control of beat effects and parameters such as LFO. So, for instance, when using filter, phaser or flanger effects, there are twin LFOs, one controlled by tapping the beat buttons and the other by sweeping your finger against the X-Pad. Also, alongside the send and return audio through option (for connecting external effects) there's the option to send MIDI LFO, for extra creativity.

Back to MUSIC

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* Cubase 6 exclusive





Waves Deliver Aural Excitement

Everyone loves Aural pleasure and Waves' latest recreation of a studio classic is guaranteed to please

Aimed at adding that special sparkle to vocals and instrument tracks, the original Aphex Aural Exciter hardware was audio voodoo when back in the 1970s. So much so the first machines were hired to studios by the hour.

This modelled version by Waves is based on the extremely rare tube version and adds presence, vibrancy

and depth to a signal without raising its peak level.

The plug has been developed alongside Aphex and offers all the analogue sound of the original hardware, including details like noise and mains hum. Of course – as this is 2011 – the user can choose to dial in as much or as little as required.

The plug has both mono and stereo versions, is VST, RTAS, TDM,

Audio Suite and AU compatible. It's Waves-style pricey however, with the Native version landing at \$250, while the TDM plug will set you back \$500.

Still, at least you won't have to hire it by the hour.

WANT TO KNOW MORE?

Find out more about this plug and the Waves line up at the website of UK distributors sonic-distribution.com

Avid Student Discount



You might not have realised, but if you're currently a student and thinking about

purchasing Avid's Pro Tools 9 DAW, then you can head over to the URL below and pick up a copy for just £221 which includes the iLok 2 and an incredible four years of free upgrades. There's also the option to crossgrade to PT9 from Pro Tools LE8 and even M-Powered set-ups. Bargain. Here's the one example deal we found: studentsuperstore.com/Avid-Pro-Tools-9-Student-Edition/default.aspx

More information can be found from Avid's site avid.com/US/specialoffers/special-offers-Pro-Tools-9-Academics. Everyone loves a nice easy to type URL, right?



De La Mancha Ditto Plug

Known for their great value and creative plugs, developer De La Mancha seems to have done it again with this \$19 delay plug.

Features include the ability to randomise the delay time, feedback and filter cut-off, with independent left and right channel modulation if required. There's even the option of adding reverse delay if you fancy.

All delay times are tempo-synced to your host, with up to 6 different selections that can be randomly selected. Amazingly if the delays are randomised they will always sync with the tempo of your track, although there is the option to use alternate timings for strange effects if desired. The interface looks nice enough and for \$19 it could be a great effect for live sets as well as zinging up studio sessions. Shame it's a Windows only VST though. delamancha.co.uk



The Piano For Your 'Pad

Need a tiny, two-octave keyboard dock to turn your 'Pad into a piano? Pop in your iOS device, load the free app and you'll be playing piano (or strings, synth or guitar) in no time. But, what caught our eye is that the device seems to have built-in speakers, and if like the Akai SynthStation 25 it's Core MIDI compatible, this could be a great value accompaniment to more advanced apps such as the Korg iMS20 or Mellotron. ionaudio.com

Producer Sessions Live!

We're back for 2011, bigger and better than ever

Put the 3rd and 4th September in your diary now, because our event – **Producer Sessions Live**

– is back and heading to London.

Designed specifically for producers, the event brought together the very latest gear and live tutorials from production superstars, including The Freemasons, Dave Spoon, Danny Byrd and many more. Due to the huge success of the event, we're doing it again – bigger and better. We're currently firming up a large list of big name producers who'll be giving live lectures, tutorials and demonstrations, plus all the major gear manufacturers will be showing their goods and giving tutorials on how to use their kit.

This year's event takes place on the 3rd and 4th of September and once again it's at the SAE college in London. All you've got to do right now to be sure of being there is to head

over to <http://bit.ly/gQjSKg> and sign up for the Producer Sessions Live newsletter. We'll send details star line-up and exhibitors as they're confirmed. Also, keep your eye on the main website at producersessionslive.com or follow us on twitter at twitter.com/futuremusicmag.

The low-down

What:

A weekend of live 'In The Studio With' sessions with top producers. Plus, all the latest gear from the world's top hardware and software makers

When:

Saturday 3rd & Sunday 4th September, 2011

Where:

SAE London, 297 Kingsland Road, London, E8 4DD



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More places to get at *FM*'s goodness

The futuremusic.co.uk site is our home online. This is the place you'll find important news about what's going on in *FM* and get your first sneak peek at the upcoming issue.

We publish a breakdown of what's coming up in the mag and a trailer to the next *In The Studio With* video the day before the new mag goes on sale. There you'll also find our latest print-plus-DVD disc subscription offers and even a list of mag stockists around the world. To make sure you're not missing out, be sure to check in at futuremusic.co.uk.

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host of star producers.

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THE
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Mylo Destroy Rock & Roll

Breastfed, 2004

How does one Scotsman turn charity shop vinyl and non-cynical cheese into chart gold? **Roy Spencer** drops the pressure...



Where do you start? With the then unknown Mylo making demos at his folk's in the Isle of Skye? Or maybe when he upped sticks to Glasgow, DJing records from second-hand stores to a handful of people? You could always fast forward to his sold-out shows at the Brixton Academy, when his Poptastic synth 'n' paste productions teetered about at the top of the charts.

Maybe the story of Mylo's debut album, *Destroy Rock & Roll*, starts with a sample?

The good doctor

"A lot of tracks started with a sample," says Mylo. "But you could call the whole process of making this album haphazard. Haphazard at best." After piecing together demos of the title track and then *Sunworshipper* at his Ma and Pa's in 2001, *Destroy Rock & Roll* took shape in his bedroom in a shared flat in the West End of Glasgow between the Summers of 2003-4.

Fuelled by a DIY Punk attitude, coffee and basic studio ignorance, Mylo managed to whittle together a

further 130 track ideas, which he winnowed down to a final crop.

Most days Mylo rummaged for sample fodder in local charity shops, then spent hours listening for anything usable. "Glasgow's brilliant for picking up cheap vinyl," he says. "There's a wee shop called Lost Chord on Park Road that's half vinyl, half porno mags. It's heaven."

In between bouts of sampling and left-handed reading, he'd made three or four demos he liked and a CD was punted around a few labels. After an initially hot trail at Wall of Sound turned cold he met with two guys he knew in Glasgow about putting a new label together. "That was Breastfed. We signed up together in late 2002 then I started working full time on the album," he says.

The sound of clipping

"I was very naïve at the time, but at least I knew it," says Mylo. "I never had any training in sound engineering, or a particularly good ear for the technical side of mixing. My flatmate would come in and just look in horror at all my channels clipping. I didn't care. I didn't mind the sound of clipping. The rest was just playing about. I had no skills and nothing going for me except that I was cocky."

It paid off. The record was a smash, and nearly two years of touring followed with a live band put together with good friends.

"It was difficult to translate an essentially homemade Electronic record into a live band setup. But we went from playing tiny tents to outdoor stages all over the world, and two sold out nights at the Brixton Academy. People seemed to like it."

Getting away with it

All through the album Mylo admits he was trying to see how much he could get away with pushing the cheese factor. "You can get away with a lot as long as it's done in good faith," he says. "People can always see through cynicism. Cynical cheese is the worst thing in the world."

Fast forward to 2011, and Mylo claims to have "gone quite Disco", and remixed Robyn, Bryan Ferry, Villa feat. The New Sins, Human League and Cut Copy. "Three of which I'm happy with." A new LP is finished but has been delayed "due to reasons I can't go into". Welcome back Mylo. That seems like a good way to start your next chapter.

Track by track with Mylo

Valley of the Dolls

"This is obviously a sample-based track, very simple. The momentum comes from some gentle automation on a low-pass filter on the sample channel. The drums came from a sample loop CD, I forget which, with added crunch from Reason's original distortion on foldback mode – not the Scream module.

"The synth you hear in the intro – and throughout – is an NN19 multi-sample running through a phaser. The bass is a patch I made in Subtractor. The pizzicato strings, and in fact all other synths, are Reason as well. I was just going for a simple, warm, repetitive, hypnotic, dare I say 'Balearic' sound with this track."

Sunworshipper

"This is one of the first tracks I made on the album. Again, simple and very sample-based. Again just gently automating an LPF on the sample. I supposed I'm a child of French filtered House – I'm still not tired of this effect in certain contexts.

"The drums were layered Reggae Dub loops that I programmed. There's not much detail apart from some delay automation in the breakdown. The speech sample I found, I don't know where, I suppose it's from an old radio interview with a hippy of some kind. I liked the serendipitous way it sat with the rest of the parts."

Muscle Cars

"This track came from experimenting with an pre-NI version of Absynth. I started with the synth part in the breakdown, which sounds like a gated synth but isn't. I didn't know what a gate was! I think it was a synth bass patch that I tweaked, made polyphonic, added a synced delay and played these syncopated chords with a kind of early House feel.

"One cool discovery I then made was that if you turned the polyphony back to '1' and kept playing the chords, the synth was selecting notes at random automatically from the chords. That's what you hear at the start of the track."

Drop the Pressure

"I layered a snappy bass from a Korg multi-sample with a sine wave to add some bottom. The synth parts were

LIKE IT? TRY THESE...


Röyksopp
Melody A.M.

"I was really impressed with this. It had an expansive feel with different sections. *Emotion 98.6* was my lame attempt at doing that."

ADD THESE TO YOUR PLAYLIST:

Röyksopp's Night Out; *Epile*


The Avalanches
Since I Left You

"When I started putting rough tracks together this was always on. I was really into their sampled cut 'n' paste ethos."

ADD THESE TO YOUR PLAYLIST:

Frontier Psychiatrist; *Flight Tonight*


Felix Da Housecat
Kittenz & Thee Glitz

"In *Destroy Rock & Roll* I use an unfiltered sawtooth wave played in octaves, with some delay on it. That was inspired by Felix."

ADD THESE TO YOUR PLAYLIST:

Control Freak; *Silver Screen Shower*

Scene


Prince
Dirty Mind

"I'd been listening a lot to Prince around that time so I think I was going for that kind of tight feel with the bass, drums and synths."

ADD THESE TO YOUR PLAYLIST:

Dirty Mind; *Head*


Williams
Love Crisis

"My mate Williams helped mix the record and came on tour with me as chief bandmate. He was my flatmate in 2002. I learned a lot from him."

ADD THESE TO YOUR PLAYLIST:

Bad Boy; *Jesus Jazz*

Mylo vs Miami Sound Machine

– Doctor Pressure

"*Doctor Pressure* was the idea of a pair of amazing bootleg guys, Phil and Dog. They put their version together and gave it to me on vinyl backstage at a gig I did in Brighton, as far as I remember, so I always thought they were from the South Coast, but I

think they're London-based. After some umming and ahing we did a deal with them where they got paid and credited, as of course did Gloria Estefan and the Miami Sound Machine, and we put it out.

"It went to number two in the singles chart,

which was pretty surreal. The version that was released was put together by me in Pro Tools, although obviously it didn't differ at all in concept from Phil and Dog's original.

"The released version was made out of the master stereo files of my original, and *Dr. Beat*. I feel a little guilty about this because Gloria Estefan's husband, Emilio [MSM producer] went to all the trouble of dubbing the original separate parts, but in the end we didn't need them.

"The original *Drop the Pressure* still works better as a club track because it's all about the drop, which takes up most of the song, and you lose impact with the bootleg."



just pure unfiltered saw waves from Reason's subtractor. I think I sent them through a little phaser and delay but that's all the processing they had.

"Propellerheads had just introduced their Vocoder module. I made the instrumental in the afternoon – this was on the Isle of

"I remember the first stab I had at this it included the wailing sax solo from the start of *Boy Meets Girl* – vaguely funny but basically appalling. The only bit of this track that required any detail was chopped up bits, which I just did by hand in Pro Tools. Again the synth parts are done in

The main synth line is just completely over the top.

"I liked the flute sample because it reminded me of the famous Fairlight Shakuhachi sample [Peter Gabriel's *Sledgehammer*, etc]. I cut the sample up to the same rhythm as the scratching in MARRS' *Pump Up the Volume*... I don't think it was deliberate."

Paris Four Hundred

"This track, along with *Otto's Journey* and *Rikki* were originally

intended for an EP of non-album tracks but ended up on the album because there wasn't anything better!

"The staccato keyboard line is a Reason Subtractor. I'm pretty sure it's a preset I tweaked. The sub is a kind of Detroit sound I suppose, like something you might hear on a Funk D'Void record.

"The flute was created with Reason's NNXT flute patch. It's a bit like *On Up* by Tiefschwarz, but I don't think I set out to steal it. The

I made the instrumental, went out to a party, got drunk, then came back and did the vocoder line

Skye – went out to a party, got drunk, then came back and did the vocoder line. I remember listening back the next day and thinking 'oh shit, what have I done?'"

In My Arms

"Back to sample-based... I was going for a bootleg feel with this one. I liked the idea of sampling irredeemably cheesy '80s classics, in this case *Boy Meets Girl's Waiting For A Star to Fall* and Kim Carne's *Bette Davis Eyes*.

Reason – I think you can hear a Malström preset in there!"

Guilty of Love

"More comic nonsense. The intro and outro are a George Duke sample, replayed. More jazzy and chromatic than anything I could do.

"The saw tooth chords on the eighth notes are a very '80s reference, like Wax's *Bridge To Your Heart*. It's in a completely major key, which is rare for Electronic music.

indecipherable vocal part I sliced up and reordered in ReCycle and Reason's REX player."

Destroy Rock & Roll

"Apart from *Sunwarshipper*, this is the first track I made that is on the record. It took about fifteen minutes to put together. As soon as I got the vocal sample, I knew what I wanted to do with it. It's one of those situations where my ignorance about music acted in my favour. If I'd known that another band had already used the same sample in the Eighties [Negativland's *Michael Jackson*] I wouldn't have bothered."

"The rest of the track is a bad jacking' House loop from some loop library. The bassline – from Absynth I think – was influenced by my favourite records at the time, *Control Freak* from Kittenz & *Thee Glitz* by Felix Da Housecat."

Rikki

"I remember being really blown away by *Deck the House* by Akufen. His whole debut album remains the most insane example of micro-sampling I've ever heard. This was a lame attempt at a nod in this direction, but obviously nothing as complex."

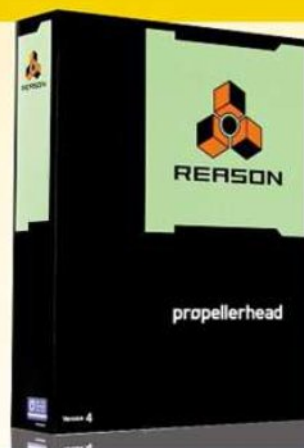
In The Studio With... Reason!

"Around the time of the album I had upgraded to a new Mac G4 with Pro Tools LE. I had a budget Samson amp and cheap Spirit Absolute passive monitors. I recorded samples into the computer from an old Technics 1210, and used an old Yamaha SY35 to input MIDI. I recorded a bit of electric guitar through a Zoom digital effects box. That was the extent of the studio."

"Software-wise, my big discovery in 2002 and 2003 was getting to know Propellerhead's Reason. Most of the parts on the album were done in Reason. Using it was a revelation. Almost all the drums were made from

loops sliced in ReCycle and programmed in Reason. Propellerhead had introduced ReWire by this point but I found it impossibly buggy – it's better now – so instead of syncing Reason to Pro Tools as a slave I just sync'd them manually by pressing spacebar, and put my arrangements together by exporting loops from Reason to load into Tools."

"Once in Pro Tools I did most of the processing with their Audiosuite plug-ins. I wish I still had the confidence to do that instead of keeping all my options open with a chain of plugs on each channel the way everyone does now."



Otto's Journey

"I remember trying to make something influenced by Jolly Music, who I loved, although listening back to Jolly Music now I don't really hear the resemblance. The main synth parts were created in Reason's Subtractor, just an unfiltered saw tooth, or two, detuned and put through a phaser. There are three layers of these. The second one was given added crunch through Reason's native distortion. The drums are ReCycled Disco loops. I still like the

came up with the – wonderfully camp, I thought – lyrics. The main guy behind Freeform Five is the amazing Anu Pillai. He's recently been doing some crazy releases under the name Kid Gloves and he also co-wrote some of the Ladyhawke tracks. The drum sounds are sampled and rearranged from a Disco-not-Disco record. The main vocals and farty bass come entirely from FF5, for which I'm very grateful."

Zenophile

"I suppose I was trying to make a kind of Metro Area type track here, but inevitably it ended up being a lot cheesier. The main drum kick and snare are

from some Disco record, the guitar was played – badly – by me and the synth parts come from Absynth. I think I reused the snare/clap sound in my remix of Sia's *Breathe Me*."

Need You Tonite

"This is back to the very sample-heavy side, and the very cheesy-Balearic side. Most of the parts are samples from one the most

under-rated early-eighties power ballads, *Stay With Me 'till Dawn* by Judie Tzuke. I added bass and drums, changed the tempo, and added various effects, filters, etc."

"It's a re-edit, in some respects. It's a nice effect when you raise the filter on a sample from an old record and start to hear the crackles."

Emotion 98.6

"More cheesy Balearic vibes to round off the record. Just like *Drop the Pressure* came from experimenting with a Vocoder for the first time, this one came from experimenting with the Reason NN19 sampler for the first time. The main part of the track is a single orchestral string sample pitched around the keyboard."

"Then another sample with the same phrase, with woodwinds in it. I played some other parts in from the NNXT orchestral string library. Fortunately they sit quite well with the sample and don't sound too stuck on, hopefully."

"Basically all the way through the album I was trying to see how much I could get away with..." **FM**

WANT TO KNOW MORE?

Mylo's highly-anticipated sophomore album will be out "soon". Keep your eyes on mylo.tv for all the latest news and DJ dates.

All the way through the album I was trying to see how much I could get away with

"Like the snippets in *Paris Four Hundred* this was created by slicing up and reordering little chunks of samples using Recycle and Reason's REX player. I found you could get a good staccato effect by just shortening the length of the MIDI notes in Reason's sequencer. The rest were in Reason too, apart from the guitar, which I played into Pro Tools, through my Zoom digital effects box."

snare/clap sound, it's kind of meaty sounding. The whole middle breakdown is high-passed at about 500Hz for 32 bars, just as an obvious way to build tension."

Musclecar (Reform Reprise)

"This track is a kind of Frankenstein's monster created in collaboration with Freeform Five. Their singer Tamara

NEED TO KNOW

Five essential facts about...

Mylo and Destroy Rock & Roll

1 "It was all about Reason. It was really amazing to find a single product that you could do so much with."

2 "I never performed live until the album was finished, or DJ'd other than in a bar in Glasgow."

3 "I recently bought a Moog Voyager off my friend, after he threatened to put it up on eBay."

4 "I won a Diesel U-Music competition in 2002, but missed my slot at Fabric because I got knocked out by a bouncer. I deserved it, though."

5 "I had Propellerhead's ReBirth and Absynth when the original developer Brian Clevinger was selling it direct."

Momma Said NOX You Out



Kick Ass with the New NOX DJ Mixers

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

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

Studiofile

The world's finest recording and production environments

ALL YOU NEED TO KNOW

A few essential bits of information about...

State of the Ark, London, UK



ADDRESS

144 Sheen Road
Richmond
Surrey
TW9 1UU

WHO RUNS IT?

Dan Britten

TELEPHONE

+44 (0)7979 651000

WEBSITE

stateofthearkstudios.com

Tucked away behind a row of houses in suburban Richmond is an Aladdin's cave of incredible vintage recording equipment. State Of The Ark Studios is so well hidden that like many other people we drove straight past it at first. Owned by songwriter and guitarist Terry Britten and his son Dan Britten, State Of the Ark is a hidden gem on the outskirts of London and has been the home to some classic recordings on some very prestigious kit.

Owner Terry Britten is somewhat of a legendary songwriter, penning hits for everyone from Cliff Richard to Michael Jackson and this homely studio is where most of that songwriting magic happened. "I was initially just looking for a space for my own work and songwriting," explains Terry. "Then, after I started producing Tina Turner in the big studios like Olympic and Mayfair, she did some rehearsals here and said it was much more homely and we should record here."

However, State Of The Ark becoming a commercial studio was a slow and natural process. "Word began to spread about the studio and after Tina worked here, others really enjoyed the personal touch and vibe. I worked a lot with Status Quo's engineer at the time and he recommended the studio to the band. They showed up with a giant Arctic Truck full of gear on the first day of recording and blocked the road outside!"

Atmosphere

Like most studios the atmosphere is something that can't be bought and the pleasant vibe of State Of The Ark is abundant throughout all the rooms. "We try to keep it looking new, because I hate those studios that look really tired. If our studio ever starts to look that way, I'll close it down," Terry confidently announces. "It sounds corny but I always say to people that the studio was built on songs, so it does have a really personal vibe. You create that vibe

EMI TG Sidecar

"I found these modules separately so I decided to make a little sidecar mixer to sit alongside the main desk. These units are the actual ones that were used by The Beatles on the Abbey Road sessions."





Pro Tools

"We have the HD 192 rig and it works great. It took some work to get the old console set up to work with Pro Tools, but now we're set."

Binson Echorec

"This looks like a tape delay but it's actually a little drum and wire that goes around. It's quite unique and sounds like nothing else."

Monitoring

"This central section can be used for mixing, but it has no EQ so we use the Oram Octa EQ [See page 22] for this as it sounds really nice with the desk."

INTRODUCING...

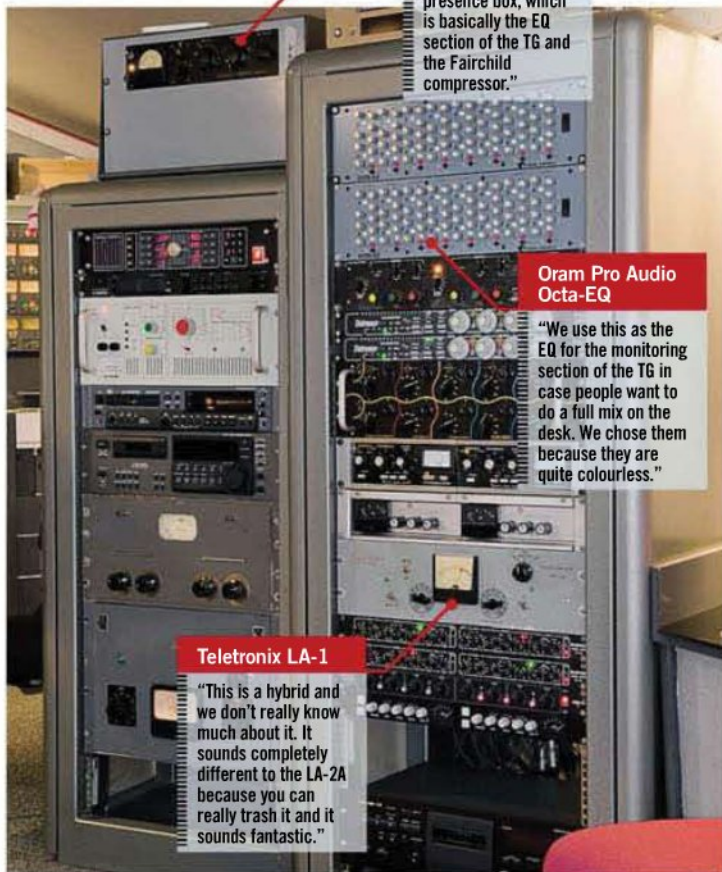


L-R
Terry Britten
Owner
Dan Britten
Studio Manager



Fairchild Compressor

"I bought it because every time I was recording at Abbey Road we used the presence box, which is basically the EQ section of the TG and the Fairchild compressor."



Oram Pro Audio Octa-EQ

"We use this as the EQ for the monitoring section of the TG in case people want to do a full mix on the desk. We chose them because they are quite colourless."

Teletronix LA-1

"This is a hybrid and we don't really know much about it. It sounds completely different to the LA-2A because you can really trash it and it sounds fantastic."



Forget Time Team – THIS is history

The EMI TG12345

"Getting this desk was a fluke really. I was up at Abbey Road when they were doing The Beatles *Anthology* album and they had hired in a TG to mix it on because nothing else sounded right. I saw this desk and thought 'wow', so I said to a mate of mine who buys gear that I'd buy one if he could ever track one down. A week later he called and asked if I was serious as he'd found one in a barn in France! We turned it on, it coughed and spluttered, but it was fine."

"We found out it was originally from EMI Pathé-Marconi studios when the Rolling Stones producer Chris Kimsey first came here and told us it was the same desk he made three Stones albums on. If you look closely at the front metal wrist-rest it actually has Keith, Mick and the rest of the Stones scratched in to it."



over 30 years of using a studio and making music in it. Every time we have a new producer work here, we always hear from them just how much they love the place."

Terry's son Dan Britten continues, "What people like is the fact that when you close the front door, the place is yours. You don't have to share the place with anyone else." But the eagle-eyed readers will have spotted another reason why people choose this studio – the incredible EMI TG desk that sits proudly in the control room and the other amazing vintage recording equipment that the Brittens have amassed over the years. "I think this is the only TG desk that is used for both recording and mixing now", explains Terry "We never intended this place to be a mixing environment, it was always a place for tracking, but now many famous bands use us to mix."

Great Britten

When it comes to the upkeep of this piece of recording history, the Britten

struggle to get a bad sound out of it. So many times we've had engineers just running drums through it flat and being amazing on how good they sound without touching anything. The mic amps on it are so good that even though we have all the other usual pres like Neve, Telefunken etc, people tend to go for the ones on the desk." In fact, the desk draws so much attention that the State Of The Ark was visited by an unexpected star in the middle of the night as Dan explained. "We had a knock on the door at midnight a few years ago and it was Mick Jagger! He'd heard that we had the desk that he'd worked on so he arrived unannounced and was looking all over the desk and under it for all the things the Stones had carved into the frame."

As you might have guessed, running a studio like this isn't cheap, but with rates penned at around £750 a day and a soon to be implemented last minute deal of £550 a day when available, the studio is still within most labels and

musicians budgets. "We'd love to be a more budget conscious studio", explains Dan, "but being in this beautiful area of London and maintaining all of the vintage gear just isn't cheap. That said, one

I think this is the only TG desk used for both recording and mixing now

boys have been relatively lucky in finding parts for it and keeping it in tip-top condition.

"There's kind of a little gang for TG owners, we all club together for getting bits custom made and sharing information," explains Terry, "It's been expensive putting in direct outs and insert points in onto this desk because the output level that the desk produces isn't really the level that Pro Tools wants to hear." Added Dan, before explaining, "We had to figure out a way to boost the level without colouring the sound in any way. It was a lively experience, but we got there."

So what does this rare recording beast sound like? Well, fantastic as you would imagine as Terry explains "It's got a really present and raw sound. It's not pretty and glossy but it sounds very real." Terry Adds, "It's the simplicity in the design that makes it sound so good – it's a real

thing that labels often forget is that with our studio there are no hire rates for things like guitar amps, drums, amplifiers and so on. In other studios you can end up with a gear hire bill that is more than the day rate of the studio. When you book State Of The Ark you get to choose your Musical weapons from our cupboards."

And stacked cupboards they are, with the basement area next to the live room positively overflowing with gorgeous vintage guitars, basses, amps and more piled up pedals than a crash at the Tour De France. "We have so many effects pedals that it's hard to keep track," explains Dan, "I'm sure we lose as many as we gain from bands mixing them up with their own gear." **FM**

YOUR STUDIO IN HERE?

Want to show us around your studio? Drop us a line at futuremusic@futurenet.co.uk, and we'll pop round for a Stoli Eliit.



RCA 76b Mono Valve Mixer

"This is basically a four channel mono-mixer and is often used on drums, mainly because it's such a massive beast and it's hard to move around. There are huge amounts of gain on it and it's really not that noisy considering."



ON
THE
RADAR

Dubfire

Dubfire continues to tear up dancefloors around the world with his Traktor-powered DJ sets. We caught up with him at BPM Festival in Mexico



Dubfire is a true Dance music veteran. As part of Deep Dish, Ali Shirazinia conquered dancefloors and radio waves across the world, remixing everyone from BT and Michael Jackson to The Rolling Stones and Justin Timberlake and claiming their fair share of Grammy nominations.

As a solo artist, his success has been no less remarkable, playing in some of the world's best clubs, remixing Plastikman, Axwell and Booka Shade, starting and releasing on his own label, SCI + TEC, and winning multiple awards including Beatport's Best Minimal and Best Techno artist.

On top of his success as an artist, Dubfire also pushes technology in his DJ sets, testing Native Instruments' X1 and S4 controllers long before they hit the market and incorporating Maschine and even TouchOSC into his shows. We grabbed him backstage at BPM Festival in Playa del Carmen, Mexico for a chat about all things technology.

FM: First thing's first, tell us about your live setup.

Dubfire: "I use Native Instruments' Traktor on a 17" MacBook Pro, using two X1s as controllers. I run Ableton Live and Maschine on a separate 13" MacBook and I use a TouchOSC template to control both. I also use a Roland Space Echo RE-201 pedal for some added tape delay effects.

"So in total, I've got six different channels going on an Allen & Heath XONE:92 mixer and yes, at times it does my head in!"

You're a big Traktor fan – when did you make the move and why?

"I don't recall the actual year but it was a long time ago. I had been using Serato up until that time but felt very limited by its lack of features and the poor sound quality of their audio interface. Not to mention that they had very limited artist relations with DJs like me who were more involved in the Electronic underground circles.

"They seemed to make Hip Hop and mash-up DJs more of a priority, which is fine but that didn't work for me. The staff at Native Instruments have been nothing short of amazing in making me feel involved in the continued evolution of their software and hardware."

You said you use TouchOSC – do you think the iPad has a big part of the future of DJing?

"Very much so. Especially in terms of how you can create fully customisable templates for TouchOSC as well as the general use of the iPad's multi-touch display – you are no longer limited by hardware design. And I'm sure by now everyone has seen the Token multi-touch display video demo online [visit smithsonmartin.com if you haven't] so I'm salivating at what could be in store for us just around the corner!"

You were one of the first DJs to use Native's new S4 – what is it you like about it?

"I've only really used the prototype and once live at Space in Ibiza where we filmed it in action for the teaser video. I do like it – it's an all-in-one unit that

will eliminate the need to carry all but your laptop, a USB cable and an RCA cable. It is absolutely ideal for some people.

"Whether it's right for me per se, remains to be seen but it is a fantastic new tool – especially used with the new Traktor update and control of the sample decks."

Tell us about your studio setup. What's been the biggest technological change since you started out?

"Mainly moving from straight MIDI to a strict DAW setup and the advances which have been made to sequencing and editing software. I've always said that it's fine to be a slave to technology but it's the ideas that matter the most.

"The genesis of creativity begins in the individual mind and that is the true measure of the artist. Technology merely allows us to express that in different ways."

Speaking of technology, any technological DJ disaster stories for us?

"Of course – way too many to mention! I've had bad USB cables that have died mid-set, cutting out all sound output, I've hit the wrong button on my controllers and killed the music, I've had my old black MacBook overheat and shut down about four or five times during a gig, I've had my tour manager accidentally pull my USB cable out of my MacBook while he was moving it – as I was playing in front of 10,000 people!

"More recently, I knocked a glass of sake onto my own mixer while playing with Richie Hawtin during our Click 2 Click show in Amsterdam in 2010 and basically killing the mixer for the remainder of the night! Not good."

According to Twitter, you seem to be touring a lot – and eating in great restaurants! When do you get a chance to make music?

"I don't! At least I didn't get much of a chance in 2010. But honestly, I worked tirelessly in the studio my entire career in pre-, mid- and post-Deep Dish and then beginning with my solo career, right up until March 2010 so I needed a break.

"Having said that, I've dived right back into the studio in early 2011."

Does your setup or equipment change when you play at festivals like BPM?

"The equipment and setup is pretty much always the same but song selection will vary, depending on who is playing before me and the mood that they have created in the room – sometimes the DJ has killed the vibe and I have to step in and do my best to create one again and other times they've been rocking the room and I have to figure out what the hell I'm going to play!

"Every situation is unique and challenging and that's what keeps me inspired." **FM**

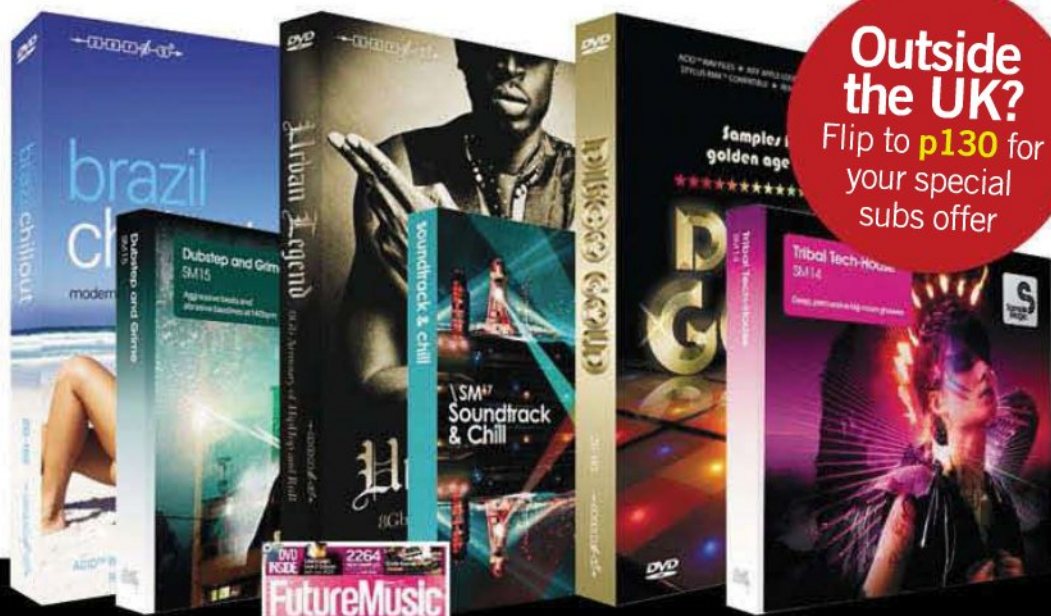
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For all the latest news on Dubfire and for more info on any upcoming shows and releases, visit his official MySpace page at myspace.com/djdubfire

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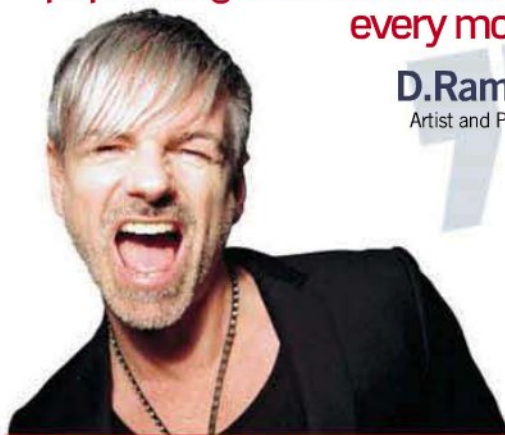


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FM always has excellent content. It even teaches a veteran like me new tips. I can't wait for mine to pop through the door each and every month

D. Ramirez
Artist and Producer



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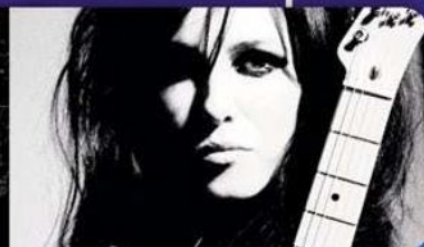
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Albums



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

Album Of The Month



Ali Love Love Harder

Back Yard



It's been quite a while since we heard the vocal stylings of Ali Love, with his predicted rise to Pop stardom hitting a few bumps in the road. *Love Harder* is a ten track delight is a kaleidoscope of synths and drum machines produced by ex-Cazal member and producer Martin Dubka. The first thing that will strike you is just how retro the album is.

This is not homage, or an album that simply hints at a bygone era, this album feels like it was actually produced in 1984. It's as if Ali Love has appeared from the misty backstage area and announced, 'Tonight Matthew, I'm going to be Alison Moyet', while instructing Dubka to do his best Vince Clarke impression. The synths click, fizz and distort warmly, while Ali opens his heart, delivering vocals, that actually have a refreshingly modern touch. The production here is second-to-none and there are multiple moments where it sounds like early Prince, with Linn-like kicks punching through each track.

You can genuinely get lost in the blipping arpeggios and modulated trills and when female vocalist Samantha Lim joins Love, it all begins to make sense. So much so, that we'd have liked to hear more of that ethereal female vocal, as Love's slightly whiney tone can become tiresome by the time you reach the end of the record. Overall though, the album is real songs, real synths, real emotions and anyone looking for a slice of genuine home-grown Synth Pop should lend it an ear.

Chris Barker

ADD THESE TO YOUR PLAYLIST:

Diminishing Returns, Love Harder, The Night, Smoke & Mirrors, Talk To Tokyo

8/10

Daedelus Bespoke Ninja Tune



A former attendee of the Southern California's Thornton School of Music, there is certainly something bespoke about the Daedelus sound – Electronic music crafted from sources that are anything but predictable.

This is verified by the artist's eccentric fascination for all things Victorian-era, including his peculiar exploitation of 19th century style vocal annotations, blended into his surreal, carnivalesque backgrounds. Most of the 12 tracks seem to be dual-layered, with woozy rhythms and

symphonic textures deliberately rubbing against each other as if two songs are being forced through the keyhole. Much of *Bespoke* works splendidly though, as a dreamlike patchwork of rhythms, vocals and tones melt to provide a satisfyingly melancholy montage of Electro Pop craftsmanship.

Even if it all sounds a bit of a mess at times, I find *Bespoke* a triumphant record. It's clear Daedelus is capable of delivering a style of Electronic music that's somewhat unique, and for that reason alone *Bespoke* is worth checking out.

Danny Turner

ADD THESE TO YOUR PLAYLIST:

Tailor-Made, What Can You Do?, Sew, Darn, Mend

8/10

John Foxx And The Maths Interplay Metamatic Records



Interplay sees Electro-Pop legend John Foxx in collaboration with Bengie, whose best known release *Twenty Systems* undertook a beguiling experiment in early analogue synthesis.

Obviously intrigued, Foxx teamed up with Edwards to produce *Interplay*, a debut album of edgy Electro-Pop songs structured from purely analogue sources. The opening *Shatterproof* certainly has that unmistakeably rich, earthy analogue lustre.

From here, *Interplay* switches between vague

Metamatic-era visitations and some rather slowed Synth Pop, where Foxx's vocal limitations occasionally grate. For me, the idealism behind

Interplay doesn't entirely pay off, mainly because if I wanted to hear a wholly analogue-induced Electronic record I'd return to all those 30-year old classics, which still stand up today. I guess it's difficult to re-invent the wheel – especially when you're one of the spokes – and therefore, for all its limitations, *Interplay* remains an enjoyable record if you don't expect too much. **Danny Turner**

ADD THESE TO YOUR PLAYLIST:

Shatterproof, Summerland, The Good Shadow

7/10

It's On Our iPods



Mason They Are Among Us

Animal Language

If you saw the *In The Studio* feature in *FM* featuring this Dutch duo, or read any of their superb producer tips over the last few years then you'll know these boys are serious when it comes to their kit. It kicks off with the riffy Disco single of *Runaway*, which loops up a friendly string line before track two's *You Are Not Alone* changes the pace with darker synths and a moody female vocal.

Collaborations are in full flow on the album though, with Kurtis Blow, Róisín Murphy, Aqualung, and Sam Sparro all making appearances. Róisín Murphy steals the show with their collaboration *Boadicea* really being one of the stand-out tracks of the album. The eclectic array of styles is fused together with a driving soft Electro House vibe, hinting at '80s style synths

and riffs. It's a wholly commercially offering and musical enough to be enjoyed outside of the clubs. As a collection of tracks, Mason have proved that they can serve up slick production and stir up a mixture of styles without making them all sound completely alien to each other.

I almost wish this was a double album or two completely separate ones – one full of commercially viable collaborations, and one full of the great Electronic instrumentals. It's a cracking debut but I think some tracks will benefit from the remix treatment. **Chris Barker**

ADD THESE TO YOUR PLAYLIST:

Runaway, As The World Turns, I Just Wanna Rock, Kippschwinger

8/10

Photek Avalanche

Photek Productions



In 1997 Photek took the Drum 'n' Bass world by storm with his debut album *Modus Operandi* – check *FM236* for the making of it – showing his mastery of programming drums. Fast forward to 2011 and Mr Parkes is back with a new slab of the future.

While *Avalanche* maybe only a four track EP it clearly gives an indication that Photek is back in the game and firing off all cylinders. The production levels, as to be expected, are very high, the title track pounds the speakers mercilessly offering up a heavy simple yet unforgiving groove.

The other three tracks on the EP offer a good palette of different sounds as did his last full album *Solaris*, showcasing his ability to easily switch it up. If this is a taste of what's to come from Photek then bring it on! **Will Seelig**

ADD THESE TO YOUR PLAYLIST:
Avalanche, Slowburn

8/10

Conjure One Exilarch

Netzwerk



Still trying to shake off ties to previous membership of languishing Industrial band Front Line Assembly and money spinning Worldbeat duo Delerium, Rhys Fulber delivers his third Conjure One album following a five-year break.

The Middle Eastern elements present historically throughout the Conjure One project are still apparent on *Exilarch*, but more muted, phased into the slow building, trippy arrangements to complement another raft of female guest vocalists. *Exilarch* is therefore a fairly uniform Downtempo Pop album that occasionally dips its toes leftfield for want of being too commercial.

The music is lush and ephemeral and Leah Randi's background vocals complement well, yet *Exilarch* is devoid of something – the subtle addition of electric guitar, darker spoken samples and piano widens the scope slightly, but the songwriting goes through the motions in places, particularly vocally and lyrically, the record is also a little one-paced.

Ultimately, *Exilarch* is not a patch on previous Delerium albums that Fulber has been involved in – instead it's merely something pleasant to plug into every now and then.

Danny Turner
ADD THESE TO YOUR PLAYLIST:
Like Ice, Nargis, Zephyr

6/10

Stimming Liquorice

Dynamic



In a bad place in his life when he was recording *Liquorice*, Martin Stimming could

often be found sleeping on the couch of his 16-metre-square studio. On the plus side, obliged to feed some raw emotions into his music has brought about a rather radical album of found sounds and eerily imaginative arrangements.

The reams of samples carry a stunning clarity, then Stimming adds electronic Free Jazz elements – from African percussion, to the awkward twang of guitar, juddering double-bass or placid synthesizer line.

When collated, the overall effect is nervous, stifling and introspective, yet somehow reaching out.

Frustratingly inaccessible to some no doubt, the skewed percussion and ghostly synths of *On a Grey Day*, and dulcet tones of *The Train*, both deliver authentic emotional connections – transporting lucid images, moods and atmospheres.

Stimming himself alludes to the title of *Liquorice* being a metaphor for something you either love or hate – and that definitely applies here, but the artist's willingness to experiment erupting from a strong emotional nucleus is sometimes fascinating and certainly worthy of admiration.

Danny Turner
ADD THESE TO YOUR PLAYLIST:
On a Grey Day, The Train, January

7/10

Nôze Dring

Get Physical Music



The duo of Pailhes Ezechiél and Nicolas Sfintescu became notorious for their

quirky and crazy take on Techno. Here they fused the jovial sound of gypsy rhythms and horns with deep lush Techno bass and off-the-wall vocals. I know it might all sound a little strange, but Nôze manage to craft something so intelligent here, without any pretentious attitude.

The production is fantastic, especially when you consider the rather arduous process of making an album like this in comparison to standard Electronic works – balancing the tight Techno aesthetic against loose, organic music, recorded with real instruments is no mean feat.

The space and simplicity that Nôze have implemented isn't as easy as they make out, and the fusion of Jazz, Balkan and many more musical flavours all roaming the edge of Dance music is very clever. The only track that didn't sit well with this musical experimentation was the Reggae-infused *In The Back of My Ship*, which sounds a little bit like a function band on a cruise ship. That said, the fact that this track is called *Willi Willi* and has lyrics about touching said 'Willi Willi', might mean it was never intended as a serious track. Only Nôze, um, know.

Towards the end of the album, the whole vibe becomes a touch more experimental and acoustic, with the hissing of gear and the sound of the room becoming much more apparent.

Overall though, there are some genuinely beautiful pieces of music here and Nôze's original touch should make this an album you go back to when you need reminding that not all Dance music needs to sound the same. **Chris Barker**

ADD THESE TO YOUR PLAYLIST:
Dring Dring, Exodus, When Tiger Smoked, Nubian Beauty

7/10

Win Win Win Win

Vice Records



Alex XXXChange is probably better known for his work in Spank Rock and on first listen

to his Win Win project, you'll figure that's probably for all the right reasons. But, as you begin to ignore the annoying interlude tracks and hipster audio vomit and get to the real meat of the synth psychedelia you'll begin to really enjoy what XXXChange has created. The more experimental aspects are fine, just a little clichéd and the more aggressive tracks are a bit try-hard, sounding like the soundtrack to a Shoreditch house party five years ago. Retro, Rave, dreamy and phychadelic is when the album is at its best, so follow the recommended downloads and you're in for a treat. But, unfortunately as an album goes this isn't a win, win situation. **Chris Barker**

ADD THESE TO YOUR PLAYLIST:
Releaserpm, Interleave, The Nature Of Transcendent Forces, Not too Late

6/10

Compilations

PICK OF THE MONTH Various Back and 4th

Hotflush Recordings



This double-CD showcases exactly why Hotflush is really pushing the

boundaries of modern music. With their own artists featured on this compilation such as Spealcure, Mount Kimbie, Joy Orbison and owner Scuba alongside some exclusive tracks from the cutting edge artists of bass music. If you thought you knew what Dubstep could be, check this compilation and think again. **Will Seelig**

Various DJ Kicks Wolf + Lamb vs Soul Clap

!K7



From groovy '90s influences to more off-the-wall Jazzy Deep House

numbers, this mix starts well, gets lost in the middle and then eventually satisfies.

It needs to be played at a decent volume so it doesn't end up as a forgettable compilation of background music though. Hit and miss. **Chris Barker**

Pearson Sound / Ramadanman FABRICLIVE 56

Fabric Records



The next instalment of the ever-popular FABRICLIVE takes you on a journey

through the tracks that Ramadanman has been feeling for 2010. This is a wide ranging mix of tracks that will undoubtedly confuse some yet delight many others due to the breadth of tracks eloquently mixed. **Will Seelig**

Claudia Brücken Combined

ZTT / Salvo



As a single package that allows you to get up to speed with one of the

'80s, '90s and '00s most arch Art Pop stars, *Combined* is a must buy. As lead singer with Propaganda, Act, OneTwo and as a solo star in her own right Brücken has spearheaded a wealth of classic productions without ever gaining the accolades she deserves. A fabulous body of work. **Daniel Griffiths**

Retro Respect



Fleetwood Mac Tango in the Night

Warner Bros

Tango In The Night, resurrected the Mac as an international phenomenon. Despite *Big Love*, *Everywhere*, *You and I*, *Family Man*, *Caroline* and even the title track initially being penned for a Lindsey Buckingham solo album, he left the band and never toured the record. Slathered in DX7, its spacious, crisp production is one of the best examples of digital technology influencing classic songwriting. **Declan McGlynn**



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ULTIMATE TIME-STRETCH MASTERCLASS

The ability to time-stretch is a staple studio process. As new technologies take this to new levels, **Jono Buchanan** examines time-stretching tricks and finds out which DAW is the true 'King Of The Stretchers'

The process of being able to stretch audio isn't new. As a concept, time-stretching was available in digital samplers long before DAWs became viable and, once computer-based recording became popular, the level of complexity within native time-stretchers became ever more impressive. So, why run a tutorial about time-stretching now, when it's such a well-known technique? Firstly, we're willing to bet that, while you might know how time-stretchers within your DAW function, their assorted algorithms and parameters might well remain a mystery.

A little knowledge here can make a big difference to the success of your results. It's also a relevant time to be looking at time-stretching as new techniques are available to allow you to achieve the effect without having to process a sound in the traditional, offline way. So during the

next few pages, we'll address all of the questions you ever wanted to ask about time-stretching using only the native algorithms within your DAW.

Test section

In order to put our DAWs native stretching algorithms through their paces, I've devised a set of tests to see how each responds to different program material. For starters, we're testing their ability to stretch vocals as this is such a common technique: getting vocals to play back at a different, remixed speed. The second test concerns beat loops and how

well these translate once processed across quite a wide speed range, again a popular technique for those building loops from diverse looped sources. Lastly, I'm really putting those algorithms through their paces by stretching a whole track.

The reason this represents such a challenge is that time-stretching algorithms look at harmonic frequency content and make calculations on what they find, broadly meaning that if an audio file contains lots of harmonic content, it's much harder to stretch accurately than one containing many less. As

full tracks contain lots of rich bass, mid-range and high frequency content, it's inevitable that such material will break any stretching algorithm out in a cold sweat.

Without further ado, let's run those tests:

Test audio: the contenders Vocals

For the vocal test, I've made two phrases, one of which will be stretched upwards in speed from 107bpm to 128bpm and the other of which will be stretched downwards from 128bpm to 107bpm. Both audio files are formed of a couple of vocal phrases from the Apple Loop library that I've arranged to form a longer part. These phrases are going to be used in the other DAW tests too, so I'm choosing deliberately diverse source material.

The 128bpm phrase is dry, while the slower one has reverb and delay mixed in with the vocal, which is a common issue for remixers and producers working on source acappella files. Effects such as a delay and reverb add harmonic content and 'smudge' sounds, so one clean file and one with effects should challenge our DAWs nicely. I'm also importing phrases at their original speed and in their original keys. I've deliberately chosen files, which haven't been stretched already to ensure cleaner results.

Beat loops

For the Beat Loop test, I'm using two bounced loops from Stylus RMX. I've bounced a House loop at 128bpm and a Hip-Hop one at 108bpm, ready to speed the slower one up to 128bpm and slow the quicker one down to 108.

Full track

For the full track, I've created a MIDI-only backing track using bass from Spectrasonics' Trilian plug-in, drums from Stylus RMX, an NI FM8 pad, a sequence lead line from LinPlug's MorphoX synth and a 16th note sequence using Logic's ES2. I've bounced this down at 128bpm and 108bpm, so it's an easy job to compare the stretched versions, with their pristine originals. All audio files were bounced to 24-bit WAVs before stretching was applied and all stretched clips have been exported using the same settings.

Why Are Time and Pitch So Inseparable?

The A just above middle C has a frequency of 440Hz and is therefore called A440. The A an octave below this has a frequency of 220Hz. From this we can deduce that the same note an octave higher

will double its frequency while the note an octave lower again will halve it. So, the 'speed' of that waveform has halved as we drop an octave. When a sound is digitally recorded, it is captured via sample

frequency – 44.1kHz – it stands to reason that when you play an octave lower, the frequency will halve to 22.05kHz. This means we're hearing what we've recorded at half its pitch AND half of its speed.



Three Famous Tracks Starring Famous Time-stretching

Air, Remember



The time-stretched element we like in this track is the snare. It's less a percussive hit, more a long blast of granulated sound which is stretched to produce a sustain.

Fatboy Slim, Rockafeller Skank



Everyone knows this party favourite whose extreme time-stretch section – involving a dramatic slow-down, without pitch changing before a huge pitch ramp up – ushers in the final section of the track. A classic moment of time-stretch magic.

The Prodigy, Smack My Bitch Up



Time-stretching is used on a number of elements here but there's one classic drop where Kool Keith's sample is stretched to draw extra attention to the song's title. You can hear the crunchiness in the vocal, which adds edge.



The Science Bit

How Time-Stretching Works

As we know from the box on the first page, pitch and time are linked. If you want to change both together, you'll use the science of resampling, whereby an audio clip is recaptured at a new sampling rate, which is a process known by anyone who has ever had to produce, for example, a 48kHz version of their track for use in a video. Play that 48kHz track back in a DAW set to 44.1kHz and it'll sound higher and faster while triggering a sample an octave lower effectively resamples your audio clip at half frequency, producing a re-sampled result in real-time.

Time-stretching is different, as it needs to separate time from pitch, so different mathematical algorithms are applied to affect time while keeping pitch the same. One popular method is the use of Phase Vocoder, which effectively slices each sample into a block of a certain length and then uses a process of multiplication to make that block longer or shorter. This process works well on sustained sounds but is a little less good for percussive

material as the results can often smear transients, reducing their desired, percussive edge.

One alternative to this involves spectral modelling of a signal. This breaks a sound into virtual slices as before and spaces them out in order to produce a slow down in speed.

“If you're unhappy with your DAW, a third-party plug can be a smart move”

Once the waveform is spaced out, the spectral modelling processes 'falsely' connects the waveform peaks to one another to smooth out the effect of having a period of silence between each waveform, so that effectively a waveform is re-drawn with these waveforms connected back together.

A third approach uses crossfading to connect peaks so that rather than again creating a situation where gaps might appear in a sound which is being elongated, the virtual blocks I mentioned before have their gaps filled via a volume crossfading process. As you might expect, some approaches work better than others on different types of material.

The reason why DAWs offer different algorithms and parameters for time-stretching is to get around this very problem – if a waveform is a complex combination of lots of sounds playing at once (for example, a whole track) one algorithm might work well, while if the sound you're stretching is a single instrument with aggressive transients, such as a beat loop, other settings might do a better job. Often, developers of DAWs won't build time-stretching algorithms themselves but instead license them in from companies who specialise in building time-stretching code, which

produces more natural results.

Serato's Pitch and Time algorithm is one example, as is the Speed algorithm built by SoundToys. The time-stretching approach used

by FXpansion's new Geist drum machine was coded using the acclaimed Dirac system while iZotope's Radius plug-in is many people's favourite and let's not forget Melodyne's capabilities in this area. If you're unhappy with your DAW's native abilities, a third-party purchase can be a smart move.

Time-stretching

DOs & DON'Ts

DO: Audition the various time-stretch options your DAW provides

DON'T: Assume that just because an algorithm suggests success on one type of material it will necessarily be best

DO: Explore the alternatives to time-stretching using Elastic Audio, Flex Time, or whatever else your DAW calls the same technology

DON'T: Expect results to be completely transparent. This is tough processing for any computer

DO: Use effect-free, clean audio wherever possible – it gives the computer less data to have to think about and process

DON'T: Assume that speeding up data will achieve better results than slowing it down. Time-stretchers don't work simply by knocking out unneeded samples when speeding up



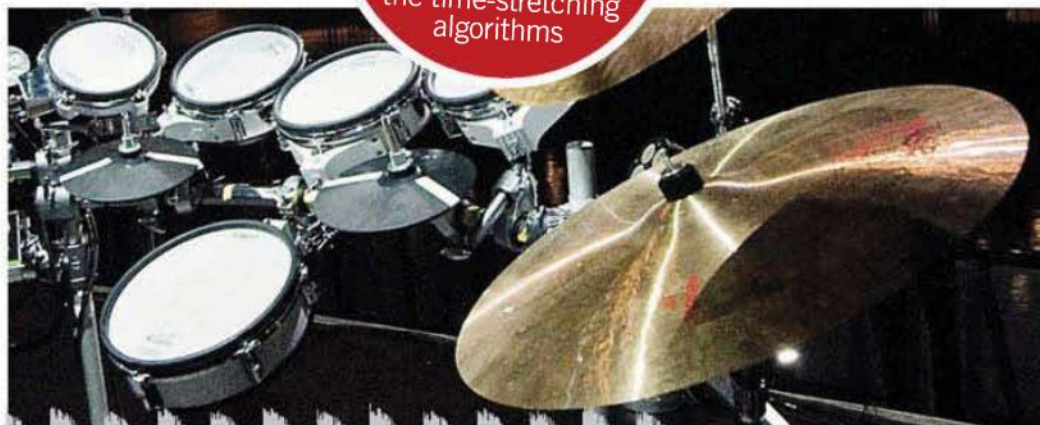
TIME-STRETCHING IN...

Live

We flex Live's muscles

**AUDIO ON
THE DVD**

You can find audio files demonstrating each of the time-stretching algorithms



USING LIVE TO PROCESS THE...

Beats

108 to 128bpm – Transients

Live has a reputation for being a great stretcher of beats so I'm starting with the 108bpm Hip Hop loop. I'm selecting Live's Beats algorithm and selecting Transients as the Granulation Resolution. This produces a great, smooth stretch.

108 to 128bpm – 1/16

The shortest slice in the loop is a 16th note, so here's the same loop

with 1/16 selected as the resolution this time. Once again, the result is very clean.

128 to 108bpm – Transients

The next test is for Live to slow down a beat loop, so I'm importing the 128bpm House Loop and again selecting Transients as my preferred Granulation Resolution. For smoothest results, it's well worth correcting Live's 'guess' at the segment BPM of your imported

USING LIVE TO PROCESS THE...

Whole Track

108 to 128bpm – Beats

Time to process a whole track now, starting with the 108 to 128bpm example. I'm selecting Beats in Transient detection mode first and the result is good, with emphasis on tempo detection.

There is definitely some aliasing but this is immediately better than Pro Tools, in particular.

108 to 128bpm – Complex Pro

Here's the same track, this time employing the Complex Pro algorithm and again stretching from a groovy 108bpm to a more dancefloor 128. The result here is better still, preserving the track's character nicely.

128 to 108 – Complex Pro

Next, it's time to try the same algorithm as applied to the 128bpm Whole Track being slowed to 108bpm. The result is good again, though the bass end suffers slightly – those raspy tones have really pushed the time-stretch algorithms.

128 to 108 – Tones

Lastly, I'm trying a less obvious algorithm, Tones, to see what it does to the audio. As always it's worth experimenting. The result is understandably less 'transparent', though much can be done to clean up a really glitchy result by auditioning different 'Grain Sizes'. The huge advantage is experiments can be carried out in real-time.

USING LIVE TO PROCESS THE...

Vocals

107 to 128bpm – Tones

I'm bringing the 107bpm vocal phrase into Live first and clicking on the Warp button in the Sample Clip dialogue box. I'm selecting the Tones with a small Grain size. Increasing the playback to 128, the result is good, though aliasing is apparent.

107 to 128bpm – Complex Pro

Next, I'm trying the same stretch but this time using Complex Pro. This works well too, preserving the tonal character of the original nicely.

128 to 107bpm – Complex

Importing the 128bpm vocal part, I'm selecting the Complex algorithm and adjusting the host tempo down to 107 to perform the stretch. The result is fairly good, though there is some aliasing.

128 to 107bpm – Complex Pro

The same test again with Complex Pro used as the timestretch algorithm. The final result is noticeably cleaner and freer of unwanted artefacts.



AUDIO ON THE DVD

You can find audio files demonstrating each of the time-stretching algorithms

TIME-STRETCHING IN...

Pro Tools

Avid's industry leader tackles our tests

USING PRO TOOLS TO PROCESS THE...

Beats

108 to 128bpm Loop – Rhythm

I'm speeding this loop from 108 to 128bpm. Prioritising Rhythm with the Accuracy slider achieves a great result, though there's a slight flabbiness to the kick.

108 to 128bpm Loop – Sound

As you'd expect, prioritising Sound doesn't work as well, as there's a loosened to the rhythmic shape produced. Rhythmic prioritisation is definitely the way to go here.

128 to 108bpm Loop – Rhythm

In this first clip, I'm pushing the Accuracy slider over to 'Rhythm' and the result is nicely tight, though Pro Tools does struggle slightly with the thin snare.

128 to 108bpm Loop – Sound

Again, the 'Sound' alternative is less successful with further glitching. In this instance, Pro Tools has proved that its Rhythmic option definitely works best on drum loops.

USING PRO TOOLS TO PROCESS THE...

Vocals

107 to 128bpm Vocal Phrase Sound

I'm starting again with the 107bpm vocal, speeding it up to 128bpm. Pro Tools' AudioSuite menu provides access, via the Other item, to the Time Compression/Expansion tool, which loads an editor with assorted options. The results are clean and impressive.

107 to 128bpm Vocal Phrase Rhythm

This time round I'm prioritising Rhythm. As you'd expect, this isn't quite as accurate and you can hear some aliasing through the longer notes, as experienced during the Logic tests. However, even this is more impressive than Logic's Complex algorithm.

107 to 128bpm Vocal Phrase Sound

Time to treat the faster vocal now. We use the same test again, so in this example, we're slowing the 128bpm vocal phrase down to 107bpm, prioritising Sound. The results are as impressive as the 'sped up' files, producing a smooth result with little aliasing.

107 to 128bpm Vocal Phrase Rhythm

The same file again, processed with priority over Rhythm. The same pattern emerges once more – the result is not quite as impressive as the Sound-prioritised file. Like Logic, however, Pro Tools is clearly as comfortable slowing audio down as it is speeding it up.

USING PRO TOOLS TO PROCESS THE...

Whole Track

108 to 128bpm – Sound

Next, it's time to process the Whole Track audio. It's important to move the Minimum Pitch down to the minimum frequency of 40Hz for these files, as there's plenty of detail in the bottom end of the track.

Despite this, Pro Tools struggles to preserve detail at the bass end and there is

some obvious glitching and rhythmical vagueness when prioritising Sound.

108 to 128bpm – Rhythm

Selecting the Rhythmic option with the Accuracy slider tightens up some of the transient details but the Time Compressor/Expander still struggles to cope with detail at the bottom of the mix. Having comfortably out-performed Logic's assorted

algorithms until now, Pro Tools is beaten in the whole track category.

128 to 108bpm – Sound

Does the Pro Tools' algorithm in this category improve when it's slowing audio down? Here, I'm prioritising Sound again and the results are poor – there are serious problems in the bass end yet again, including a couple of spots where the pitch changes completely.

128 to 108bpm – Rhythm

Again, Rhythmic prioritisation helps preserve transients but the bottom end of the track suffers once more – the algorithm just can't cope with the bass blasts, in particular. Overall, Pro Tools has proven quite poor at stretching full tracks, which is rather surprising considering its performance on other materials. Look elsewhere for your mashups...



TIME-STRETCHING WITH...

Stonebridge

Time-stretching an R'n'B vocal with the Swedish legend

"The most radical time-stretch I've done is my remix of Shaggy *Mr Boombastic*. I think it was 87bpm but I took it to 126bpm. What I did is stretch the whole piece and then have the unprocessed vocal on the track below. I then used the phrase endings of the original as the vibrato is the thing that messes it up most of the time.

"These days I always test stretch the original version before committing to a remix just to see how the vocal sounds. I've used Serato Pitch 'n Time for time-stretching for at least ten years and I haven't heard anything better. The cool thing is

that ever since Logic 8 you can use the LE version as an algorithm in Logic's Time and Pitch Machine.

"The thing with Pitch 'n Time is that it doesn't mess with the timing at all. Logic's algorithms either garble the sound or it moves the timing around which isn't very helpful when stretching beats or percussion loops.

"When I stretch something I do the whole thing in one go, then check back and if there is a problem area, I may use the original tempo and cut it up to fit. Rhodes and live bass can be really difficult so it's better to cut it up and just re-sync it manually."



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TIME-STRETCHING IN...

Logic

We put Flex Time to the test



AUDIO ON THE DVD

You can find audio files demonstrating each of the time-stretching algorithms

USING LOGIC TO PROCESS THE...

Whole Track

108 to 128 – Any Material

The first 108bpm 'Whole Track' file is stretched up to 128bpm using the 'Any Material' algorithm. The result is a bit of a disaster! The audio breaks up, transients are lost and the whole process struggles to deal with the track.

108 to 128bpm – Complex

The next algorithm proves much more successful. This time, we're

using Complex again and it does a much better job on the whole track than 'Any Material'. The processed file is noticeably duller than the source file but otherwise, the process has been fairly successful.

128 to 108bpm – Universal

In the following two clips, we're taking the same track, this time bounced at 128bpm and slowing it down to 108bpm. Following the disaster of the 'Any Material'

algorithm, we're using the 'Universal' one this time and the result is good. Again, the result is duller than the original but there's not too much aliasing and the result is fairly musical.

128 to 108bpm – Complex

Another success follows with the 'Complex' algorithm, which does a broadly comparable job. Both of these algorithms have performed well on full track content.

USING LOGIC TO PROCESS THE...

Vocals

107 Vocal Stretch to 128bpm – Complex

I'm stretching the 107bpm vocal to 128bpm using 'Complex', which should pay particular emphasis to the gaps in the phrase where the effects are apparent. The result is fairly good, except that you can hear some aliasing on the long note in each phrase.

107bpm Stretch to 128bpm – Monophonic

Next, I'm processing the same file from 107 to 128bpm again, this time using the Monophonic algorithm. This again copes well with the effects but breaks up nastily at the start of each note, producing a percussive glitch, which would be hard to mask in a production.

128bpm Vocal to 107bpm – Complex

The third vocal test involves slowing the 128bpm Vocal phrase down to 107. I'm using the Complex algorithm again as it worked well on the previous clip. Again, it does well, though the resonant 'oooo' of the word 'you' breaks up and becomes more resonant still.

128bpm Vocal to 107bpm – Universal

Lastly, I'm turning to the Universal algorithm, which is designed to have a decent crack at any material within Logic, rather like a skeleton key for any audio lock you want to pick. It does well, possibly adding yet more resonance but otherwise performing comparably with 'Complex'.

USING LOGIC TO PROCESS THE...

Beats

108 to 128bpm Loop – Rhythmic

Logic does a good job of translating the beat fairly cleanly, though it breaks a little through the tom fill towards the end.

108 to 128bpm Loop – Percussive

This does something really interesting as it shortens each slice noticeably as it stretches so that the audio becomes chopped, almost producing a gated effect. In this way, the audio isn't only stretched but changes in character too.

128 to 108bpm Loop – Rhythmic

This does a good job of keeping the stretched loop 'in time' but the clap/snare breaks up nastily. Weirdly, there's one exception – a much cleaner hit that arrives just after the halfway mark.

128 to 108bpm Loop – Percussive

As with the files that were being sped up, this does a much better job with the audio itself, preserving each transient more faithfully than the Rhythmic algorithm.



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TIME-STRETCHING IN...

Cubase

The magic of élastique audio takes on our loops



Beats

108bpm to 128bpm – élastique Pro Time

This example uses the élastique Pro Time algorithm and delivers a strong result, with little in the way of metallic overtones that can occur with processes of this order.

108bpm to 128bpm – élastique Pro Tape

This works in the same way as speeding-up a tape machine, and shortens the loop and raises the pitch. On drum and percussive material this can work well as many a vintage sampler owner will tell you.

128bpm to 108bpm – Standard Drums

The various Standard algorithms in Cubase are those used for real-time processing prior to Cubase 6 and it is clearly struggling here, with some unwanted phase and distortion.

128bpm to 108bpm – élastique Pro Time

The last beat example uses the trusty élastique Pro Time algorithm and is a definite improvement on the previous example, although there is inevitably something a little looser with this kind of tempo reduction.

USING CUBASE TO PROCESS THE...

Whole Track

108bpm to 128bpm – élastique Pro Time

The final section of our audio tests looks at how élastique deals with time-stretching a complete track i.e. one that features a range of sonic elements. The first example uses élastique Pro Time to do the work to go from 108bpm to 128bpm, and seems to treat the material with respect, giving a fairly pleasant-sounding result.

108bpm to 128bpm – élastique Pro Pitch

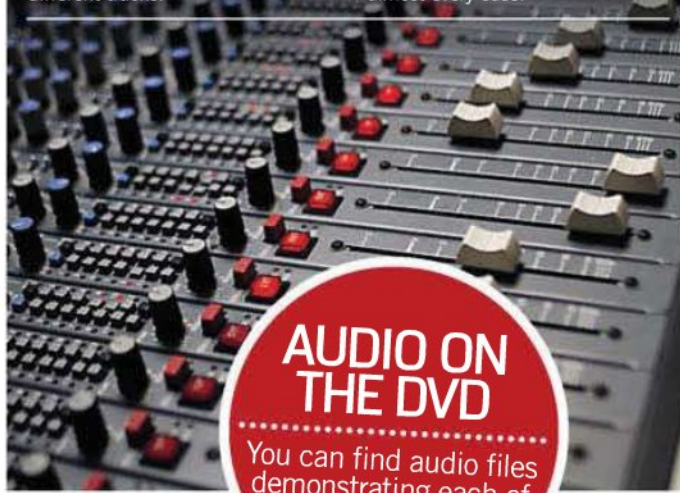
Now, we switch back to élastique Pro Pitch again processing a full track. We find that the results are also really good, but with some small differences in high-end definition, albeit of a fairly subtle nature. The differences will perhaps be more noticeable examined on large number of different tracks.

128bpm to 108bpm – élastique Pro Time

In the final two examples, we take a version of the first track, played and bounced at the faster tempo of 128bpm, and explore two alternative algorithms to shrink to 108bpm. The first uses élastique Pro Time, which does a good job, though it does impart some indecisiveness in the timing of the various elements.

128bpm to 108bpm – Standard Mix

This version uses the Standard Mix algorithm, and it is immediate from the start that it isn't up to the job, with distortion and glitching present in many places throughout the clip. Quick and dirty it may be, but for permanent time-stretching of audio this should be passed over for the élastique algorithms in almost every case.



AUDIO ON THE DVD

You can find audio files demonstrating each of the time-stretching algorithms

USING CUBASE TO PROCESS THE...

Vocals

107bpm to 128bpm – élastique Pro Pitch

First up, let's use the new Cubase 6 élastique Pro Time algorithm to shift this 107bpm vocal phrase up to 128bpm. This gives a very good rendering of the original, with minimal unwanted sonic artefacts.

107bpm to 128bpm – MPEX Solo Musical

Next, the same file is shifted (from 107 to 128bpm again), but this time using the MPEX Solo Musical algorithm, which up until the last update, was the recommended processor for monophonic material. Although it's still pretty good, you can hear some quiet mid-low frequency grunge hidden beneath the vocal.

128bpm to 107bpm – élastique Pro Pitch

Now we take a different vocal phrase at 128bpm and slow it down to 107bpm. As before, the élastique Pro Pitch algorithm is used first. The results are again very good, although there is perhaps slight dulling in the high end of the frequency spectrum. Within a mix though, it's something that could be easily hidden.

128bpm to 107bpm – élastique Pro Time

Finally, the phrase is processed by the élastique Pro Time algorithm, where timing accuracy is favoured over pitch accuracy. However, the results are still very good, and seem to reinforce the big thumbs-up being given to the new Cubase 6 algorithms. Each setting produces something very usable.

TIME-STRETCHING WITH...

Freemasons

James Wiltshire on why he loves to stretch in Record

"The first revelation we had when we started using Record was the real-time time-stretching. We do a lot of remix work so we've had to invest in lots of time-stretching software. We've gone through all of the major options but then Record came along and blew most things out of the picture.

"We've found that the time-stretching in Record is the most accurate for time-stretching vocals. Not for huge stretches – if you're talking about a 25% shift then anything is going to complain at that level – but for the kind of work we do where we're taking something from 118 up to 126bpm I've

never heard anything that keeps the transients so perfectly in time.

"And the brilliant thing is that you can just lump it all in, work out your new tempo and then export it. And because it's real-time you're not sat there waiting for the processor to work. You can work out how you're going to attack a mix – speed it up, slow it down – as you're going through that initial process and trying to decide on the feel and tempo.

"We used it on our remix of Whitney Houston's *Million Dollar Bill*. Ableton Live will do the same thing, but it just doesn't sound like Record, especially on vocals."



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TIME-STRETCHING IN...

Record

Propellerheads' DAW tackles time

USING RECORD TO PROCESS THE...

Whole Track

Record doesn't feature offline time-stretching, instead converts audio to tempo simply by changing speed in the Transport bar. Its analysis tools then snaps audio to the new tempo. It's much more simple, so the tests are shorter!

108 to 128bpm

Speeding the 108bpm Whole Track file up to 128bpm produces an interesting result. Record copes better than most of the other

workstations with the bottom end of the mix but produces more artefacts in the mid and upper ranges. This is still a very good and usable result in general, however.

128 to 108bpm

Another good result is achieved when slowing the 128bpm file down to 108bpm. Again, the bottom end is preserved particularly well, though Record does struggle slightly with the detail in the quicker snare fills.

AUDIO ON THE DVD

You can find audio files demonstrating each of the time-stretching algorithms

USING RECORD TO PROCESS THE...

Beats

108 to 128bpm Loop

The 108bpm to 128bpm Hip Hop Loop produces a fairly successful result, though it's worth noting that it pays dividends to give Record time to calculate a new playback speed.

The first time I played the audio through after adjusting tempo, it glitched badly. The second time, it was much

smoother, though there is still a little fuzziness at the bottom end.

128 to 108bpm Loop

The House Loop converted down from 128bpm to 108bpm also suffers slightly at the bottom end but this is impressive otherwise, with many less artefacts and fracturing of the sound we heard in other DAWs.



USING RECORD TO PROCESS THE...

Vocals

107 to 128bpm

I've imported the 107bpm file onto a new audio track and turned the tempo up to 128. The result is OK, though there is some obvious aliasing in places.

128 to 107bpm

Next, I'm importing the 128bpm phrase and turning the tempo down to 107bpm. This produces a fairly clean result and would certainly be usable in most production work. Record continues to give all the major DAWs a run for their money, so don't dismiss it.

AND THE WINNER IS?

Which DAW is Best for Processing...

So which DAW proved the best for each of our categories? The result is a varied one, proving that there is no one algorithm that suits all material. Have a listen to the processing on the DVD to find out which one suits your music and to see if you agree with us – if not be sure to let us know via Twitter @futuremusicmag.

Beats

1 Live

THE VERDICT

Live makes light work of stretching while maintaining transients

2 Record

3 Cubase

4 Pro Tools

5 Logic

Vocals

1 Pro Tools

THE VERDICT

Pro Tools provides clean and transparent vocal stretching.

2 Cubase

3 Record

4 Live

5 Logic

Whole Track

1 Cubase

THE VERDICT

élastique has gone a long way in improving Cubase's stretching

2 Record

3 Logic

4 Live

5 Pro Tools

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Back to the Future

IN THE STUDIO WITH...

An innovative DJ, incredible producer, gifted musician and a pretty good dentist. **Chris Barker** heads to Düsseldorf to learn the studio secrets of a German producer on his way to the top



He rose to fame in 2006, when his rework of the classic *Love Sensation* with Kurd Maverick became a club smash. Since then, he's remixed huge names, played enormous, sell-out worldwide DJ sets and his new single *Live Your*

Life alongside industry stalwart Erick Morillo and House diva Shawnee Taylor looks also set to become an epic club anthem.

The German-born producer isn't your average DJ turned producer though – he's a classically-trained musician, playing piano, jazz guitar, drums and has been known to lay down vocals. With a studio based in the attic of his Düsseldorf apartment, Thoneick produces mainly in-the-box using a selection of virtual instruments with Cubase at the heart of the setup. We were kindly invited over to find out more about his production methods and spend the day in Eddie's studio.

Picking us up in a suitably pimped-out white Range Rover, Thoneick is slightly stressed as prior to our arrival, he was just confirmed as the Mixmag cover CD artist. Though he is in the midst of trying to get a final tracklist together and source exclusive tracks from the rest of the DJ community, as well as preparing for our *In The Studio* session, Thoneick is well used to the busy scheduling. It was with a

raised eyebrow *FM* learned that Eddie Thoneick is still a practicing dentist and hasn't yet committed seven days a week to his role in music, despite his success and continued work alongside Dance music mogul Erick Morillo.

Could Eddie Thoneick really be in Germany taking out your wisdom teeth the Monday morning after a sell-out DJ set in front of thousands of people? Alongside discovering his studio secrets and production techniques it was time to get to the root of it all...

FM: You're quite the piano player – are we right in thinking this was one of the reasons you didn't end up a full-time dentist?

Eddie Thoneick: "Well, I wasn't thinking about being a dentist when I was four [laughs]. I had piano lessons from the age of four to the age of 16, but I quit because I got a new teacher who was from the Church and made me play all these boring Folk music songs. The most important thing that got me into production was the DJing. When I was 14 and 15 House music had just started to grow in Germany, but was still underground.

"I went to a club and saw the DJ playing and everyone dancing to the music and I just knew that I wanted to have a go at that. So I managed to get hold of some turntables from a friend of mine and practised. I started to enter DJ contests and

won a few and began to play often in the local area. After a while I got an Atari ST, MIDI keyboard and an Akai sampler."

Was it easier to make your first tracks because of your musical knowledge?

"Yeah, because I had the musical background I knew about harmony and arrangement, but it took about six years before I really started to focus on actual ideas. At first I had so many ideas and just tried to put them all into the same track, which obviously never works."

Were you in bands?

"Yeah, always as a piano player or singer. But, it wasn't the sort of music I wanted to make – it was more like covers of Metallica or Guns & Roses."

When did the production ideas turn in to something you thought was working?

"Around 2002 I started to work with Egoïste Records in Switzerland and DJ Antoine and he wanted some remixes. So I was doing about five or six remixes a year for him. It was during the time of the funky bassline stuff like Kid Crème and Junior Jack style. Then I had the idea of doing a version of *Love Sensation* because I was a collector of all this stuff."

What was that like, when everything fell in to place?

"I was hoping for it to all work out like this, but when I look at where I am now, I could have never imagined getting this far."

Were you still studying?

"Yes, in fact when *Love Sensation* came out, I was still doing my dentistry exams."

What kept you pushing with the studies, because most people would have considered the amount of success you'd had with *Love Sensation* to be the start of something big. Were you still worried it wasn't going to work out?



aesthetics..." [At this point, Eddie takes a look at my teeth and recommends some procedures, before getting back on topic...]

Anyway... Have you always used Cubase and did you learn to mix with it?

"I learned on Cubase with the Atari, but I switched to PC after about a year. At this time I wasn't educated in mixing, I guess I just referred to other tracks and tried to make something that sounded like that, but I really had no idea how they did it."

What about for vocals?

"Balancing up things like the vocal is getting easier because the vocals that are delivered for remixes are definitely produced better."

What would your advice be for people who are learning to mix?

"Everybody goes through that phase where you don't really know what you are doing with mixing. I had the same and it was really a fluke that I got it right for *Love Sensation*. One tip would be just to keep things simple and listen as you work so you really train your ears from the start of the track."

What about arrangements?

"Again keep things simple and use the formula."

Do you think that arrangement formula will ever change for the big House tracks?

"Well, it's been like that for a long time and it works. Even the Pop songs have a similar arrangement and the radio mixes of Dance tracks also follow this Pop arrangement. It's all about creating a climax for the people in the club. But those moments can be dangerous, as the breakdown can turn from the part when everyone's hands are in the air to the part when people just stop dancing."

Who did you take your inspiration from with the big breakdown arrangements?

"I'm a climax guy so I think Axwell is probably up there as one of the best producers ever. He's the guy

I still practise dentistry two days a week. In fact, when *Love Sensation* came out, I was still doing my dentistry exams

"Well I was objective because I've seen a few DJs rise pretty fast and seem like they were going to have a long career, before fading away pretty fast. Then they end up in a regular job because they didn't have any education. So the dentistry was just my backup. I will always make and write music, but you don't always know if that guarantees a living."

Are you still practising as a dentist?

"Yes I am, I actually still do two days a week. It's a family-owned practice so I can do the part-time work. I'm really professional though, this isn't a joke, there's no House music playing, I'm wearing whites and it's all very serious. I actually specialised in

Do you think you'll ever go back to more hardware?

"I've been working with ATB's engineer from time-to-time and learning some tricks from him. He told me that with all the plug-ins and software I have right now, there is no need to reinvest in any expensive hardware."

"I know some people swear by the sound of analogue and of hardware in general, claiming it's warmer, but at the end of the day, the general music consumer doesn't hear it. That said, when I get to the position of building my own house, I'll probably invest in a proper vocal booth and some sort of small studio setup for proper recording of pianos and real instruments."



Thoneick has been using Cubase since its days on the Atari ST

Making the Track *Live Your Life*

"It was fantastic getting together with Erick at the end of 2009. He was always a big supporter of my music and one day I ran into him and we said: 'Hey we should work together!' I'd been looking for a collaboration that had a special energy. It's been a pleasure working with Erick and when we get together there's always a flood of inspiration.

"I sat down in the studio here in Germany and produced an instrumental, which later became *Live Your Life*. Erick then worked with



Shawnee Taylor on vocals and recorded the vocal at his studio. I then put the vocal and everything together in my studio and the track was born!

"It was such an easy thing because it all seemed to go so fluently! We also did *Nothing*

Better and we're now working on three new singles. Although there's a big distance between us, we somehow found a way to work together. We talk nearly every day. He has a really good feeling for music, so he tells me what to change."

that really brought that Swedish sound to where it is now. He's always made these big anthemic tracks – tracks for the ladies and that's what it's all about, right?" [laughs]

And you have your own label, how's that going?

"I have Tonik Recordings but I'm not really focussed too much on the label as it's more of a platform for licensing my tracks. Y'know, to give that baby a name. But, all my records come out on Tonik in Germany, Austria and Switzerland. Other territories are licensed to other labels usually."

Long-term, do you see yourself signing acts?

"Well I've signed acts before but it really is the worst time to start a label. When I started the label in 2008 I thought it was going to be so fantastic and I was going to do everything on my label. The reality was that it's easy to get knocked off your feet with it all and drown in all the other millions of small labels that already exist."

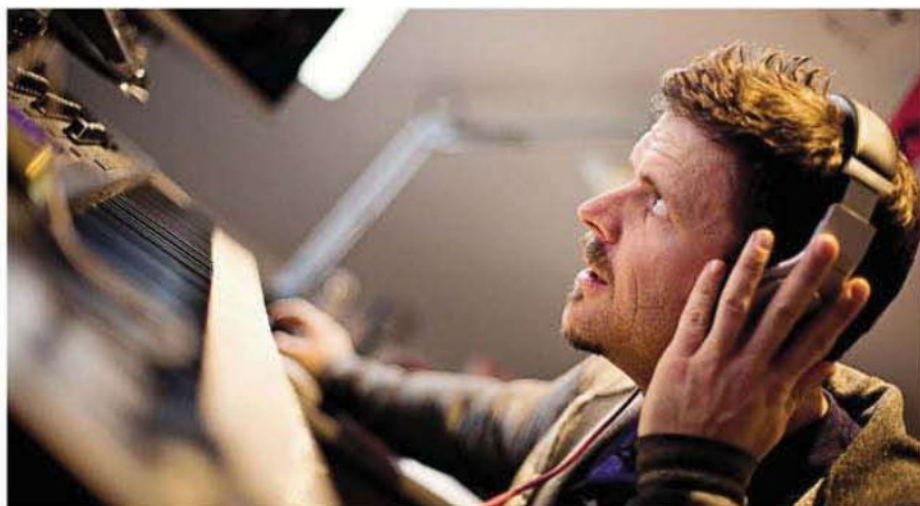
Is it worth giving tracks away for free?

"Well that's what a lot of people like Avici did – getting known for bootlegs and getting people's attention that way can be worth it. I think it's a mixed bag with the internet, because it is such a huge promotional tool too. I release my bootlegs online after a month or so after I've used them, recently my bootleg of *Sweet Dreams* and *Sweet Disposition* got picked up by everybody, so it's a great platform to get your name out.

"Be careful though, because it could also ruin your chances of getting the track released. Realistically though, it's usually better to get known and raise your DJ fees rather than earn 100 Euros from selling a record."

Is it depressing earning so little selling a record you spent so much time working on?

"It's only depressing if you don't see an eventual rise in your DJing fee."



young nerds that are able to spend time trying all of the freeware and software that is out there.

"There are endless possibilities now, most of it for free and this means there is more music than ever, even though most of it is crap. To rise up above all this crap is very difficult."

If you do manage to rise up then how do you keep that going?

"You always have to be working on the next thing. It would be easy to have a successful record and then

record. Now, because everything is ripped online that income has changed. For me, the balance is there with the overall income."

What about the balance in your life?

"It's pretty rough to be honest, I have no balance at the moment. It's important to have trust in your manager and the people around you. For instance, the social networking side of things is very important to let the people know what you're up to, but I'm working seven days a week, including

travelling when DJing, the dental practice, radio shows et cetera.

"I love it, but the problem is that all the stress of that is leaving me with writers block in the studio. It drives me crazy."

What's your process for writing, when you do get the chance?

"I always start with beats and getting a good loop going before reaching for the piano and working up ideas for melodies and chords that way. I like to find what works musically before I start changing the any of the sounds. I love searching for synth sounds and getting new libraries for my plug-ins and finding the sound that is close before tweaking it to work with the track."

What are you hoping to achieve in 2011?

"I've just been in the studio again with Erick Morillo and we're working on a track with Skin from Skunk Anansie at the moment. It looks like we're going to do an album together."

Most big DJs don't produce themselves, but I'm pleased that I can make my own records and play them out in the club

Is that up to your management to decide?

"Yeah, something like that..."

So your management works very closely with you?

"Yeah, but they know everything anyway. Even when I go to the toilet." [laughs]

What tracks have done it for you in the past?

"The Axwell remix of *Turn Up The Music* by Roger Sanchez sounded amazing."

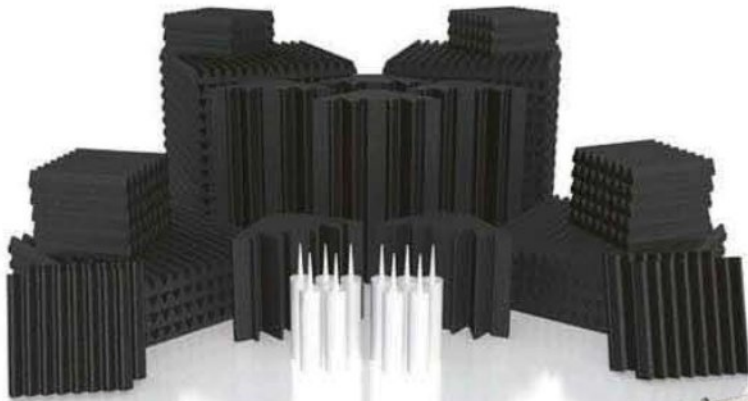
Any tips to breakthrough?

"It's more difficult that ever for new people to rise. Everyone can get the software, there are tons of

ride it with DJing and not get the next record ready. The producing and studio side is much more import than DJing because you have to get tracks out that the people like to get your DJ bookings. Most big DJs don't produce themselves, but I'm pleased that I can make my own records and play them out in the club, testing them to see crowd reactions. You don't earn so much from the Dance music releases unless you cross over like the Swedish House Mafia or David Guetta, though it took both of those acts a long time to get where they are now. But I'm sure their DJ fees are huge because of it.

"Back in the day it was the other way around because people had to buy the vinyl to get the

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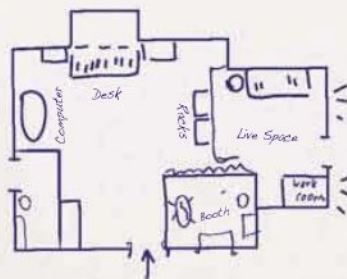
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MUST ACOUSTICALLY TREAT MY ROOM!

What's the plan for the album?

"We don't have a plan for when it will be released but I think it will be done pretty fast. We want to bridge the gap between Indie, R'n'B and the classic Soulful House sound. I think for House DJs, Erick Morillo is one of the biggest guys – a symbol for Vocal, Soulful House music."

What's it like working with Erick?

"It's really quick because he has a real ear for arrangement so he just tells me what he wants and whoosh, it's done. So yeah, this year will be a lot of trips to Erick's studio in Miami."

"But, when we work remotely we simply do it over the telephone, playing back tracks and sending bits back and forth."

Are you aiming for a commercially focused album?

"I don't know yet, I don't want to reveal too much as we've only just made a plan."

With that in mind, would you ever consider moving to the States?

"No, I can't – I have too many roots here, but I was considering getting an apartment over there. But, we'll see."

Do you think the popularity of House music has been a positive thing with David Guetta and many others bringing parts of the House music sound into the mainstream?

"Well, I've been asked this question before in a way. Guetta is the guy that brought the sound into the Pop charts and now other mainstream acts are doing it. It's Pop or Dance to the public though and not House. But, it does mean that more people are open to House music now, with R'n'B audiences going to House nights and such."

"I try to do this crossover with my bootlegs by mixing up these commercial parts with underground or House beats."

And do you do these edits in Cubase?

"Yeah I also have a MacBook Pro with the same setup running but it's quite difficult to make tracks on the road. Even taking the laptop to Erick's studio makes the workflow different to your own studio. Because I have my radio show and the podcasts, plus the DJ gigs I try to keep them all special and have me playing exclusive bootlegs and tracks. That's why I'm constantly doing edits to keep it fresh."

Is it hard to just listen to music and enjoy it the more work you take on?

"I'm actually a really big Indie and Alternative guy so I don't really listen to Electronic music in the car on in my spare time. I really love The National at the moment and The Editors, I go to gigs when I can and this type of music was really my first love. So if I'm at home, I'll generally be listening to this type of Indie Rock." **FM**

WANT TO KNOW MORE?

Check the new single from Eddie Thoneick and Erick Morillo, *Live Your Life*. Out now. eddiethoneick.com

SOFTWARE

The Pick of Eddie's Plug-ins



> digitalfishphones Blockfish
"This is a bit of freeware that I found about seven years ago. People should definitely head to digitalfishphones.com and try it."



> Waves SSL Compressor
"This is always used on the master buss as a bit of pre-mastering with the Ozone 4 plug-in."



> Spectrasonics Trilian
"I use this for original bass only. The library is amazing but it's so big you just can't find anything."



> Synthology Ivory Pianos
"Usually this will be where I go for realistic piano sounds. Either the upright pianos or the grand pianos."



> Korg M1 Synth
"Nobody would have expected it but the piano sound on *Live Your Life* is actually the Korg M1 soft synth. It really works."

Behringer Ultra Curve Pro

"This sits between the monitors and the interface and was EQ'd to compensate for the unwanted frequencies in the room. ATB's engineer Rudi Dittmann came in and did all the frequency tests and room analysis."

ON THE DVD

1



Drums

Starting with the kick drum, Eddie shows how he tweaks Flux Alchemist for the perfect sound.

2



Piano Parts

See how the piano part in *Live Your Life* was made using the classic Korg M1 and get some top tips on writing piano lines.

Steinberg Cubase

"I love it and I just think why change a working system. But I have to say I was so frustrated with Cubase over the past couple of weeks and the technical guys at Steinberg had no answers for me. The ASIO drivers were clipping on the CPU and it's become really frustrating. I was getting to the point where I was thinking of moving to Logic, but now I have Cubase 6, hopefully this problem will be resolved and I can stick with it."

iZotope Ozone 4

"This is not only used on the master buss, but on the synth busses too, to glue things together."

Fostex PMO.4

"I bought these six years ago when I didn't have that much money. I added the subwoofer later on. Over the years I've really learned how they sound."

M-Audio Keystation Pro 88

"I really wanted to get a keyboard that had weighted keys and assignable knobs and faders. I have the faders assigned up the same on all synthesizers with ADSR on the faders, and filters and so on on the rotaries."

3**Beats and Bass**

Eddie gives a masterclass on getting your drums and basslines to fit together.

4**Synths**

Find out how Eddie tweaks and twists LennarDigital Sylenth1 to make it work for him.

5**Arrangement**

Eddie shows you how he created the arrangement for *Live Your Life* with tips and tricks along the way.

6**Vocals**

See how Eddie removes vocal spill and creates a bigger sound using double-tracking, widening, compression and reverb.

7**Master Channel**

Check out what tools Eddie has at his disposal to give his track a pre-master finish that makes it ready to play out.

CUBASE ESSENTIALS



Making the Move to 64-bit in Cubase 5

This month, **Bruce Aisher** wades through all the technical mumbo jumbo and turns Cubase up to 64. Is 64-bit better? Does it sound different? What is the difference between 64-bit in Mac and Windows systems? All will be revealed...

The computing world has always been obsessed with 'bits', and this fascination began seeping into the music technology environment with the arrival of the Compact Disc format in the early 1980s. The techie interest in

the digital landscape is in many respects the flip side to the creative world, but we now inhabit a studio environment where the two are inextricably linked at almost every stage of the recording and production process. The problem however is not in 'digital' itself, but

THE EXPERT

Bruce Aisher,
producer,
engineer



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

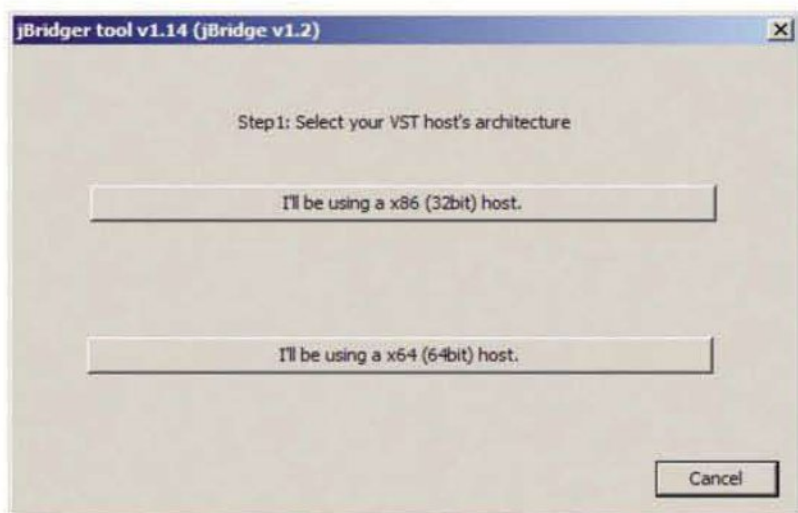
in the way it is used and understood. Cubase is no exception, built as it is on a bed of zeros and ones.

Having been a Windows XP user for longer than I can remember – with the ongoing consensus that it was the most stable Windows OS for music work – I was also aware of its limitations in some areas (more on this shortly), and felt that old OS wanderlust returning last year with Steinberg's announcement that XP would no longer be supported, and the increasing reports of success using Windows 7.

To clarify, Steinberg issued a statement saying that they would focus their attention developing for 64-bit OS, and this is borne-out with the official system requirements for Cubase 6, which specify either Mac OS X 10.6 or Windows 7, and nothing else.

Back to basics

Take a look at the numerous production forums out there, and you will find lots of myth, fallacy and downright nonsense in relation to 32 vs 64-bit. The important thing



jBridge allows you to run 32-bit plugs in 64-bit DAWs



Symphonic Library's VE Pro allows you to host 64-bit plug-ins on OS X

here is to separate the various elements of the software and processing chain.

We have the CPU itself, and OS sitting on top with a whole host of device drivers (see box to the right), followed by the DAW software itself. Changing from 32- to 64-bit in any of these cases will not change the fidelity of audio you record, mix or export. All that changes is the size of numerical processing chunks underneath the hood.

Cubase 32 vs 64

Assuming you want to take full advantage of a 64-bit OS, the next issue is which version of Cubase to install? Both Mac and Windows versions of Cubase come in 32- and 64-bit flavours, and either can be installed. Installing the 32-bit version should allow you to keep running your existing plug-ins (after reinstallation), but it will not be able to make use of 64-bit plug-ins. However, 64-bit plugs are only really needed here if they are of the RAM-hungry variety, and you have the physical RAM to keep up with their demands. This is perhaps most relevant to those of you wanting to load larger multi-sampled instruments.

You could of course install 64-bit Cubase, but the problem here is that it will only work efficiently with all your plug-ins if they in turn are of the new 64-bit variety. Cubase will try to incorporate your 32-plugs using its VST Bridge technology, but this can be hit or miss, and places some limitations on use. Those using Windows might want to give jBridge a go (see the next page), as it allows the use of 64-bit plug-ins in a 32-bit host (and vice versa) and, given that many plug-ins have yet to be ported, might well offer the best way forward. An alternative that will also work for Mac users is Vienna Symphonic Library's VE Pro. Both these programs host plug-ins themselves, but link the functionality to your chosen DAW, allowing you to overcome some of the memory limitations mentioned earlier. **FM**

CUBASE ESSENTIALS NEXT ISSUE

Next month in *FM*, we'll take a look at more unmissable Cubase tips and techniques. *FM239* on sale 14th April

Windows Upgrade Checklist

Here are our tips for moving from Windows XP to Windows 7



1 Backup, backup, backup. Now is the perfect excuse to backup everything on your computer. The W7 upgrade has the ability to manipulate the partitions on your disk and therefore makes backing-up especially important. Test the restore function of your backup program as well!



2 Time to do some plug-in housekeeping. You will need to reinstall everything after upgrading, so how about making a list of the plug-ins you actually use (not the ones gathering dust). Download the latest updates (are they 64-bit yet?) and dig out those serial numbers.



3 Download any drivers you may need (especially your soundcard drivers) – the 64-bit versions. Now is the time to do some research into others users experience. Are the 64-bit soundcard drivers stable? You can install Win7 to test it, but boot into XP for day-to-day production work.

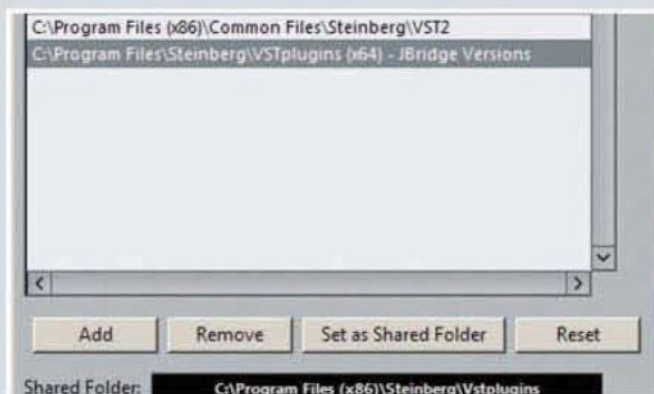
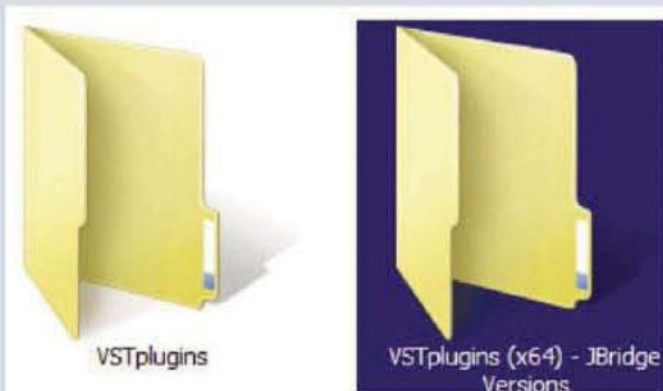
Bridging Plug-ins

jBridge is a third-party plug-in bridging application designed to run 32-bit plug-ins in 64-bit hosts – and vice versa



1 Regardless of your OS, within a 32-bit version of Cubase there will always be some limitation on how much RAM the program can use, and this quota is easily eaten-up by sample-playing plug-ins. A way around this problem is to 'bridge' Cubase to an external plug-in host such as jBridge (jstuff.wordpress.com/jbridge).

2 On running jBridge you must specify which type of host you will be running (32 or 64). After this, jBridge will prompt you to select a plug-in directory to scan. If you want to use 64-bit plug-ins in 32-bit Cubase under Windows 7, this is likely to be the 'C:\Program Files\Steinberg\VSTplug-ins'.



3 In order to keep things simple, you should create a new folder for your bridged plug-ins – for example 'VSTplugins (x64) jBridged' for 64-bit plugs prepared for use in 32-bit Cubase. Keeping things separate will make for easier migration in future.

4 Once you have bridged your plug-ins don't forget to point Cubase to the right place in the VST 2.x Plug-in Paths window – found by accessing Plug-in Information from the Devices menu in the main Cubase window. You will need to Add a location by selecting a path to the appropriate folder.



5 jBridge will append a '.32' to 64-bits plug-ins wrapped to work in a 32-bit host (and '.64' for 32-bit plugs intended to work in a 64-bit host). However, if you subsequently move to a 64-bit version of Cubase the project will load as normal (and use the appropriate unbridged version).

6 Of course with all this talk of bridging plug-ins let's not forget that there is general move to 64-bit from plug-in developers. It is especially pleasing to see that Togu (kuzn.corrpt.ch) and MeldaProduction (meldaproduction.com) are leading the charge for the free x64 plug-in brigade.

64-bit Cubase and Mac OS X

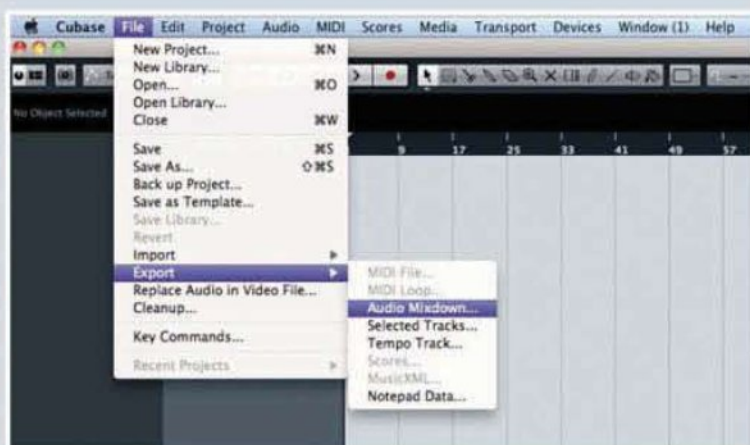
Steinberg have recently made it possible to switch to a 64-bit version of Cubase under OS X



1 Unlike Windows versions, Cubase running in Snow Leopard (OS X 10.6) can be switched to 64-bit mode without an additional installation. Simply select the Cubase icon in Finder, press Command+I and un-tick 'Open in 32-bit mode'.



2 The disclaimer in this mode is that Cubase will attempt to load 32-bit plug-ins via VST Bridge, which is not always successful. You may get better results with VE Pro (viennaensemblepro.com) in some cases, although this might be overkill depending on your needs.



3 In bridged mode, only a single 32-bit plug-in can display its GUI at one time – not ideal. Also, you will have to switch back to 32-bit to work with OMF files, print, import/export MP3s, work with ReWire or use the Tonic, Embracer or Monologue plug-ins.



ON THE DVD

Check out the vid, where we take a look at some of the issues involved with Cubase when moving from Windows XP to Windows 7, such as moving Preference settings and plug-in location issues.

The 64-bit Future

An operating system, at its most basic, acts as an interface (via the BIOS) between the computer's hardware (from the internal RAM to your soundcard), and the software that it hosts – in our case Cubase. The number of bits that an OS uses determines how it communicates with that hardware.

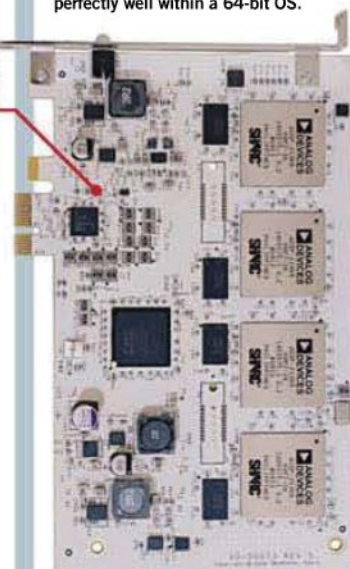
The higher the number of bits used to represent a number the larger the size of number that can be processed in one go. This can improve efficiency depending on how a piece of software is written. As most newer CPUs use 64-bit processing internally, it makes sense for the OS to match this in number shifting terms. One knock-on effect of this at the hardware level is that unless some trickery is involved, limiting the number of bits an OS uses can also limit the total amount of memory that can be 'addressed'. For example, under Windows XP 4GB is the limit, but more importantly, each process (Cubase, for example) can only use a maximum of 2GB. Unfortunately, things can get even worse if you use DSP cards.

As I found when upping my RAM to 4GB in system crammed with a TC Powercore and UAD cards – the cards grabbed some of the 'address space' away from the OS in order to work correctly, and this meant little gain in total RAM available to Windows.

The solution – upgrade to Windows 7 64-bit. I can now see all 4GB and keep my PC well stocked with DSP cards. The biggest issue here is that for the OS to talk to your hardware, each manufacturer must provide new 64-bit device drivers for their kit, meaning that there is little point upgrading your OS until you are confident your existing hardware is supported. Remember though that most 32-bit programs themselves – the software – will run perfectly well within a 64-bit OS.

DSP Drain

When using a 32-bit OS DSP cards can use up 'address space'.



A Brief History of Pro Tools

We conclude our DAW *Knowledge Base* series with one of the most successful pieces of software ever made. **Greg Scarth** investigates Pro Tools

Avid's Pro Tools, originally developed by Digidesign, looms over the DAW world like a colossus, widely considered to be the industry standard digital recording solution. This month, our DAW series reaches its conclusion with an examination of the single most important piece of music software ever made.

Digidrums

Over the course of the last few months, we've seen how most DAWs were created by companies with prior experience of music software and hardware development. Pro Tools is no exception. The story starts in 1983 with the release of E-mu's Drumulator drum machine. A companion to the Emulator sampling keyboard and antecedent to the equally legendary SP-12 and SP-1200 samplers, the Drumulator was a relatively simple digital unit with EPROM-based memory for its non-editable 12-bit samples. The Drumulator was a hit despite the fact users were limited to its built-in

sounds. Enter Evan Brooks and Peter Gotcher, high school buddies and University of California graduates with a shared interest in music, recording, electronic engineering and computer programming. After consulting E-mu for details of the Drumulator's memory system, the duo set about creating new sound libraries and formed a company, Digidrums, to offer a series of upgrade EPROM microchips just a year after the release of the drum machine itself. Digidrums' hugely successful range of chips were simple enough for Drumulator owners to swap in and out as desired, offering everything from Simmons electronic drum sounds to John Bonham-inspired 'heavy metal' samples.

However, Brooks and Gotcher anticipated that users would soon crave more than just a selection of alternative preset sounds. Luckily, they were already working on a solution. Having recorded the Digidrums samples on Sony's videotape-based PCM-F1 digital recording processor, the duo were keen to find a less cumbersome and more

flexible option. Identifying the audio potential of the newly released Macintosh computer, they set about creating basic digital audio recording and editing software for their own use. Despite their primary interest in making their own lives easier, it soon became apparent that the software should be developed for general release.

Working in conjunction with E-mu, Digidrums changed their name to Digidesign and began work developing a groundbreaking Mac-based sample editing system for the Emulator II keyboard. Released in 1985 at a price of \$995, Sound Designer brought the visual editing features of exotic instruments like the Synclavier and Fairlight to a much larger market. Although at this stage sampling was beyond the reach of most consumers and amateur musicians, Digidesign developed new versions of the software for each new sampler that hit the market, eventually releasing a Universal application, which could be used with all the most popular hardware by the likes of Akai, Roland and E-mu.

Sound Tools

Having successfully mastered software sample editing, a fully featured digital audio recording and processing solution was, in retrospect, the logical next step. Sound Tools, released in 1989, was Digidesign's first attempt at a computer-based hardware direct-to-disk recording solution with a software front end. Essentially, Brooks and Gotcher wanted to design a digital recording solution based on what they'd learned from Sound Designer but decided the Mac's 8-bit AD/DA conversion capabilities weren't up to scratch. Hooking up a separate 16-bit interface to the Mac, it then became apparent that any serious signal processing was going to push the computer's processor to its absolute limit. Even carrying out very basic edits meant having to wait for the computer to process the signal, making for an infuriating stop-start workflow.

The solution came in 1987 with the release of the Macintosh II, complete with six NuBus expansion slots. Brooks built an expansion card equipped with a 16-bit DA converter and a prototype Motorola DSP chip, allowing Sound Designer to use the DSP chip rather than the computer's CPU for its audio editing. After showing off the prototype at the NAMM trade show, Digidesign set about developing a full audio input, output and processing system, eventually producing the 16-bit Sound Accelerator card, DAT-I/O digital interface and AD In analogue interface.

Pro Tools

The Sound Tools system's stereo audio features were groundbreaking, but the move

Apart from GUI improvements, Pro Tools' layout hasn't strayed far from the first version



to multi-track recording with the release of the Pro Tools system was a logical progression for Digidesign. Released in 1991, the first version of Pro Tools was based around a similar hardware-software hybrid setup to Sound Tools, this time with a four-channel interface.

Priced at nearly \$6,000, the software side of the system was handled by Digidesign's ProEDIT program and ProDeck, a newly designed version of OSC's Deck application. However, the Digidesign team soon admitted that relying on a third party to develop part of the Pro Tools software was a mistake. Version 2, released early in 1993, brought the software back in-house and introduced the now-familiar Pro Tools application. Pro Tools II also introduced TDM (Time Division Multiplexing), a system which allows complex routing of multiple digital audio signals between DSP cards and enables Pro Tools to run multiple real-time DSP-based TDM plug-ins simultaneously.

As we've seen in our recent DAW features, the early 1990s were an incredibly exciting time for the development of music software. Steinberg and Emagic were hot on Digidesign's heels, readying audio-capable versions of Cubase and Logic for release. In order to maximise their potential market

“With the pros catered for, Digidesign began to target the budget-conscious consumer

share, Digidesign wisely opted to license their Digital Audio Engine (DAE) to other software developers. As such, users of other DAWs could take advantage of Pro Tools hardware and run DSP-based TDM plug-ins without using the Pro Tools software as the front end.

Hardware

The Pro Tools concept has always been based around the digital audio workstation, combining hardware and software to create a complete package throughout the 1990s, Digidesign (which merged with American audio-visual giants Avid – now also owners of M-Audio, Sibelius and Euphonix – in 1994) continually refined both the software front end and the DSP and I/O capabilities of the Pro Tools platform.

From its humble 16-bit stereo origins as Sound Tools, Pro Tools progressed to 24-bit resolution and 24 tracks of audio by 1997.

Mbox and M-Powered

While larger Pro Tools rigs can easily run into tens of thousands of pounds, Digidesign and Avid have gradually filtered the product down to the consumer market, first through the Digi001 and later through cheaper options such as the Mbox range of desktop interfaces and the M-Powered range in conjunction with M-Audio.

Released in 2002, just a few years after the Digi001, the Mbox represented Digidesign's first move into a more accessible budget market, targeted directly at home users.

Priced at £445 and bundled with Pro Tools LE, the 2-in/2-out, 24-bit Mbox boasted Focusrite-designed preamps and 48V phantom power. 2005's

Mbox 2 added MIDI In/Out, while the Pro and Mini added slightly expanded takes on the same concept.

Without DSP chips, the Mboxes restrict users to native plug-ins, but offer a substantial chunk of the full Tools experience. For the release of Pro Tools 9, Avid redesigned the Mboxes, improving quality and adding a few extra features. In the summer of 2004, Avid purchased M-Audio,

market leaders in consumer audio interfaces, and announced that Pro Tools would be made available to users of a selection of M-Audio interfaces. Up until 2010, this was the only way to run the software without Digidesign's hardware. The release of the hardware independent PT9 suggests that LE and M-Powered will be discontinued, encouraging users to move to the full version.



By this stage, Pro Tools was used alongside tape machines in most professional studios and starting to replace it altogether in many more. With the professional market well catered for, Digidesign also began to target the more budget-conscious consumer market in 1999 with the introduction of the Digi001 package, comprising a rackmount 24-bit 44.1/48kHz 8-in/8-out audio

interface with 1-in/1-out MIDI connections, a PCI card with no DSP capabilities and Pro Tools LE, a stripped down 24-track version of the software front end.

Mid-range consumers continue to form a key part of Avid's client base, and the range has been regularly updated over the years, with the addition of

the 002 control surface/interface in 2001 and the arrival of the current 003 control surface and 003 Rack in 2007. Strong rumours suggest an updated 004 is just around the corner.

Industry standard

2002 saw Apple buy out Emagic, acquiring the rights to Logic, and Steinberg announce Cubase SX, rewritten from the ground up and based on the Nuendo audio engine. Digidesign hit back with Pro Tools HD, an update focusing mainly on new hardware choices rather than dramatic overhauls of the software front end. With the introduction of the 192 I/O interface and new HD Core and Process cards (soon followed by the even more powerful HD Accel cards) Pro Tools offered substantially more recording flexibility and DSP power than ever before.

Over the last decade, Pro Tools has come to define the workflow of most modern

studios. Consistently staying at the front of the pack with regular software updates, Pro Tools offers audio editing options which exploit its DSP power to the maximum. Beat Detective (introduced in PT5, 2001), Elastic Audio (PT7.4, 2007) and Elastic Pitch (PT8, 2008) have become essential tools for recording and mix engineers.

Last year's overhaul of the Pro Tools product line, now rebranded as an Avid product, refined the range even further. The software is now available in three varieties: Pro Tools 9, 9 HD Native and 9 HD. The former is roughly equivalent to the previous LE or M-Powered editions, but for the first time in Pro Tools' history there are no specific hardware requirements.

HD Native is the full software package for non-DSP Digidesign hardware, while HD is the full TDM-equipped flagship product. On the hardware side, updates to the Mboxes and HD series interfaces brought the range right up to date.

Conclusion

In two decades, Pro Tools has done more than any other product to revolutionise the way we record, edit and mix music using computers. Critics may argue that its MIDI and sequencing capabilities lag behind most other DAWs or that its software and hardware features are no longer superior to cheaper alternatives.

However, the release of PT 9, hardware independence and continual enhancement of the feature set suggest that Pro Tools is sure to remain an industry standard for the foreseeable future. **FM**

KNOWLEDGE BASE NEXT ISSUE

Stay tuned to *Knowledge Base* for more unmissable studio wisdom and industry insight. **FM239 on sale 14th April**

IN THE STUDIO WITH...

Dennis Ferrer

House veteran and label founder, Dennis Ferrer has continuously refined his sound and style without steering away from his roots. 20 years later, he's still at the top of his game. **Declan McGlynn** caught up with him to talk DJing, digital distribution and sample DVDs...

From working in New York's famous studio swap shop Rogue Music to Grammy nominations, Radio One A-lists and Beatport number ones, Dennis Ferrer's career has been fruitful, to say the least. It's been a career driven by a passion for gear, demonstrated in the press release for his global smash *Hey Hey*. It wasn't filled with elongated similes or wacky anecdotes, but the compression settings for the vocal channel and details of the sidechain relationship between the kick and bassline, to name but two on a long list of studio insights. Thirty-seconds into our interview, I already knew Ferrer was a fan of Nuendo, dabbled in Ableton Live and had seen a picture of his studio – the wallpaper on his iPhone.

When talking about gear, Dennis Ferrer is like an excited child, tripping over himself to get the well-versed and sentence out. His passion is contagious and it wasn't long before we lost track of time discussing the finer details of dBs...

FM: You mentioned you're using Nuendo...

Dennis Ferrer: "We're using Nuendo at our spot yeah, and a problem we've been having recently is something I call 'digititus'. We've been moving over to Ableton but we still have issues with the low-end. Everybody does null tests [playing two audio files simultaneously, reversing the phase of one. If the files match, there should be complete silence] and say 'it nulls out!' and yeah, that's fine.

"But there's something about the way the mix engine handles the output. The only way we could tell something was going on with Live was because we have JBL 4430s with 15" woofers. When you matched the bottom-end of a kick coming out of Nuendo and one coming out of Ableton there's something different. You can't quite pin-point it but it's something around 40Hz. Let's say you you're using Drum Rack, you make your loop using MIDI and so on. Let's say you move it over to another track as audio, fades off, high-quality is on, no looping – we loop via Follow Actions, it's the best way – and still, there's something missing.

"For writing, for quickness, for ingenuity, you can't beat Ableton. You can write songs in a flash. If you've never been subjected to analogue, used Nuendo or worked with a lot hardware, Ableton is the shit, because what you don't know won't hurt you. But I come from gear – we've got iZ ADA converters in our studio, we've got [UA] LA-2As, Neve 1064s, racks of [Telefunken] V72s – I come from that. People say it's subjective, but to me it's not, and if I'm the one who has to make the records, if something's bothering me, then I gotta change it. So even though I love Ableton, for now I'm stuck with Nuendo. Ableton's like having the hottest girlfriend, but she's dumb. But then, you keep coming back to it." [laughs]

What else have you got in your studio?

"Right now we've got a Euphonix System-5MC, 24-channels of iZ ADA converters, Mac Pro, every



Ferrer at work in his New Jersey studio surrounded by a select choice of vintage gear

plug-in known to man, a pair of Telefunken V72s, Neve 1064, [UA] LA-2A, [Tube-Tech] CL1B with Mullard tubes, Purple Audio MC-77, Nuemann U47 and 67, two Sennheiser [MD-]421s, Shure SM7B, [Muse] Receptor 2..."

Do you use the Receptor a lot?

"I love it actually – there's some synths you can get on PC that you can't get on Mac. I have commercial plug-ins but I like using the ones that guys just come up with. There's one where a guy modelled a PPG and he repairs PPGs, and I've heard the latest Waldorf PPG 3.V and it ain't nothing like this cat's."

What other soft synths are you liking at the minute?

"I'm into [SonicProjects] OP-X Pro, [GMedia] ImpOSCar, a lot of TAL stuff like TAL-U-No-62. I actually got rid of my [Roland] Juno-60 because it was so close. Thing is though, I actually run all of my soft synths through my V72. Nuendo allows you to do hardware effect inserts so I run it through the V72, through my AnaMod ATS-1 [analogue tape simulator] and back in to the DAW and it's thick as shit. I got a new compressor the other day, Vertigo [VSC-2 Quad] that's amazing. I've also got a pair of modified [Urei] LA-4s, two John Hardy M-1s, Adam S7s and a SUB12."

Wow, that's an impressive list. How did you start picking stuff up?

"I used to work at Rogue Music [famous New York second-hand studio equipment store] and I sold gear, so a lot of the people in the music business knew me from that. I knew almost every piece of

gear when I was like 14 years old. I'd get [Akai] MPC3000s for around \$500, so I just grew up with [Roland] Juno-106s, [Korg] MS-20s, Oberheim Matrix-12s, Xpanders, lots of great stuff. I also had a [Roland] MC-202, which we loved. It was amazing for kick drums, still to this day. It's really nasty and rough sounding. I used the MPC60 for sequencing MIDI and the Korg SQ-10 for CV and gate stuff."

Do you still own those synths?

"I got rid of them. Everybody says 'hardware is hardware' but if you can tell me what kind of synth I'm using on any of my tracks, God bless you. I mainly warm 'em up through my V72, through my pres, because I miss that feeling and that warmth. You don't have to do that, but I prefer it. It's a personal thing.

"With plug-ins though, there was always something missing for me at the start, they never seemed to get it just right. And they still don't. Steven Slate's VCC thing, I mean it's pretty damn close. I've been beta testing for him and it's amazing. But, it isn't right quite yet. I was trying to find ways, be it through summing, or going through a board, to try and get back that sound I was missing.

"The synths weren't quite right either, there was nothing that sounded like a Juno-106 or a 60 until TAL-U-No-62 came out. I sold my Juno after that. And when Korg did a Mono/Poly emulator, I sold mine. It didn't sound exactly like it, but it was close enough. And when they did the MS-20, I got rid of my MS-20. Of course, it's not an MS-20 with all the routing possibilities, but it's close to it. I prefer to spend my time making music than sitting there

being a scientist. I know how to make sounds, so I do it quickly, get the sound I want, and move on."

So you're a fan of sending plugs out of the box?

"Well you don't necessarily have to get a summing mixer – keep it simple. Get a two-channel pre that's really warm that rounds everything out, render everything through it. If you want different flavours then get different types of pres, maybe one with tubes in. It's very simple. Quite honestly, the days of 24/48 72-channel big format mixing is done. Big

Do you think there's too much music out there?

"Well when you went through a physical media distributor, they were taking a shot at warehousing all this media. So they were taking a big chance. Just like time is money for the artist, space is money for them. So they've gotta get rid of it before it dies or before it sits there too long.

"So there was some sort of quality control in that, if the record was crappy, the distributors wouldn't pick it up. Of course there were crappy records, but there was at least legitimacy to it. There

labels and each of those sell 1,000 copies in a month, I've moved 400,000 copies. My percentage is 50%, I made \$200,000 in a month. And what do I pay for? I pay a couple of employees, hard drive space, servers, that's it.

"If you've got 600 labels and the average turns out to be two or three thousand with one that does 20, one that does 10 and so on, you're potentially making half-a-million a month. Do you think they really care? Some will say they believe in quality and it's true, some of them do, and I can't say they're all the same, but at the end of the day the guy paying the bills doesn't give a shit."

Do you think it's undermining Electronic music?

"In a weird way, no I don't. Talent will prevail. I'm not worried about anyone else, because my

biggest judge is me. Why? Because I buy records, I know a bad one when I hear one, I play records out every weekend. It means everybody's got to step up their game to be noticed.

"Anybody can make one hit record, but can you make ten? There are some people that say 'oh well this is an art'. Bullshit. It's half art, half business. The reason you make a record is to have it heard. If you want it to be art, keep it to yourself."

Records are no longer a means of sustenance or getting rich – they are now your business card. They represent you

studios were having a hard time in New York because you had guys who were doing records in Ableton. Does the general public really care what it sounds like? Fuck no, they don't give a shit. Do I really care what it sounds like? Yes. Because I come from that background. Because I use classic hardware, does that mean I'm going to make a better record than a kid on Ableton in his bedroom? No dude. What counts is what's inside your head."

weren't 20,000 record labels and everyone thinking every time they finished a record, it was ready to come out. Just because you think you've made a record, doesn't make it a record."

What do you think the solution is?

"I don't think there is one. It's done. The bottom-line for a digital distributor is moving copies – they don't give a shit who it is or what it is. If I have 400



DAW Rules

Dennis Ferrer on the importance of metering

"The main mistake I see a lot of kids make is running things too hot in their DAW. In reality, 0dB in a DAW is not equal to 0dBVU. If you're running a kick at 0dB in Logic or whatever and you run it out to a compressor, it's smashing the needle and you're thinking, 'what the fuck?' So you bring down the input on the compressor right? Wrong! Depending on the converter – each manufacturer has their own standard – let's say on my Lynx, 0dBVU is

-16dBFS. So knowing that, you set the metering in your DAW to redline at -16dBFS. You don't record anything above that. If you're recording at 24-bit or 32-bit, you've got plenty of headroom.

"Let's say your drums are running to a drum buss at -18dB and all your other synths running to the master at -18dB, you're thinking 'how am I going to make up the gain?' A maximiser. Bring up the gain like that, threshold is -18, output is -0.3,

Red Book CD standard. People scoff at L2 by Waves, but that's part of the character I like. Nine times out of ten, I'll put that on my drums. All that being said, I try not to get too technical because you over-think things, the only rule I stick to are the DAW rules for my converters.

"You want to stay within boundaries of what you've learned, but you don't want to go by the book, because nothing's by the book, this is a creative process."

So, it is healthy then, digital distribution?

"It's healthy competition, but it's not healthy in the way we're getting paid. As an artist and a label owner, I see it from both sides. As an artist, hypothetically, I'm starving. You can't make money from download retailers, some are taking fifty-percent. Fifty-percent of what? \$1.99? In Dance music if you sell 3,000 copies you know that's a big record, but that's six grand. Split it with the distributor, it's three grand. And that's for the label. The artist is making ten-percent on those sales."

But do you find you can push your DJ fee based on those sales and make up some of the difference?

"This is where the game has changed. Records are no longer a means of sustenance or getting rich – they are now your business card. They represent you. Sooner or later the business card is so prominent, someone's gonna wanna pick you up. The more notches you've got in that belt, the more money you can command. For a musician, it's all about live performance and DJing."

What are you DJing on?

"Traktor Scratch Pro is what I use. For me there's gotta be an element of surprise, mistakes or whatever. Some of my best friends use Ableton and play live sets with it, but I just don't feel there's a risk involved. Part of the mystique of DJing was the vinyl or the CD drifting, or you botching a mix and Ableton is too predictable, in my opinion. But I can't ignore the fact that some artists are pushing the envelope with technology, and I have to respect them for that. But if you're just up there with Ableton and an APC40, you're just pushing buttons."

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Will we be seeing a Dennis Ferrer 'live' set where you open Ableton instead of Traktor?

"They want me to do that, but I refuse to do it because I feel like I'm robbing the public. Let's not get it twisted, a lot of people sit here and say 'I deserve \$20,000 for a night'. Be realistic. You play records for a living. You're paid to get drunk, hit on chicks and play records. There are doctors who don't get paid what we get paid in a week and they save lives. For me to get paid an extra five grand to use Ableton 'live', that's a rip-off."

Would you ever do your own sample DVD?

"Nope, and I've been asked many times. Why? Get your own! Go hunting! Stop being fucking lazy. Go to a record shop, or a flea market, buy old records, sample them, run them through an EQ, process them, that's all part of sound creation and being creative. When you come across a sound you've made, you run it through a flanger, some outboard, back in through a Rat, then through some SoundToys and suddenly you hear that new sound and you think 'oh shit' and you've got a riff you never would have had otherwise. And that's your sound. If your production is worth any salt, you go ahead and make your own sounds."

"I come from Techno not House and we had to be able to make our own sounds – if you didn't know how to tweak an envelope, you were screwed. I'm not judging people who use them, but I just don't believe in them. Sample your own shit."

A lot of producers we talk to mention a 'eureka moment' where they were able to make next-level productions much faster and more efficiently. What was that moment for you?

"I think the biggest thing that changed for me was when I stopped making loops and started making tracks. This happens to a lot of producers – you set up Logic, bar five to bar thirteen, and that's all you've got. A trick I learned was, once you've got your pattern, copy it to bar 200 and build to that."

"You've got the idea that had you grooving in the first place but you're thinking 'what am I gonna add to this, where is this going to go?' Copying to bar 200 forces you to arrange correctly. That was a eureka moment for me, because before that it took me a long time to finish a record. I still start by making a loop, but when I have my main idea, I'll move it and then reach it by building to it."

Have you noticed your crowd change a lot since Dance music took over the US commercial charts?

"Yeah my crowd has changed a lot. Where it was once a very soulful House kind of crowd, it's now more Tech House. The front doors of a club are always revolving. Just because I get older doesn't mean those doors get older. If you want to be in this business for a long time, you need to pay attention to the kids, they're the biggest demographic. Young people run the world." **FM**

WANT TO KNOW MORE?

Visit Dennis' label's official website at objektivity.com to keep up to date with release dates.



Pro Tools 9

"I have Nuendo 5.1 and Live 8.2.2 but I like PT for personal perceived sound quality. PT finally stepped up and now the game is just about even. It's a personal taste issue. Whatever floats your boat."

iZ ADA Converters

"My holy grail of converters! They're basically the standalone converters of their RADAR. I've got the Nyquist 96kHz version – fucking amazing! I had Prisms, Apogeess, and lastly Lynx but this puts a big foot in all of their asses."

Tube-Tech CL1B

"That's my baby right there. I swapped out the stock tubes for some British Mullard tubes. Way warmer and smoother than stock. An upgrade to my ears."

Purple Audio MC-77

"An alternative to getting a vintage [UA] 1176. A truly remarkable and working 1176 is quite hard to come by these days and I'm not really into the re-issues. The MC-77 is as close as you can get to a vintage 1176 without it actually being one."

Telefunken V72

"These are invaluable. Absolutely mint working condition. I like to use them as hardware inserts to warm up and record VSTs. They're also magic on vocals."

AnaMod ATS-1

"They will have to pry my pair of units from my cold dead hands when hell freezes over! Indisputably indispensable! Every one of my soft synths gets run through this. I don't care if it takes me four hours to bounce each track through them, I'll gladly do it with a huge ass smile. No tape plug-in can match it – don't even bother. End of story."

LOGIC ESSENTIALS



Creative Filter Effects in Logic Pro 9

This month, **Jono Buchanan** is going filter crazy, looking at a variety of ways to bring tone control to your projects. Whether you want wobbly basslines, ghosted bass parts or treatments to help with your entire mix, there's something for you

Creating Dubstep basslines with the ES2

1 Dubstep is officially 'going overground' and if there were any doubt that this remained a niche genre, that's been blown out of the water with the release of the forthcoming (at the time of writing) Britney Spears single *Hold It Against Me*, which features a huge

Dubstep-influenced drop section in the middle. In case some of you are keen to get in on the Dubstep action but don't quite know where to start, I'd suggest looking at the style's characteristic wobbly basslines first and enjoy making sounds which fill up the bottom end of your mix.

Dubstep basses tend to feature LFOs, clocked to the tempo of your track, opening

THE EXPERT

Jono Buchanan
composer,
producer



Logic Pro is a composer, producer and music

technology lecturer. Jono Buchanan is the program central to all of its activities. Hang on, something's wrong there, surely...?

and closing the filter cutoff but rather than this movement being constant, the wobbliness tends to emerge through notes so that it becomes a dynamic, dramatic effect. On the DVD, you can see how easy it is to build a basic Dubstep bass sound and set up LFOs to work their magic.



ON THE DVD

> **Dubstep Bassline:** Learn how to build a classic wobbly Dubstep bass part.

Modulation realisation

2 Of course, so far I've had to create my Dubstep wobbles in 'post production', by going back to a part I've recorded and drawing in the wobble parts through automation of the assorted parameters I'm using to make the part dynamic. If I wanted to create these swells in real-time, it would make sense for me to patch in a controller between the LFO and the filter and that's exactly what I've done in this video. Within the ES2's router, the 'via' control lets you place a controller between your Source and Target so that any effect is



Use automation to build classic Dubstep basslines

Multiple LFOs

Varying the speed of multiple LFOs can keep your modulation interesting



Multi-speed Dubstep Patterns

3 However, Dubstep aficionados will tell you, quite rightly, that one speed of clocked LFO isn't really enough as Dubstep basses tend to vary the speeds at which they pulse up and down to keep a

listener's interest. Varying LFO speeds can also hint at the idea that a track is constantly doubling or halving in tempo, all of which can lead to some powerful effects. So, following on from the previous video, I've looked at two ways in which you can easily turn your single LFO'd

bassline into one which produces a variety of 'quantised' LFO effects. You have two choices – either turn automation on and record a line of data to switch LFO2's rate from one note to the next, or use Logic's Duplicate track function and a little chopping up of your bassline to

achieve the same result. Watch both techniques on the DVD before deciding which one suits you.



ON THE DVD

> **Dubstep multi-speed:** This Dubstep bassline produces LFO wobbles at different speeds.



dependent on the behaviour of the 'via' control. In this example, I've used the modulation wheel and, as you'd expect, the LFO routing only affects my bassline when I

ES2 allows you to quickly route modulation controls

turn the mod wheel up. Looking through the list of via controls, it's clear that interrupting a routing such as an LFO or envelope targeted at your parameter of choice can produce some seriously creative results.



ON THE DVD

> **Modulation Routing:** Here's how to set the mod wheel up as a control source.

Using velocity to bring filters to life

4 Another huge performance tool is velocity and I'm regularly struck by how under-used this control source is. I'm willing to bet that if I were to ask you

what velocity controls, 10% of those reading (at least!) would say 'volume'. Don't feel guilty if you're among that 1 in 10 as you can be forgiven – most of the time, velocity does indeed control volume and anyone who has ever played a real piano will be able to explain why the correlation between touch sensitivity and loudness makes such perfect sense.

However, velocity is merely a control source, so not only can you disconnect it from affecting volume, you can also choose any target you like for it. So, if you want to control the brightness of your sound so that notes hit hard sound brighter and those pressed more gently sound quieter, you can.

Of course, there's nothing to stop you using both volume and tone change as your velocity targets or even go further and set up yet more targets to be velocity controlled. Find out how in this video.



ON THE DVD

> **Velocity Routing:** If you like the idea of control sources but want to use Velocity instead, watch this.

Autofilter your delays

5 Delay is a great effect. We Logic users are spoiled by the creative potential of Delay Designer, as it allows each delay tap to be tuned, panned, changed in tone and in resonance and so it's a sound designer's dream.

If, however, you want simpler effects, both tape delay and stereo delay can produce powerful results at the mixing stage. The only problem with delay, particularly if you're using a high feedback level to produce several repeats, is that the



Autofiltering your delays can stop them sounding too static

sound of a succession of identical echoes can become a bit predictable. One way to avoid this is to place the Autofilter effect after the delay on your auxiliary buss.

If you then activate the Autofilter's LFO section you can decide how quickly or slowly the tone quality of your echoes will open and close and almost regardless of the source sound you're passing through this treatment, the effect can be really powerful. Watch the video on the DVD to see and hear this effect in action.

Filter Your Whole Mix

7 You always know when a production trick pioneered by Dance producers has really hit home with the masses, as it starts showing up in mainstream Pop music. Among the techniques which has successfully crossed over is the use of filtering across entire mixes. Add a low-pass filter

to an entire mix and it sounds like your track is coming from the room next door, while the effect of placing a high-pass filter over every part in your mix is akin to sitting next to someone on the train whose headphones are spilling.

Both effects create powerful drops and tend to precede the track 'dropping' back into a critical moment after a long build up or

through a section leading back into the final chorus, for instance. On the DVD, you can see how easy it is to produce both of these effects independently and, for those of stout heart, together!



ON THE DVD

> **Full Mix Filter:** Using low- and high-pass filters across your whole mix is a popular trick.



Master Filter

Filtering your master channel can create DJ-style drops, or have a more subtle arrangement impact.



ON THE DVD

> **Autofiltered Delays:** Delays with multiple straight delay taps can sound dull but not if you get clever with the Autofilter.

Sidechained filter effects

6 Another killer way to lock drums and basslines together is to create an envelope 'ghost' of your beat loop and apply it to your bass sound. You'll remember being a kid in school and drawing the outline of pictures onto tracing paper. Well, imaging being able to trace the transients of your beat loop and laying those on top of your bassline so that when a loud transient is detected, the bassline's tone opens up and for quieter moments between transients, the tone drops.

You can do exactly this in the ES2 by routing your beat loop into the synth via the sidechain. Then, via some careful parameter setup within the router, this effect can be achieved. You can even invert the shape so that loud transients drop the tone quality, which then rises up in the gaps, which represents a 'tonal version' of volume ducking. You can watch both techniques in action on the DVD.



ON THE DVD

> **Sidechained filter Bassline:** Use the transients of a beat loop to 'ghost' the tonal outline of your bass end.

BPF Pads

8 Pads and other sounds which are commonly used to fill tracks out by playing thick chords while employing rich harmonic tones are capable of swamping a mix too readily. Pads are a great way of filling tracks up but if you overstep the mark with their volume balance, pretty soon they can sound dull and lifeless. Obviously, the most obvious way to reduce their impact is to use EQ but that will simply result in another static sound, albeit one reduced in weight from its un-EQ'd original. An alternative to EQing, which will still produce a lighter, less overwhelming sound is to apply a band-pass filter to the sound, which is in some way modulated to provide movement.

The band-pass filter will scoop out bass and treble, leaving you with mid-range, while you then have a range of options available to give the sound some life. You could use LFOs, envelopes, sidechains, further effects... the options are endless – I've looked at some on the DVD.



ON THE DVD

> **BPF Pads:** One way to reduce the unwanted 'weight' of pad sounds is to treat them with band-pass filters.

Filter Fusion

Filtering two elements separately can create a more subtle version of a DJ-style drop



Treat Bass and Drums Separately

9 If you like the sound of using high-pass and low-pass filters at the same time but don't want to use both in the output channel, you can apply one filter type each to different groups of tracks. In this video, I've looked at the power of adding a high-pass filter to drum and

percussion parts, while using a low-pass filter on all of the other track elements. As the entry of these two groups of instruments is staggered, with the drums coming in first, we get used to the drums before they get thinner via their high-pass filter treatment. Then, the rest of the track creeps in from a 'sub-bass' style low-pass filter treatment,

prolonging the wait for these elements to lock together and drive the track forward.

After a build and a one-bar drop, this finally happens – it's a powerful trick you could apply yourself to an even more extended section, perhaps experimenting with alternative filter treatments for further groups of instruments. Remember, if you want

to leave one mix element out of the filter treatment, such as a vocal, just don't route it into one of your groups, leaving it routed to Output 1-2.



ON THE DVD

> Fix Filters Separate: For a more subtle version of filtering your whole mix, use groups with separate filter treatments instead.



Create a rising filter sound by inverting the its envelope

Inverted envelopes

10 As I'm sure you know by now, envelopes help you to shape a specific element of a sound, so while amplifier envelopes help

you sculpt how the volume of sound will shift and shape over time, so an envelope applied to the filter section will help you shape the tone.

For lead and bass sounds, envelopes can be used to create sounds which bite hard before receding in tone quality through the sustain section by providing quick attack, short decay and a low sustain level before the release is allowed to tail off the end of a sound naturally.

However, if you invert an envelope shape so that rather than closing after an initial attack, the sound rises in tone quality, the options for creating 'sucky' sounds is huge.

These can sound really great either at the bottom end of your mix or towards the top when allied to a great hook.

Watch the movie on the DVD to see how easily and effectively filter envelopes can be inverted.



ON THE DVD

> Inverted Envelopes: Turning an envelope shape upside can allow you to create some great 'sucky' sounds.

NEXT ISSUE

Join Jono next month as he lifts the lid on yet more Logic tricks and treats. *FM239* on sale 14th April

Hardware Modelling: Part Two

Can software emulations of classic effects really be indistinguishable from the original? **Greg Scarth** concludes our special feature on modelling

In last month's *Knowledge Base* we began our exploration of hardware modelling by looking at the ways in which software developers can create clones of real instruments by mathematically modelling the way they generate sound. This month, we complete our investigation with a look at modelled effects, which employ a similar process of scientific study and mathematical models in order to produce exact soundalikes of hardware units.

Effect models

Our study of instrument modelling last month examined the ways in which software developers model acoustic and electronic instruments. To recap briefly, instrument modelling involves creating a series of mathematical formulae which define the behaviour of a piece of hardware, then programming software which follows the same rules. The result – assuming the mathematical model is accurate – is a software instrument which generates sound based on the same principles as the hardware. As such, it's possible to create a

modelled instrument which is indistinguishable from the real thing.

In the case of effects, it's actually a little easier to understand exactly what the model requires. Essentially, a model of an effect is based on a transfer function – an equation which represents the behaviour of a system. The system to be defined in this case is the effects processor itself. An effect has a clear input, processes the signal based on a series of variables, then passes the result to the output. The variables may be adjustable settings on the effect itself, or they may be elements of the input signal itself such as frequency, harmonic content or amplitude. Since digital systems are relatively simple to recreate perfectly in software, effects modelling is mainly concerned with analogue processing devices. However, 'digital' effects units also contain analogue sections – input stages, AD/DA conversion circuits, output amplifiers, and so on – which may also be modelled.

Modelling first took off in the world of guitar effects and amp simulation, where companies such as Line6 have created a

range of products based on accurate models of classic guitar hardware. The POD, launched in 1997, was revolutionary in the guitar world thanks to its ability to create a range of realistic amp tones for recording or live performance. Likewise, the Roland COSM (Composite Object Sound Modeling) technology found in many Boss processing units offers models of a wide variety of amps, speakers, mics and effects. While guitar effects remain popular, many other companies have focused their modelling research on recreating classic analogue studio hardware. Powerful DSP-based effects systems such as Universal Audio's UAD range, the Focusrite LiquidMix and SSL's Duende allow software models of a range of hardware to work in real time.

Advances in computer processing power have also meant that software models can be run as DAW plug-ins rather than on dedicated digital hardware or proprietary DSP chips. A number of manufacturers offer emulated clones of everything from the most simple distortion units to the most complex compressors, reverbs and even channel strips from classic mixing consoles.

The modelling process

As we discussed last month, developers use a rigorous scientific process when developing a model, analysing components, breaking circuits down into sections where appropriate and measuring a range of test signals to understand exactly how a piece of hardware responds to given inputs and front panel adjustments.

We asked Dr David Berners, Chief Scientist at modelling experts Universal Audio, for an insight into UA's working process. "We model equipment by looking at schematics and documents and calculating what the behaviour should be," he tells us. "Usually, some component properties are not fully specified in a [technical] drawing. Based on what we see in the schematic, we create particular test signals to exercise the components in a way that will expose the unknown component properties. If necessary, we'll remove components from a circuit so that they can be tested separately. Each piece of equipment thus undergoes purpose-created custom testing."

So, what about listening tests? Are they used to fine-tune the model? "We always employ listening tests to make sure that our models function properly," David tells us. "However, we don't typically use listening to 'tune' an emulation – rather, listening is used to find bugs in an algorithm. If an emulation doesn't sound identical to a piece of equipment, we don't consider that a mistuning, but an error, either in analysis or implementation. So the listening is a critical step, but not a part of the design process for

Focusrite's LiquidMix is a popular DSP solution with EQ and compressor emulations



emulations. It's used more as feedback to ensure that the design is carried out properly. One place where we do use listening in design is when we add additional controls or features to a product. Here, listening plays a big part in determining the useful ranges for additional controls."

Pros and cons

Niklas Odelholm of Swedish software developers Softube spoke to us about the company's modelled emulations of classic hardware, including the Tube-Tech CL1B and Urei 1176 compressors. We were curious to find out what a company which focuses heavily on modelling sees as the advantages and disadvantages of software emulation. Odelholm readily conceded that there will always be certain advantages to using hardware. "It's a lot faster to work with real knobs and faders than with a mouse and keyboard," he tells us, "and it's definitely more sexy to have a real piece of hardware in your studio." However, he believes that the benefits of emulations more than outweigh the few disadvantages, most notably in terms of practical ease of use. "Computer models of hardware allow you to use several instances of the same effect with total recall and preset capabilities. As developers we can also add functionality to a model without changing its sonic character, something that would be very difficult to achieve with real hardware."

“As developers, we can also add functionality without changing character”

So, after all this effort to create a software model, the big question is whether the emulation can really sound identical to the hardware. If that's not the case, there would appear to be very little point in going through such a complex development process just to create a rough approximation of the hardware's sound. Both UA and Softube are convinced that modelled emulations can sound identical to the original hardware. Niklas is in no doubt that the rigorous development process creates a software model so close to the original hardware that it would be impossible to know which was which in a blind test. "In many cases, the difference between the computer models and hardware is smaller than the difference between two different units of the same hardware" he tells us.

Modified Models

One of the interesting aspects of modelled effects is that the software programmers don't necessarily have to be slaves to the original design. It's possible for developers to add new features or alter certain functions of a classic, but it may not necessarily always be desirable. Niklas Odelholm, Product Manager at Softube, filled us in on the tough decisions involved in updating the classic Urei 1176 for the company's FET Compressor plug-in: "If you turn off all the added features of the FET Compressor, you

will get the original 1176 sound," he tells us. "We wouldn't want to do something that changes the DNA of the unit. A lot of classic hardware units can be 'improved', but it's important to stress that the improvements we make don't change the original sonic qualities, i.e. the things that made these units famous in the first place. The addition of detector filtering, external sidechain and parallel compression were quite obvious, since they're features that many modern compressors have.



Other features are more or less necessary to add, like the Output Volume controls on the Tube-Tech PE1C. Without an output volume it would be difficult to manage the headroom in your DAW.

"For the Trident A-Range plug-in, we decided to remove the original Input Gain from the software and instead add a Saturation control and an Output Volume. So the Saturation is not really an added feature, but more of a re-mapping of the existing controls. Increasing the Saturation knob is the same as increasing the Input Gain while lowering the channel fader by an equal amount on the original desk. We often do these kind of 'translations', but not easily. Every time we decide to add or remove something we have long and heated debates about the pros and cons... Who are we to change what's worked for 30 years?"

"During the A/B testing sessions of our CL1B emulation we came to the point where we couldn't use two different CL1Bs anymore (one for developing and one for testing), and needed to use the same piece of hardware for both testing and developing. The differences between those two CL1Bs were bigger than between the software

model and the development unit." Developers are also highly aware that part of the charm of analogue circuitry is often its imprecision, whether it be non-linear response or design flaws such as unstable LFOs. In some cases these variables may be insignificant, but

they're always taken into consideration to ensure a realistic model. Dr Berners fills us in: "Many of the vintage products we model incorporate unique and highly non-linear components, such as electroluminescent panels, variable-mu vacuum tubes, and saturating magnetics. By understanding the physics which governs the behaviour of these components, we're able to create emulations which faithfully replicate the complex behaviour of these components and, in turn, the sound and 'vibe' of the circuits that contain them."

Future

With modelling technology already mature and widely available, what does the future hold for modelled instruments and effects? David Berners believes we'll see even more

accurate, subtly nuanced emulations. "In terms of fidelity," he tells us, "we strive to make emulations which are as accurate as possible with the DSP we have available. Since available computational power is always increasing, we expect that we will continue to create more sophisticated emulations. In many cases, we are already past the limits of human perception in terms of faithfulness to the original, but we are still interested in modelling every behavioural detail in our products."

There's also likely to be a serious trickle-down effect as computer processing power eventually catches up with and overtakes dedicated DSP hardware. Niklas Odelholm suggests that companies like Softube already have the knowledge to create more powerful emulations: "With increasing amounts of computer power it will be possible to create even more complex models. Some of our modelling technology is just not feasible to release in a plug-in today, because of the huge amount of CPU these models would take. I'm really looking forward to the day when we can turn this technology into products. A good example of this is the modelling of acoustics, which today is possible to mimic using reverb algorithms, but is way more complex to actually emulate. The theory of physical modelling is mature. It's just a matter of time before we can fully utilise it." **FM**

KNOWLEDGE BASE NEXT ISSUE

Make sure you pick up *FM* next month for more studio science and industry insight. *FM238* on sale 17th March

Mange Tout: Stephen
Luscombe (left) and
Neil Arthur (right)

Blancmange

After lighting up the '80s with three quirky albums while playing Pop stars with a darkly, self-deprecating comic twist, they disappeared... But no '80s band disappears forever! Blancmange are back with a new album and an exclusive chat with ***Jon Andrews***...



As Blancmange, Neil Arthur and Stephen Luscombe bounced through the eighties with helpings of melodic, quirky and majestic synth pop. With tracks like *Blind Vision*, *Don't Tell Me* and *Living On The Ceiling* they made a glorious mark before gently bugging off towards the end of that decade without so much as a by-your-leave...

Between then and now it surely would have been tempting to simply reel out those hits every few years but the duo has resisted all such offers while, for the last few years, quietly working on new – yes new – material. The cheek of it!

With tracks like *The Western* taking you up to the rhythmic heights of *Living...* and *Probably Nothing* bringing you back to roost with a teasing chorus to die for, Blancmange's new album, *Blanc Burn* delivers a Blancmange for the new century with all the bluster, dark humour and catchy tunes you would have expected.

So welcome back Blancmange, and welcome Neil Arthur to his first interview in 25 years...

First up, we're unsure: did Blancmange ever officially split?

Neil Arthur: "What happened was that Stephen and I got to the point where it was very intense when we worked together. We were, by our own admission, very much like chalk and cheese. That kind of friction was very creative when it was constructive. It was the best thing ever as we'd really try to push each other. But when it became destructive, it was awful. Our musical relationship got to the point that if we'd carried on it would have spoilt the friendship."

"So we said 'come on we've had a good run for our money, enough of this, let's go and do other things' and by doing so we preserved our friendship. Looking back I'm so thankful that we did that as it's fantastic that we're still really good mates."

What have you both been doing?

"In a roundabout way both of us have ended up involved in film and TV work, doing documentaries, short films, some ads, and I've been doing 'sonic branding' which means making sounds for different companies. It's very funny, you basically try and get the same intensity over a four second sting as you would in a track lasting four minutes."

"So we've both been involved in production but in the background and both of us have kept in contact with Dinesh." [Pandit Dinesh, long-term Blancmange percussionist]

Why did you get back together?

"Well, I don't think I can wait another ten years! Over the years we've mentioned it a few times and we have been asked to get involved in certain things and to get Blancmange back together but we've always said 'no' as we really enjoy the other things that we are fortunate enough to be involved in. But a few years ago we got chatting and both happened to say 'yes' at the same time, face to face, in the same



The 808 and Super Jupiter are two pieces of hardware left over from their '80s kit. Now, Spectrasonic's Trilian looks after bass



room. It had never felt right before so we thought 'let's see how it goes'."

Did the current popularity of the synth, and people's general positivity about that era help?

"We got contacted by Rollo and Sister Bliss who were really interested in doing a reworking of *Feel Me* and asked how would we feel about? Of course we gave them our blessing – in fact we were very honoured that they were thinking about doing it. We were also aware that other bands had referenced us – as they did a lot of bands from that era – but did it influence us on releasing the album?"

"Well what goes around comes around so it's not going to be bad timing for us to put it out now. It's quite interesting hearing some of the sounds being referenced at the moment. People will cite Gary Numan, Human League and Heaven 17 and when we were all doing it originally we were actually miles apart from each other but all happened to be using synths. Now people think we were a very close group of people or that we were all 'New Romantics'. We weren't New Romantics we just happened to be using synths. I never dressed like a bloody pirate!"

Were you scared that you would be put into the '80s revivalist camp and just 'yet another '80s band making a comeback'?

"We're not going out on an '80s revival tour. We've got our new album out but people are bound to say whatever they want but I don't care. Of course we'll play some old tracks... by Kraftwerk!" [laughs]

Are you surprised by how well some of those old tracks have stood up?

"Flabbergasted! If I'd have only ever had one record with Blancmange, like *God's Kitchen* which got to number 65, then that would have sufficed. So yeah

I'm absolutely gobsmacked and flattered. I remember hearing that track for the first time on Radio 1's Peter Powell show and we drove across three lanes of the motorway we were so excited. That was one of the best times. The worst time was our last gig at The Royal Albert Hall. Coming off stage it didn't feel right and it didn't feel like we were Blancmange anymore so I said 'I'm not doing that again'. And here I am 25 years later doing it again."

Any nerves about the new tour then?

"Well I'm bound to forget lyrics old and new – in fact sometimes the ad-libs are more interesting. I'm really looking forward to it."

Tell us about your studio setup.

"I tend to work with a laptop now so have a MacBook Pro with Logic. I've written on Logic since it was on Atari as Notator so I've come through the whole thing to Mac. I don't particularly like the way it looks – a bit too much like GarageBand – but it still works for me."

Do you still have any of the old gear you used back in the '80s?

"I've still got the Roland Super Jupiter with the MPG-80 programmer. Funnily enough I've just used a Stylophone – limited sound but great when you put it through effects! I've still got a JX-8P synth and I still use our original TR-808 rhythm unit, it was the first thing we bought. I still use it even though I have loads of samples of it. I did have a PolySix but it was nicked."

What about software plug-ins – which did you use on the album?

"I use Spectrasonic's Trilian for bass. I'll put it through a few things first like a SansAmp and Line6

Guitar Port processor to see how it comes out. I also used Stylus but I tend to do a lot of faffing with it as there was always something about the original sound we weren't happy with. I used a lot of plug-ins plus Native Instruments' Kontakt sampler."

Have you had a chance to A/B any new plugs with their original hardware?

"I've got the Arturia Jupiter [8V] and I've used that on a few tracks. I've not A/B'd it and sat there to see if it's as fat and juicy as the original. I used it on a few tracks because I actually quite liked the sounds I managed to get out of it."

How do you look at the development of music technology since you started out?

"I haven't really seen an explosion in it because I've still been remained involved so closely with it.

around with sounds within the sequencer package you are using. Sending a file to a studio by FTP or DropBox and when I get there it opens up as it should be and it's fantastic. I remember just a few years ago that wasn't the case – you'd open it up and it would just crank and creak.

"I was always on Emagic's hotline and on first name terms with all of 'em! So to me there's not been an explosion in technology, it's been more like lots of eruptions along the way that I've noticed and said 'fantastic!' each time."

What about the role of the computer in the recording process?

"So many aspects of computer music today allow for potentially wondrous changes but that's also a problem because, at some point, you have to make a decision and, with so many possibilities, that issue

"I remember being in Sarm East studio in the '80s and we had to sample a random synth sound recorded at home on a Tascam Portastudio into a Fairlight. We had tried for hours and hours, possibly days, to recreate in a studio, the sound and feel of this 'special' part of the demo. But even that failed and we had to resort to using audio from a 1/4" cassette tape! Now that 'special' part, or parts of the demo can easily be in the final mix. Technology eh?"

What was it like stepping back in the studio together for the first time in so long?

"It really felt like we'd only stepped out of the studio the day before and just stepped back in! Stephen would come around to my tiny little place, we'd sit in our respective seats and it felt good.

"It was great, there were lots of cups of tea, but we didn't really reminisce as we hadn't lost touch in terms of our friendship. We just kind of got on with it."

So it was easy?

"I don't know that it was, but it was certainly enjoyable and that's what's important."

How would a new track come together? Do you jam?

"Oh no we don't 'jam' together! [laughs] It would be someone coming in with an idea. If I'm not in front of the laptop with a melody or a rhythm in my head or an idea, then a lot of things still start on guitar. So I might have an MP3 sketch that I'd send to Stephen and he'd hopefully come back and say 'yes!' and then next time he came round we'd have a go with it. He might say 'I've thought about structuring it like this or that.' Then we'd get Dinesh in to do his part."

What are your expectations for the album?

"Well I think my sister will buy it [laughs]. We've made the album on our terms. We've got a licensing deal with Proper who are great and have a fantastic attitude. We've given them a complete album, it's not been A&R'd by anyone, we did the track listing, decided what track went on and did the cut and paid for the making of it, so that is very different from 25 years ago. We'll do the tour, hopefully some European dates and if it enables us to make another one. But there's no real pressure, that's the thing."

How do you look back now at your success the first time round?

"It was an amazing time to be involved in music, but the clothes weren't though. Funnily enough some friends are doing the website and we found some ridiculous stuff from back then, and I found that suit I used to wear and it has the most ridiculous fly. It's like the zip on a bloody tent! God knows where the trousers were meant to sit, like under my armpits or something. My underpants must have been like the bloody Tardis!" **FM**

WANT TO KNOW MORE?

Blancmange's triumphant return *Blanc Burn*, is out now on Proper Records.

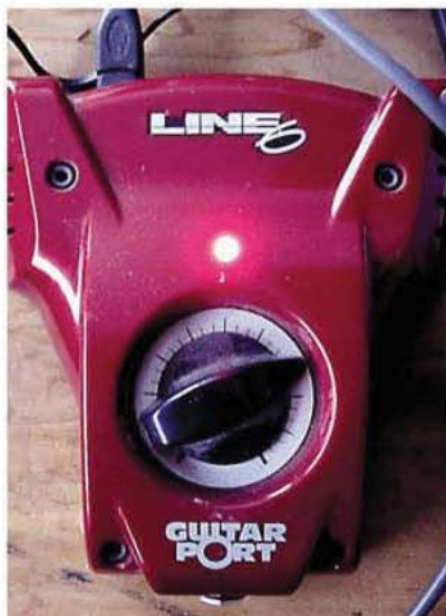
I haven't really seen an explosion in technology because I've remained so close to it. It's been more like lots of eruptions

Obviously I'm aware that technology has allowed for big changes but the biggest change for us was a long, long time ago from using tape loops to borrowing a synthesizer and rhythm unit that would actually relate to each other and keep in time with each other – well nearly, they'd always move a bit! And the other big change for us was really important: the realisation of MIDI. We just went: 'how does that work?'

"It was a phenomenal leap from using tape recorders and loops and slowing tapes down – a massive, massive leap. Obviously now it's fantastic to be able to just switch on a computer and fiddle

sometimes becomes clouded or put off until half past the eleventh hour.

"Such as when we were bouncing tracks down for this new album. Several synth parts going through a number of channel EQs and effects, would be printed to a stereo pair, but any aux send effects were muted and dealt with in the final mix. It was a massively important factor in making the album, both creatively and economically. It was like us committing to virtual tape, bouncing down groups or individual parts to audio – it made a clear commitment and for us brought a fresh perspective to the next stage, the mixing process.



Line6's Guitar Port is one of Blancmange's staple effects processors for treating soft synths such as their favourite Arturia Jupiter 8V



BACK WITH A BANG



ULTRANOVA™ SYNTHESIZER

UltraNova is a 'Nova' series analogue-modeling synthesizer with a powerful effects processor. It is a single-part synth taking the legendary Supernova II synth engine as a starting point and packing it with the latest technology including wavetable synthesis, a software editor and a revolutionary new touch-sense performance mode.

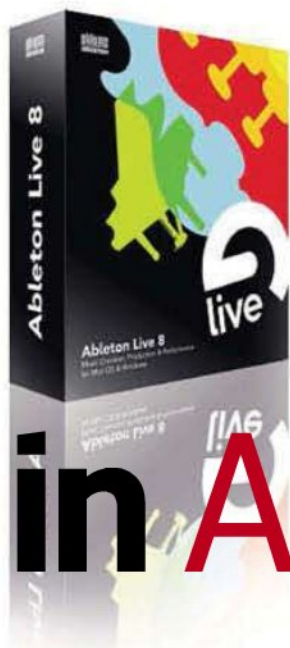
ADDITIONAL FEATURES:

- Powerful stand-alone synth with 37 full sized keys and a vocoder
- Touch-sense encoders enable totally new sound-shaping & performance
- Software plug-in editor and Patch Librarian for full visual editing
- Built-in 2 in 4 out USB audio interface - and it can be bus powered
- Includes Automap software so UltraNova can control your DAW/plug-ins

www.novationmusic.com/ultranova


novation®

ABLETON LIVE ESSENTIALS



Session and Arrangement

in Ableton Live 8

Last time, we went back to basics with Live's audio and MIDI clips – this time we're going to do the same with the Views. If you don't understand the relationship between Session and Arrangement View, you're in big trouble, reckons **Martin Delaney**

Most DAWs – Logic, ProTools, etc – have plenty of windows of various kinds floating onscreen, but Live has two distinct ways of looking at your music – Session View and Arrangement View. Before we go on; yes, we've covered the Views before, back in the days of Live 7, so if

you're experiencing a bit of déjà vu, stick with it. Each View has its own character, and tasks that it's better for – but that doesn't mean you can ignore either one – there's an unbelievable amount of crossover between them, resulting in a music creation monster.

The Session View is based around clips and scenes – it's the ideal environment to

THE EXPERT

Martin Delaney
performer,
producer



Martin, aka mindlobster, has produced Live training material for MacProVideo and has taught Live to DJs, students, kids, and prisoners.



ON THE DVD

A tutorial video taking you through the techniques discussed in this feature. There's also a Live .alp session for you to experiment with.

create loop-based music, and to compile audio and MIDI parts from different sources. It's primarily a live performance tool, but the spontaneity make it valuable for composition and arranging, too.

The Arrangement View is a timeline – all DAWs have one. This is where you can build songs in a linear fashion and finish songs that started in Session View. It's also where you need to be to work with track automation, locators and video. Most functions are available in both Views, they just give you different ways of working. After you've been working with the Views for a while, you'll realise that you can use them simultaneously – working with a mapped-out timeline structure in Arrangement View, and a jam set in Session View. I'll look at this in more detail soon, but for now let's just say the Overview and the Back To Arrangement button are going to be very important! **FM**

LIVE ESSENTIALS NEXT ISSUE

Make sure you pick up *Future Music* next month for more vital Ableton Live techniques. **FM239** on sale 14th April



Build your linear timeline-based song arrangements and get ready to bounce!

Working with Session View

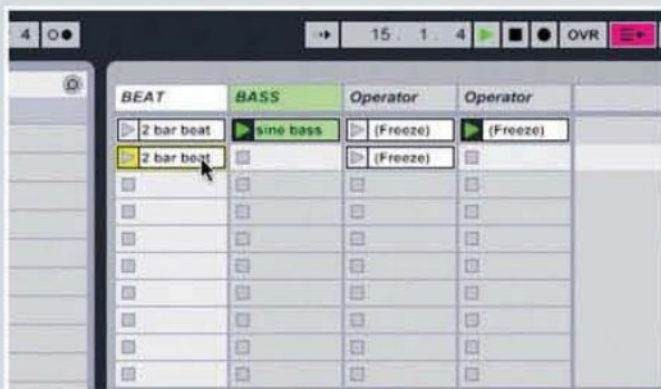
Session View is unique to Live and has played a big part in its success. Let's take a look at how it works



1 Let's start with the Live set from last time – it's also on this month's DVD. There are three audio clips in there, with one track each. Launch the 'Operator' clip, using the triangular clip launch button. Still sounds good, I hope! Now launch the green 'sine bass' clip and listen to them both.



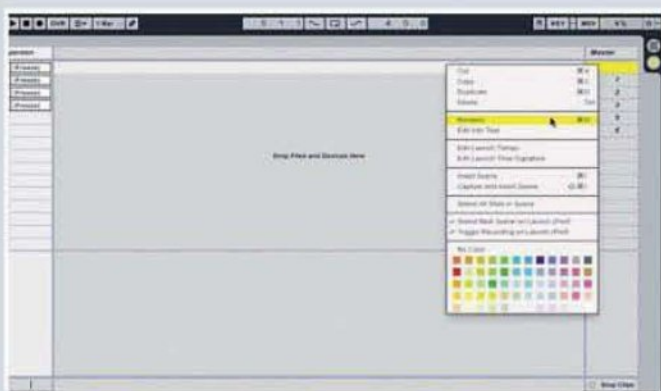
2 Use cmd/ctrl-D to duplicate the Operator track. Go to the Device Browser and drag the Resonators/Munich preset straight onto the new track – stop track three playing. Now we have four different loops to play with. Let's try and create a simple 'song' structure with these clips, working vertically down the screen.



3 We could now rearrange our clips onscreen to form scenes – vertical rows of clips that we can trigger together to make song sections using copy and paste to layout our scenes over the Session View grid. This method works very well, but there is another more spontaneous method we can use – Capture and Insert Scene.



4 Maybe we want to begin with the bass and resonator clips. Launch them, then use Shift-cmd-I to execute the Capture And Insert Scene command, creating a new scene that contains just those two running clips! Now launch the drum clip, then click on the new scene you just made, and Shift-cmd-I again.



5 You should get the idea by now. Do this a few more times according to your own personal taste. Maybe you'll end up with something that looks like the screenshot here, it doesn't have to be identical, though. Use cmd-R to rename the scenes as song sections now.



6 Let's add an effect to the Master Track – drag Beat Repeat onto it, and set it like this: Interval 2 Bars, Gate 2/16, Pitch -12, Pitch Decay 50%, this will just add a little flip to the tune every two bars. Make it three or four bars if you prefer – one is usually too much!

Working with the Arrangement View

The Arrangement View is familiar territory to anyone who's used DAWs in the past, but remains a single-window affair



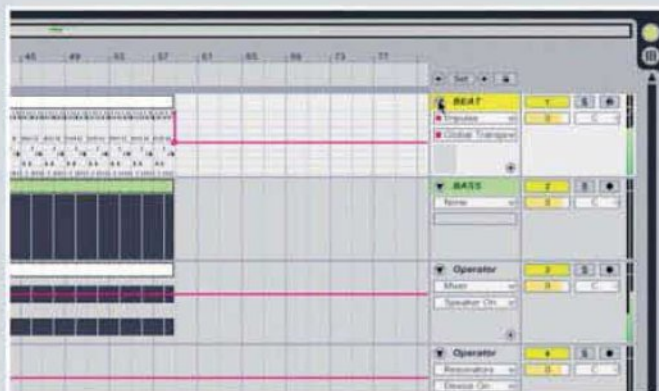
1 Do this one after the two Session View walkthroughs on these pages. Hit the tab key to flip from Session View to Arrangement View, and there's your recorded improv. Live records everything you do, even if you load new devices or clips during the jam. Tap the spacebar to start Live's transport running.



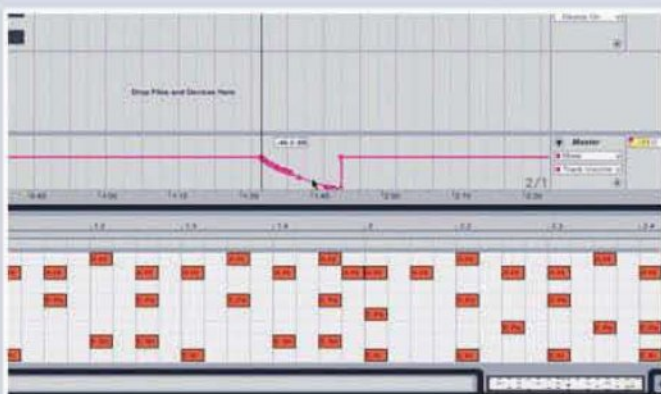
2 Now we're moving left-right instead of top-bottom like in Session View – if you're coming from Logic, GarageBand, Pro Tools etc, this will look familiar! The Control Bar, Browser, etc, are in their usual locations, though it's worth remembering that they can be shown or hidden independently in each View.



3 Confusingly, the Mixer and In/Out Views are now located at the right of the screen – I hate this! Use the View Menu or toggle buttons to show or hide them, or use tab to flip back to the full size Session Mixer – drag it up as deep as possible to get more precise info.



4 The tracks you see in one View are the same in the other. Delete it from one and it's gone altogether! Use the triangular disclosure buttons to unfold your tracks – Alt-click to unfold/fold all of them at once! Click and drag up or down at the top of the screen to zoom in and out.



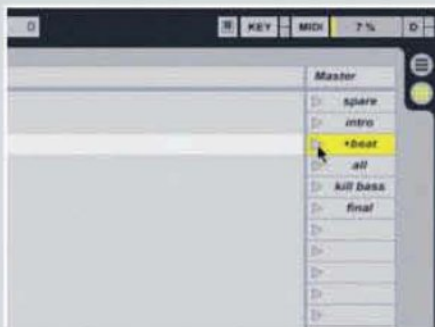
5 You can also use this Zooming Hot Spot to navigate around the timeline – click and drag up/down/left/right, and double-click in the centre to jump back out. Something you might see at this point is a red line – an automation envelope – in the master track at the bottom of the screen.



6 When you're zoomed in, and Live's running, click on the Follow button to automatically scroll through the song as the playhead moves along. Use the spacebar to start and stop, and click anywhere in the timeline to restart from that point. Highlight a section by clicking and dragging, and loop it using cmd/ctrl-L.

Record your Improv

Live's jamming functions are the best around – you can choose whether to be clinical, spontaneous or a bit of both!



1 Now let's get our sections into the Arrangement View. There are a few techniques we can use, here's one; click the record button at the top of the Live screen, then play through your scenes, triggering each new one when you think you're ready to move on.



2 If you want to launch some of the clips or scenes out of sequence, feel free. Go to the Beat Repeat effect and drag that Grid setting around, then go to the Impulse device in track 1, and transpose it up by 12 semitones.



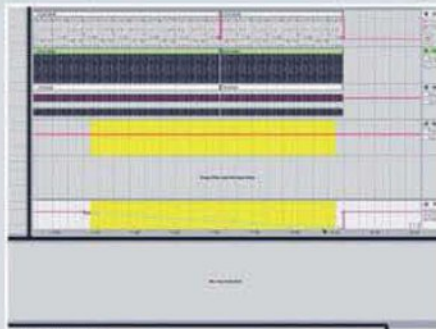
3 The Overview at the top of the screen gives you a little thumbnail image of what's happening. Finally, grab the Master track slider and do a slow fade-out, so the whole track gradually disappears. When it's totally gone, tap the spacebar to stop Live.

Editing and Automation

Live's Arrangement View is where you'll find all the traditional editing and automation tools



1 Let's do a basic editing thing, just to mark our territory here – we'll extend the track a little. Click and drag to highlight the last four (or eight) bars of the Arrangement – then use shift-cmd/ctrl-D to duplicate it.



2 Your volume fade in the master track is probably messed up now – let's fix it. Click and drag in the master track to highlight the area between the start and end of the fade, then tap the delete key, and you'll get a nice smooth fade!



3 If you did as I suggested, and transposed the beat, and changed the Beat Repeat grid, you could experiment with straightening those out too – but it's not wrong to leave them 'raw', so it sounds like a real person was moving the controls.

Take Control of Live

Virtually every music controller you'll see these days uses USB to connect to the computer, and takes its power direct from that connection. They start very cheap, and there are several that support Ableton's Instant Mapping, which means you don't have to make any MIDI assignments – they'll pick up Live's Mixer and Device controls automatically. You can use keyboards, mixers, drum pads, pedalboards, game controllers and of course iPads and iPhones. Don't be shocked if you end up with two

controllers – one for each View, because they both have such different ways of working. Typically for the Arrangement View, you'll want a mixer-type controller that also has transport controls – for Session View you're going to want something with illuminated pads so you can trigger your clips and scenes, and keep track of which one is which.

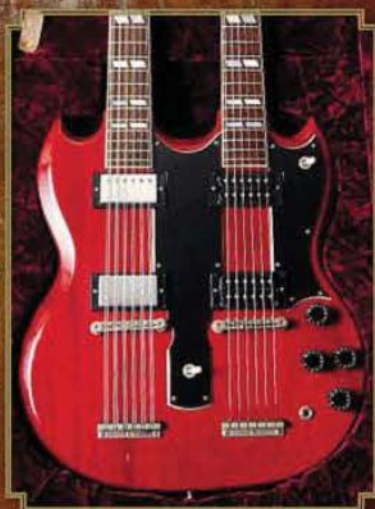
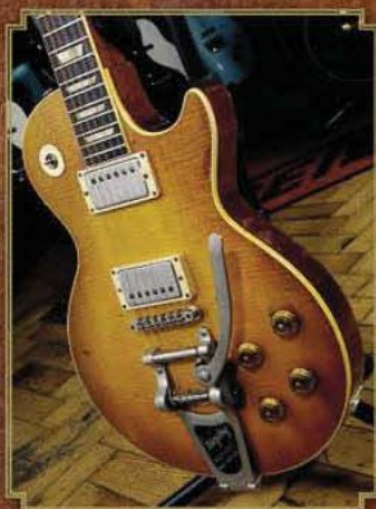
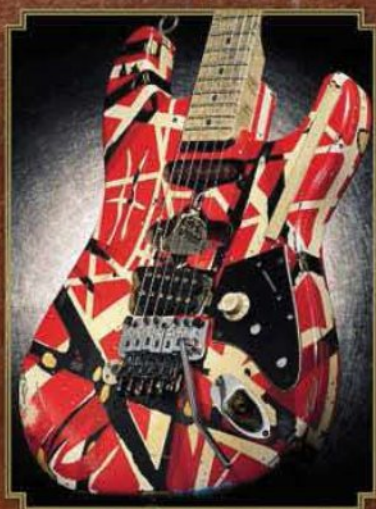
For Arrangement View, I'd recommend something like the M-Audio Axiom Pro keyboard controller, or Novation's Remote series. For Session

View, it'd be the Novation Launchpad, or Akai's APC40 – the APC40, actually, is probably the closest to an out-of-the-box controller that can manage both of Live's views. If you're feeling more adventurous,



you can use an iPad running suitable apps, that'll connect through a local WiFi network. TouchAble is a great all-round controller app, that attempts to handle everything Live has to offer, while Griid focuses more on being a highly-evolved clip launcher. For Arrangement mixer-type functions, though, you could also use something like the AC-7 Pro Control app, which emulates the popular Mackie MCU controller, giving you mixer control over Live, as well as basic scene and clip navigation.

Every issue in Guitarist...
Find out more about the gear
that made the music



Guitarist is packed to the brim every month with gear reviews, artist interviews, guitar lessons, tech Q&A, free CD and more



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Reviews

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



Korg Kaoss Pad Quad
84 Touch four effects simultaneously with Korg's latest performance FX unit.



Focusrite VRM
86 Can this tiny box revolutionise the way you monitor on headphones?



SonicProjects OP-X Pro II
88 The sound of a classic synth loved by '80s synth Gods. Think Prince, Vangelis, Van Halen...



Adam A8X
98 Can these new ribbon-tweeting wonders deliver all the goods when we put them to the test? We take a listen...



Audio Damage Phosphor
104 A software synth based around the alphaSyntauri digital synthesizer.

Highlights this issue...

Korg Kaoss Pad Quad | £275

Chris Barker pokes his fingers where they're not wanted and as usual, Kaoss ensues

WHAT IS IT?

A touch pad style DJ effects controller with multiple, controllable effects layers.

CONTACT

Who: Korg
Tel: +44 (0)1908 857100
Web: Korg.co.uk

HIGHLIGHTS

- 1 1,295 different effects combinations
- 2 Freeze controls bank
- 3 Simple to set up and use

The legacy of Korg's touchy-feely effects boxes is well known, with the first unit spicing up DJ sets and studio sessions way back in 1999.

But it's worth mentioning that this isn't a replacement to the flagship Kaoss Pad 3, but a new model that slots somewhere between the tiny KP Mini and the sampling and looping might that is the Kaoss Pad 3.

The main focus here is solely placed on effects and the ability to

achieve multiple combinations of effects and control their parameters fluidly with the touch pad in the usual Kaoss Pad style.

Twenty different effects are included, with the usual suspects such as high, band and low pass filters, distortions, delays, reverbs and modulation effects like flanging and phasing. These sit among more modern, chaotic loop chopping, slicing and vinyl-style break effects. These are all grouped in their relevant four

families on push buttons on the surface of the device.

In sync

Unboxing the unit reveals a thin and light unit that feels quite plastic and not exactly gig-ready. The soft rubber buttons for effects selection and control are more pleasant, brightly backlit and look like they'll suffer a bashing. Each effect section is in four parts with a freeze button below to keep each effect at the point you left it on the touch pad if required.

There's the usual FX Depth control allows to feed through a certain percentage of the original signal and an input volume helps to keep things at the right level. So really, technically everything is relatively simple. But, this simplicity when you consider the price might raise a few questions.

Although the KP Quad's automatic bpm calculator is fairly accurate and tap tempo can adjust when necessary, when dealing with time sensitive effects like delays, the loop slicer or beat repeat style effects, the lack of MIDI means you can't completely sync 'worry-free' in all situations. Don't



Focusrite VRM Box | £96



Mix regularly on headphones? **Jono Buchanan** tests Focusrite's Virtual Reference Monitoring...

WHAT IS IT?

A portable 'listening interface', providing modelling of numerous monitors

CONTACT

Who: Focusrite
Tel: +44 (0)1494 462246
Web: focusrite.com

HIGHLIGHTS

- 1** Offers something relevant to the studio process
- 2** Highlights mix deficiencies
- 3** Very portable

SPECS

Headphone Output
THD+N: -100dB (0.001%)
Signal to Noise Ratio:
 > 105dB

S/PDIF Digital Input
Automatic Sample Rate
conversion

Supported sample rates:
continuous from 32kHz
to 192kHz
THD+N: < -110dB any
sample rate

Digital Performance
D/A Dynamic Range: 120dB
Supported Sample Rates:
 44.1kHz & 48kHz
Input channels to
computer: S/PDIF (stereo)
Output channels from
computer: Headphones
 (stereo)

Connectors and Controls
Stereo S/PDIF input on RCA
Stereo Headphone Output
on 1/4" TRS
Headphone Output Level
control (analogue)
4-pin USB 2.0 socket

System Requirements
Windows: XP (service pack 3), Vista, 7 (32- and 64-bit)
Mac: OS X 10.5 Leopard, OS X 10.6 Snow Leopard

Dimensions
68 x 68 x 25mm
Weights
123g

Read mix advice from any worthwhile source and you'll find that checking your mix on a variety of different

listening systems before printing it is universally considered a smart move.

A second piece of advice is that, whenever possible, it's well worth avoiding mixing on headphones alone, as even the most 'pro' cans still don't behave in the same way as a pair of speakers and therefore can't be trusted as a sole monitoring source. However, more and more laptop musicians are trusting in headphones as a primary monitoring solution and even for studio musicians, multiple monitoring systems are beyond the financial means of amateur and semi-pro studios.

So, Focusrite have provided a neat solution – a dedicated playback interface which uses impulse responses and modelling to provide Virtual

Reference Monitoring, or VRM for short.
Genius, or mere gimmickry?

VRM'ed

The VRM box itself comprises two key ingredients. Firstly, the device itself – an attractive black and grey seven centimetre square with a depth of just three centimetres – clearly, this is designed as a palm-sized device to take with you, though its rubber feet also make it perfect for sitting atop your studio controller keyboard.

Connection-wise, VRM box offers a USB cable to directly monitor your computer's output, as well as a S/PDIF connection if you'd rather slave a signal from your audio interface. Apart from then plugging in your headphones and setting a listening level courtesy of the sleek silver alpha-dial on VRM's top surface, it's then over to the VRM software to pull the monitoring strings.



This is achieved via the dedicated VRM application, firstly by choosing your listening environment: Professional Studio, Bedroom or Living Room. Within these categories, a drop-down menu on the right then allows you to pick your desired speaker pair, with the Pro Studio option providing models of classic studio monitors including Japanese White Classic (an NS-10 algorithm), KRK RokIt6 and VXT8 models, Auratone, American Passive, British Studio, Genelec 1031A, plus Adam S2.5A and Rogers and Stirling LS3-5A models.

The Bedroom algorithms include flat-screen TV, computer desktop and two vintages of hi-fi speaker, while the Living Room provides a shorter list with models from the first two categories. All monitor options have been encoded from impulse responses taken from the speakers listed, while the environmental side of VRM, through the three listening spaces, has been constructed from spatial modelling.

Valuable resource machine

Does buying VRM mean that you don't need a pair of high-quality monitors? No. Does it provide an opportunity to test your mix through a series of modelled systems and environments? Yes, and as such, VRM provides a valuable resource, both for those who monitor on headphones and for the rest of us who enjoy the reassurance of varied monitoring environments, even if they are emulated. If this technology has piqued your interest and you're also at the stage of choosing a new audio interface, it's well worth checking out the Focusrite Saffire 24 DSP, which contains the same technology onboard.

All in all, VRM is a well priced, fairly unique concept which will give you fresh perspective on a mix that a single monitoring solution may miss. See what the fuss is about by checking the SoundCloud link below. **FM**

FutureMusic **VERDICT**

Attribute	Percentage of Respondents
BUILD	80%
VALUE	70%
EASE OF USE	60%
VERSATILITY	50%
RESULTS	40%

A unique concept that's a powerful resource for headphone mixers.
Listen here: <http://bit.ly/fbfbdAt>

If you hit the notes, we'll provide the backing

Create a sharp website in minutes flat



from
£4.99
a month

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www.123-reg.co.uk/sitefusion

123-reg.co.uk



WHAT IS IT?

Soft synth plug-in recreation of a classic.

CONTACT

Who: SonicProjects
Email: info@sonicprojects.ch
Web: sonicprojects.ch

HIGHLIGHTS

- 1 Oberheim-inspired VST based mainly on the classic OB-X analogue poly synth
- 2 Updated features borrowed from other synths such as Roland Jupiter-8 and Sequential Prophet-5
- 3 New trimpot tuning options recreate the unique character of discrete analogue circuits



SonicProjects OP-X Pro II | \$179

Oberheim's analogue synths are undisputed vintage legends. **Greg Scarth** checks out a virtual emulation of their classic sound

Oberheim's range of 1970s and '80s analogue synths are rightly considered classics, but they've been

almost completely ignored by software developers. It's somewhat baffling that you can take your pick from dozens of Minimoog emulations but SonicProjects' OP-X is the only major Oberheim clone on the market.

OP-X is primarily based on the Oberheim OB-X but what makes it more interesting is that it's not just a straight clone. The latest version offers a number of updated features that make it a match for any vintage emulation.

Synth architecture

Released in 1979, the Oberheim OB-X built on the success of the SEM and its

polyphonic stable-mates, eventually spawning the updated OB-Xa and OB-8. SonicProjects' OP- plug-ins are based on the OB-X, but with a number of updates which bring it crashing into the 21st century. Pro II offers far too many subtle tweaks to the OB-X formula to go into detail here, but the filter section is a perfect demonstration of SonicProjects' forward-thinking approach. The OB-X's 12dB/oct low-pass filter offered a big, fat sound quite distinct to the likes of Moog or ARP, but Pro II makes things even more versatile with the addition of the state-variable features of the SEM's VCF, a 24dB/oct mode and a switchable self-oscillation mode.

This kind of attention to detail pays dividends when it comes to the synth's

sonic capabilities. Just like the original synths which inspired it, OP-X Pro II is capable of producing a wide range of sounds, but excels at pads, warm strings and bass. In addition to all the classic sounds that you'd expect to find hiding in the presets, OP-X also performs surprisingly good impressions of a number of other synths, from the Roland Jupiter-8 which inspired its invertible filter envelopes to the Sequential Circuits Prophet-5, which offered up a variety of filter modulation options. Later Oberheim synths were based on Curtis chips, but the OB-X famously featured discrete components in every part of the signal path.

In theory, each of its voice cards were identical, but the manufacturing tolerances of discrete components invariably meant that minute differences existed between each voice. OP-X's separate voice design (SVD) features capture that analogue spirit in ingenious fashion, offering virtual trimpots to adjust voice tuning, envelope decay and release time and portamento rate. The trimpots are a fascinating and genuinely useful feature, allowing you to move from perfectly even calibration to extreme variations between each of the synth's voices. When combined with the basic but usable delay and reverb effects and the powerful arpeggiator, it's a highly versatile sound engine.

PRICING

VocalLive app
£Free – £12

(depending on version and
in-app purchases)

SPECS

Type: Condenser electret

Polar pattern:
Unidirectional/cardioid

Frequency Response:
100Hz – 15kHz, -3dB

Maximum sound pressure
(at three sensitivity levels):
120dB/90dB/75dB

Distortion: 3% THD at
120dB, 1kHz

Works with iPhone, iPod
Touch, or iPad (separate
iPad version of VocalLive
coming)

Mac or PC with iTunes
required to purchase or
backup iOS device content

IK Multimedia

iRig Mic | £50

The list of what musicians can't do on their iPhone gets shorter by the minute. **Martin Delaney** experiences mobile vocal processing

WHAT IS IT?

Microphone, and vocal
processing app combo for
iOS devices

CONTACT

Who: IK Multimedia
Tel: +44 (0)800 0934066
Web: ikmultimedia.com

HIGHLIGHTS

- 1 A dedicated mic and voice processor for iOS is just inherently cool and useful
- 2 The iRig Mic will work with any compatible iOS app, not just VocalLive
- 3 Voice processing works surprisingly well, given it's a mobile device

IK Multimedia must love the iOS music scene pretty bad, what with the Amplitube guitar apps, the iRig guitar interface, the iKlip iPad mic stand adaptor, and now, the iRig Mic and VocalLive app.

The iRig Mic is a condenser electret microphone, with a nice solid metal shell and grille, and built-in windshield. It comes across as a 'real' microphone, although the hard-wired cable ends in a jack plug for the iOS device headphone socket, and minijack stereo out for headphones. VocalLive is a voice processing app that works with the iRig Mic, but you're not forced to use them together – the mic works with any

compatible app, and VocalLive works with any compatible microphone.

Mic and the mechanics

VocalLive's setup panel covers input and output levels, feedback protection, latency, and a noise filter. Twelve effects are included – some are vocal-specific, like pitch correction, others are more 'universal', like EQ. VocalLive imports up to 50 songs from your device's iTunes library, so they can be played at different speeds for practice sessions.

The audio recorder handles just one track unless you purchase the four-track upgrade – the examples on the DVD were recorded using this.

The mic's solid construction pays off – it's reassuringly resistant to handling noise. There's a three-way sensitivity switch, which covers a lot of ground – we used the 'Mid' one to record Sarah's vocals. There was some hiss evident – the noise filter dealt with this, at the cost of losing some edge, however the damage was minimised by adjusting the filter sensitivity.

The workaday effects, like delay and reverb, are very usable, and the more out-there pitch effects are pretty impressive, especially for a mobile device. Presets are stored in banks (each preset stores up to three effects), and names like Xtreme Pitch Correction and Electro Vocals should tell you what to expect. You can save and name your own banks and presets, and use the four 'favourite' buttons as shortcuts.

Background audio

With background audio enabled, VocalLive runs behind other apps. You could use this for presentations, with Keynote for iPad, or at live shows, using an autocue app like iPrompt Pro.

Having said that, an integrated autocue function would be a good option, and the effect controls need to visually highlight the last one selected, so you can tell what the touch strip at the right is going to do next – that caught us out a few times. We went on to try the mic with other apps, including FiRe, which is a very good iPhone recorder, with more practical presets – this would be a good pairing for interviews or sample collection.

iRig Mic and VocalLive don't create a studio-quality experience, but as long as you have realistic expectations about what an iApp-based setup can deliver (with a fifty-quid mic), you won't be disappointed. This will be a great tool for practice, small gigs, and especially awesome for speech and presentation use. iOS continues to prove its place alongside serious music tools. **FM**

FutureMusic VERDICT

BUILD	☐
VALUE	☐
EASE OF USE	☐
VERSATILITY	☐
RESULTS	☐

Singers, presenters, and the merely pitch-correction-curious will all get something out of the iRig Mic.

The all new dedicated editing keyboards for
Pro Tools, Cubase and Logic

compatible with:

PC +



Available now for an
introductory rate of **£69.99**.
Usually **£99.99**

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coloured cable

Option to add coloured
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with over
25 years of experience
in the industry

Fast reliable service



NEUTRIK



WHAT IS IT?

Beat repeats and glitch-on-demand, using effects combinations and noise generators suitable for live performance.

CONTACT

Who: iZotope
Web: iZotope.com

HIGHLIGHTS

- 1 Instant access to live performance glitch/stutter/break effects via a MIDI keyboard, or incoming MIDI notes from a sequencer
- 2 Works great within Ableton Live
- 3 Individual timelines for each effect add movement and evolution



iZotope Stutter Edit | \$249

Martin Delaney asks if the Stutter Edit plug-in is just a BT-in-a-box effect, or if it has wider uses for real-world DJs and producers

It feels like stutter and glitch effects have been around forever. Originating as time-consuming edit jobs, they've become more accessible to the average joe, and Stutter Edit is the latest plug-in designed to provide instant access to those sounds. American DJ/producer/soundtrack guy BT has used custom software to create stutter effects in his live shows for years, and now that he's made a deal with iZotope, Stutter Edit is available to us all.

I used Ableton Live for this review – that seems the most likely candidate to use with Stutter Edit, although it'll work with any compatible host, as long as it can manage some basic MIDI routing (there's no standalone version of Stutter Edit, by the way). Add the plug-in to a track that's playing some audio, and then feed it MIDI notes from another track, or an external keyboard; the notes will trigger what iZotope call Gestures – preset effect combinations – and Generators, which add new

sounds/noise effects to the mix. Stutter Edit continually samples audio into a buffer that is accessed to create the playback-abusing effects. Stutter Edit looked strong on achieving complex-sounding effects with minimum effort, especially in live situations, but I couldn't help thinking that might lead to limitations in terms of flexibility.

MIDI routing matters

To configure Stutter Edit with Ableton Live, you need an audio track containing Stutter Edit and some audio clips, and a MIDI track that's routed to the audio track – this'll work in Session or Arrangement Views. Launch a clip, trigger some notes on your MIDI keyboard, or from a clip in the MIDI track, and you're off, ready to explore the factory banks and presets. At first it doesn't look like there are too many in there, but remember there are different Gestures or Generators on the keys within the preset (check out the Spacial Satellites bank, I liked that one), and yes, of course, there are some Richard Devine presets – it just wouldn't be the same without him! Each Gesture can use pans, delays, filters, and bit

crushers simultaneously, as well as buffer/playback tools – each effect also has its own timeline – a big part of the Stutter Effect sound.

Generators add another texture to the mix, with a library of noise effects that can play on their own, or on top of a Gesture. You can only trigger one Gesture or Generator at a time, but you can trigger one Gesture and one Generator together. On top of all of these effects there's a global filter, controlled by just one knob.

The filter acts as a high- or low-pass depending on whether you turn the knob clockwise or anti-clockwise, and goes off when returned to the original position. Strangely, with all of these effects, there's not much MIDI control – all you've got is the notes, the global filter, which defaults to pitch bend, and mod wheel to override the timelines.

Effects sequencer

Gestures and Generators can vary in length from 1/16th triplet notes to two

Gestures and Generators

In Stutter Edit lingo, a Gesture is a single key press that triggers an effects preset. It's not really as simplistic as it sounds, because each preset can contain several effects, and they all have their own little timelines, so there's a lot of room for evolving sounds. The timeline behaviours are editable, and you can watch them happening on screen, so you get a clear visualisation of what's

going on. Using one of Stutter Edit's few MIDI assignable controls, the Mod Wheel on your keyboard can override these timelines, so you have a bit of real-time control. I have to say that I liked the Time Warp/ Reversal bank. There's just something irresistible about audio going in the wrong direction... Try B2/ Reverser 12, and put it into Latch, then turn on the high- or low-pass

filters and toggle Palindrome Looping on and off. Nice!

Generators work along the same lines as Gestures, and have their own filter and delay effects, but they add noises, like 'Big 909 Crash' to the mix. I liked the Generators more once I started messing with the Release Modes to get more staccato effects... which isn't necessarily what they're intended for.

rhythmic values for audio repeats, and note pitches for the stutters – it's like using a step sequencer. Although you can only trigger one gesture at a time, it doesn't feel like a problem – it's possible to get enough going on inside a single preset, and besides, you could

Instant gratification

It's easy to be sceptical about the Stutter Edit hype – these aren't cutting edge sounds anymore, they're kind of retro, if anything. As I used it more, though, it transformed into a cool audio processor. The lack of MIDI automation

wasn't really an issue, because you can do so much with the effect timelines, the Gesture length and release settings, and the Stutter Matrix – I think

there's enough control there. For DJs, the idea is that you make your heavy tweaks in advance, then you get one-button instant gratification at the gig (as long as you don't mind carrying a keyboard). Outside of the software itself, the price is a problem – it's expensive compared to the competition, slick interface or not. That aside, if you're a DJ who wants a new arsenal of sound effects, or you're a programmer who sees this as an extra processing tool, or a soundtrack composer who needs fast 'genre' results, you'll have fun using Stutter Edit. **FM**

Generators add texture, with a library of effects that can play on their own, or on top of a Gesture

bars, and the first things to play with on each preset are the Gesture Length, Release, and Grid settings – these determine how long the effect stays active, and are very important for changing the sync'd feel of the effects. A latched effect stays on indefinitely, and that's cool because it gives you time to work those effect parameters. The Stutter Matrix area is where things get yet more interesting, as you set

always have another track with another instance of the plug-in!

Once the 'instant BT' vibe wore off, I really liked Stutter Edit as a drum processor – sending notes from a MIDI clip to trigger synced effects on a kick drum within a drum loop, then resampling it. The same technique also worked great with live vocal and guitar inputs – maybe iZotope should make more of that.



Generators create new sounds while Gestures effect what's playing through the plug

SPECS

System requirements

PC: Windows XP, x64, Vista, Win 7

Mac: OS X 10.5.8 or later

Stutter Edit is an AU/VST/ RTAS plug-in, and needs a host DAW such as Ableton Live, Logic, Reaper, or ProTools 7.4+

ALTERNATIVES



Native Instruments Reaktor 5

379Euros

Die-hard DIYers will prefer to use Reaktor to configure their own, entirely individual effects devices – and with full MIDI control. See also: Max for Live.

nativeinstruments.com



Sugar Bytes Artillery

149Euros

Very comparable to Stutter Edit, though this 'effect keyboard' has a standalone mode with audio player.

sugar-bytes.de



Native Instruments The Finger

69Euros

NI again, at the cheaper end of the price range. The Finger is another keyboard-driven effects device, that can run within the free Kore Player.

nativeinstruments.com

FutureMusic VERDICT

STABILITY



VALUE



EASE OF USE



VERSATILITY



RESULTS



Stutter Edit is expensive and produces a limited range of sounds, but it is a lot of fun to use!

Korg microKey | £69

Three octaves of Korg quality packed up and ready to go. **Daniel Griffiths** tackles yet another addition to the portable controller market

WHAT IS IT?

A portable mini-key controller from Korg

CONTACT

Who: Korg UK
Tel: +44 (0)1908 857100
Web: korg.co.uk

HIGHLIGHTS

- 1 Great action and build
- 2 Built-in USB hub
- 3 Octave up/down lighting

SPECS

- USB-powered
- 37 velocity-sensitive mini keys
- Natural touch keyboard
- Octave shift and key transpose
- Pitch bend and mod wheels
- Dual USB ports
- Plug and play compatibility for Mac and PC

Dimensions:

565 x 139 x 54mm

Weight:

1kg

Sure, you can just tolerate the Caps Lock Keyboard or draw random notes and drag them into tunes, and many laptop

music-makers do just that. But anyone with a keyboard tucked up at home in front of their monitor is going to start missing their ivories as soon as the plane powers up.

The solution is a portable keyboard and after going truly bare bones with their nanoKey, Korg have heaped on the love and produced the microKey – an intriguing halfway house that explores the trade off between features, portability and playability.

Immediately upon unboxing the black, sleek slab we were dead set on living the dream and using it alongside our beloved Korg iMS-20 iPad app. How cool would it be to have what is essentially a fully functional MS-20 (complete with three-octave keyboard) in your backpack?

However, our dreams were dashed soon after plugging in Apple's USB camera connection kit as it draws too

much USB power to function, leaving your iPad blithely unaware that anything is going on down below. Darn. But then there's always Korg's smaller nanoKey for this purpose. Watch out for the new nanoKey II review in *FM* soon.

Port power

All told the seemingly basic microKey is a little greedy for power. We tried it on a four-port USB hub full of dongles. Nada – but a low power warning on screen.

It's main USB port all the way for this one with a power light showing that you're up and running and Core Audio drivers (on Mac) mean its ready to go the instant you plug in while a simple install on PC addresses issues of multiple programs seeing the 'Key simultaneously.

But that power draw is there to fuel one of microKey's advantages over the competition. At the left side is a pair of USB ports so rather than placing the 'Key on a hub, use the 'Key as your hub instead.

We successfully ran keyboard, mouse and a USB external HD via the microKEY, all devices working on a single port out of a MacBook. We've been pestering USB keyboard makers for years to add some 'dongle ports' and this is the first 'board to do it. And full marks for including nice stiff full-size pitch and mod wheels and a brilliant

octave up and down system. It sounds like a minor deal but stepping up and down using the two buttons below the wheels causes them to cycle through green, orange, red and flashing red to show just how far out of whack you've moved the range.

It's a great system, borrowed from their popular microKorg synth, and it extends the range of the controller way beyond the three octaves and means no more on-stage surprises.

Key features

It's amazing how quickly you get used to that smaller key size – Korg's micro series has certainly given them a headstart when it comes to portable mini controller quality. The action feels reassuringly solid being the same board as on the microPiano, Station and Korg XL. It's tiny, but at the same time it's definitely 'pro'.

It's a shame there aren't more controls given the size of the plastic going spare above the keyboard. In comparison Akai's MPK Mini (reviewed in *FM236*) packs knobs and pads too but then only features two octaves. But the Korg is ahead of the game in terms of build, action and that USB hub. It seems that it will be the octave restrictions that will narrow down the decision for you. But hey, you get a copy of Korg's M1Le plug-in instrument in the box too – not a bad sweetener considering the price. **FM**

FutureMusic **VERDICT**

BUILD



	VALUE
--	-------



EASE OF USE



VERSATILITY



RESULTS

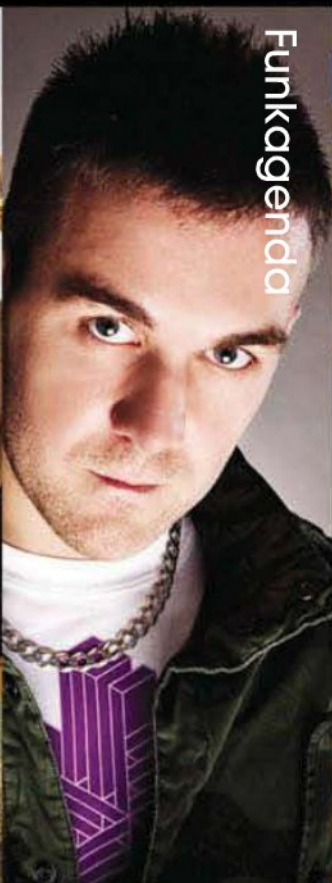


Built-in hub and great build makes this an ideal pro-quality travel companion keyboard.





Freemasons



Funkagenda



Pete Tong



Deadmau5



Joshua Blair and Mark Ronson

The only interface for the job

ORPHEUS
Professional FireWire
audio interface



When looking for a high quality I/O solution. There is only once choice.

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

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

Contact us now to arrange *YOUR* Orpheus demo.

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UK +44 (0)1353 648888 USA +1 973 983 9577



WHAT IS IT?

A major update to Spectrasonics' flagship synthesizer

CONTACT

Who: Time+Space
Tel: +44 (0)901 8800002
Web: spectrasonics.net

HIGHLIGHTS

- 1 'Orb' sound design is genuinely thrilling
- 2 iPad remote useful for studio and live users
- 3 So much easier to see your editing choices via 'zoom' re-vamp

PRICING

V1.5 update:
£Free
to registered users
Omni TR iPad app:
£Free



Spectrasonics Omnisphere v1.5 Update | £329

Spectrasonics' Omnisphere was a powerful synth already but **Jono Buchanan** discovers that the 1.5 update takes it into the stratosphere...

While there are plenty of third-party synth plug-ins available on the market-place today,

it's fair to say that few pack as much sonic punch and are capable of quite such an array of sounds as Spectrasonics' Omnisphere.

I was lucky enough to run the rule over this synth behemoth when it first landed and was staggered by its capabilities. You'll recall that the 'oscillator' content for sound development in Omnisphere contains the famous burning piano, sampled

lightbulb filaments and a wide range of other leftfield sound sources and, combined with a monstrous synth engine, this gives Omnisphere a unique, 'organic' sound.

A major Omnisphere update is now available for free to all registered users and it's significant enough that we decided it was worthy of a review in its own right... So what's new?

The Orb

The Omnisphere makeover is most dramatically represented by the 'Orb' which is a circular real-time sonic

manipulation window, representing a kind of 'radar' read-out, complete with a centralised target. The original patch lies at the centre of this target, so by moving the point which you'll find there away from the centre, around the circles, parameters relating to the loaded patch begin to change, producing a constantly evolving set of sonic variations.

What's great is that the Orb has been configured for every single patch in the library with optimum settings to produce radical or subtle sonic manipulation depending on what seems most relevant for the sound you've loaded. Better still, however, if you don't like the sonic variations offered by the default Orb parameters, you can click the Dice button, which 'rolls' in a set of replacements, providing a second collection of assigned parameters.

Indeed, you can keep doing this until you find a collection of parameters which allow you to create the variations you can hear in your head. Suffice to say that, while preserving the sonic start-point of any program, this feature alone provides hours of intuitive sound design capabilities.

iPad support

For iPad owners, the news gets even better. Orb is also available via the Omni TR (Touch Remote) iPad application, which can be downloaded for free. When installed, this seeks out

Omnisphere over Wi-Fi and then allows for all Orb action, alongside functions such as patch browsing and loading to be carried out remotely.

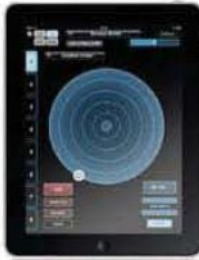
Manipulating Orb parameters with your finger rather than a mouse makes sound design much more fun for starters but the other appeal will be for live users – Orb is attractive and could easily be patched into a video display for real-time manipulation by DJs and performing producers.

Omni TR allows for greater control than just Orb manipulation – you can latch sounds so that, for instance, animated sequence sounds keep playing, so if you're using Omnisphere live in multi-mode, you can build up a sequence of sounds, all of which will sync, before moving on to control their tone qualities via the Orb.

Also new is a zoom feature for existing Omnisphere pages which require greater screen acreage, such as the Harmonia page. Harmonia allows you to create monstrous patches of up to 10 sound sources but until v1.5, editing of these has been a touch fiddly

Now With Added iPad App

Spectrasonics also deserve credit for taking seriously the feedback they've received from users – this might sound an obvious thing to do but it's extraordinary how many companies either don't request or completely ignore the desires of their faithful public. On the wishlist from Omnisphere users was a hefty raft of additional patches despite the colossal library which already ships with the program, so v1.5 contains



programs. Updating the browsing options to access this patch content was another popular wish and this too has been addressed with a new five-column browser that is easier to read and which contains enhanced search criteria. Interaction was another key demand and this has been addressed both with The Orb and with the free iPad app which brings performance to Omnisphere and dramatically increases its live usability.

an additional 780 patches that help showcase the new synthesis engine, cranking the total patch list to over 8,000 sounds contained in 5,000

reduction at the oscillator stage so the options for darker, harsher and grimmer sounds built from scratch is extended. This goes further, as you can modulate these effects, meaning that if you use the arpeggiator as your source – for instance, you can create buzzy, gritty

them in real-time via a series of user controls. Options here include Grain Depth, Intensity, 'Shooting', Spread, Pitch Grains and so on, all of which affect a different aspect of the rearranged sound. The results can be extraordinary and comprise a sound

designer's dream come true, as they can either radically warp or add subtle flavours to sounds such as unpredictable vibrato, wah or tremolo.

Omnisphere was already a killer plug-in but this update dramatically increases its appeal yet further and for registered owners, it's a no-brainer to immediately download and update. The more significant question is whether this update will attract new users. Bearing in mind the price remains the same yet the capabilities have increased dramatically, it certainly deserves to. If raw synth programming is your thing, there's enough here to last you a lifetime. **FM**

If raw synth programming is your thing, then there's enough in Omnisphere to last you a lifetime

– an independent, larger page is therefore very welcome.

Effects

New effects are included in Omnisphere via the Reducer and Crusher options via the new Waveshaper module too. These allow bit reduction and sample frequency

running sequences which are perfect for glitch music and darker TV-thriller type sounds in particular. If more extreme sound design is your thing, the Granular options are for you.

Again assigned to its own dedicated zoomed page, this employs granular synthesis techniques to break sounds up into tiny pieces and then rearrange



Create monstrous patches of up to 10 sounds at once, now with zoom functions

SPECS

Harmonia: New zoom page shows all Harmonia parameters per layer adding up to 10 oscillators per patch with new independent modulation options

Waveshaper: New zoom page with new processing modules including polyphonic 'Crusher' and 'Reducer' sections, with 'Force' and 'Animation' controls

Granular Synthesis: New 'Speed' and 'Position' modes. New zoom page with new 'Granular Visualizer'

Patch Library Update: Over 700 brand new patches gives Omnisphere over 5,000 patches and 8,000 sounds overall

Support for MIDI devices which send polyphonic aftertouch

'Clone Part' allows easier editing/setup with multi-channel MIDI controllers

New 'MIDI Learn' hardware control mode follows Live Mode selection

Modulation Envelope points can be key-command snapped to semitone when modulating pitch

User-assignable Legato Interval rule added

ALTERNATIVES



NI Reaktor 5

379 Euro

Reaktor can do it all – synth, samplers, effects and more. Its modular approach requires a steeper learning curve, though.

nativeinstruments.com



NI Massive

179 Euro

Massive is more immediate than Reaktor but still contains a raft of options.

nativeinstruments.com



Camel Audio Alchemy

£179

Multiple synthesis types and sample import, through which you can shape sounds in endless ways.

camelaudio.com

FutureMusic VERDICT

STABILITY

VALUE

EASE OF USE

VERSATILITY

RESULTS

An already powerful synth goes interstellar. Registered users – get it now!

ADAM A8X Active Monitors | £1,298

With a new tweeter and cabinet design ADAM revamp their A8. **Stuart Bruce** investigates...

WHAT IS IT?

Near- to mid-field studio monitors with ribbon tweeters

CONTACT

Who: Adam Audio UK
Tel: +44 (0)1992 525 670
Web: adam-audio.com

HIGHLIGHTS

- 1 Excellent high end response
- 2 Good stereo imaging
- 3 Very well constructed

SPECS

Specs
Tweeter: X-ART Ribbon Tweeter
Woofer: 8.5" Carbon / Rohacell / Glass Fibre construction
LF Amplification: 150W continuous
HF Amplification: 50W continuous
Controls
Input sensitivity: Off to +14dB
Tweeter Gain: +/- 4dB
HF Shelf: > 5kHz +/- 6dB
LF Shelf: < 300Hz +/- 6dB

Data
Freq Response: 38Hz to 50kHz
THD: 90dB/1m>100hz <1=0.5%
Max Peak Acoustic output at 1m per pair: 120dB
SPL Sine Wave 100Hz to 3kHz @ 1m: 112dB

Dimensions:
255 x 320 x 400mm
Weight:
13kg

German monitor manufacturers ADAM Audio have built themselves a solid reputation with their

range of active monitors all of which feature their very own ART Ribbon tweeters and midrange units. The new AX and SX ranges feature the X-ART, a further development of this design.

DAM well-made

The A8X is the biggest of the AX range and is intended as a near or midfield monitor. It is a two-way system with an 8.5" bass driver and ribbon tweeter and the cabinet is a twin-ported design, which looks calmly professional and well put together. My one surprise on taking them out of the box was that they felt much lighter than I expected. If you are going to be moving these around a lot, it could be of great benefit but somehow I expected them to be heavier.

Aside from the front-mounted power switch and master level knob all connectors and controls are situated on

the back panel. ADAM have sensibly given the option of balanced and unbalanced audio inputs accessed via XLRs or phonos.

I connected using XLRs fed from my SPL monitor controller and the first thing I noticed was that in comparison to my other monitors the overall level felt a bit low. Even with the front-panel level controls set full they still came out a fair deal quieter than my Bryston powered KRK 7000Bs and my Sonodyne 100s. A few more dBs of gain wouldn't go amiss for those of us trying to balance between several pairs of speakers.

Mission control

There are three back-panel controls to help you tailor the sound to your own personal taste and to the needs of your room. These consist of a high and low shelf with variations of +/- 6dB and a separate tweeter level control with +/- 4dB to work with.

The crossover point is at 2.5kHz so the tweeter level gives an all but linear

control of the frequencies above this point. The high and low shelves are set at 5kHz and 300Hz respectively so between the three controls, you have a fair amount of variation to suit your room and taste.

High to low

My first impression of the A8Xs was positive. I have used ADAMs in studios before and was always a bit suspicious of the high-end response, finding it too extreme and a little unreal especially in the very high frequencies. But these new X-ART tweeters sound stunning. Smooth and clear with fantastic detail and great imaging. Where previous incarnations have felt a little overblown, to me these are just right.

However, with every style of music I put through them, I kept coming back to the same conclusion. While the top sang out with beautiful detail, the mids and lows never really came into balance. I particularly felt that the mid-range really lacked any presence or bite. In comparison to all the other speakers I heard them against, they just didn't have enough detail in the 150Hz to 2kHz range.

The result is that, although very pleasant to listen to, everything comes out sounding very smooth and hi-fi. Balancing and EQing on them therefore proved to be hard work and in certain circumstances a little confusing. It felt to me that the extended low end that that 8.5-inch bass driver delivered and the bigger cabinet space somehow tipped the balance for the mids.

With the crossover set at 2.5k the bass driver needs to have a very good mid response and maybe it's just being asked to do too much. But those tweeters do sound great! We've loved the smaller units in the new AX range and they represent great value too but this big well-built two-way is all about the treble and bass. **FM**



FutureMusic VERDICT	
BUILD	■■■■■■■■■■
VALUE	■■■■■■■■■■
EASE OF USE	■■■■■■■■■■
VERSATILITY	■■■■■■■■■■
RESULTS	■■■■■■■■■■

Sturdy with excellent HF detail and imaging, let down by their mid range response.

MOTU
motu.com

HYBRID TECHNOLOGY



Introducing the 828mk3 Hybrid 28 x 30 Firewire • USB 2.0 recording system

The new 828mk3 Hybrid audio interface has both FireWire 400 and USB 2.0, so you can connect it either way to any current Mac or PC and enjoy pristine audio quality, zero-latency on-board mixing, studio grade effects, exclusive V-limit™ clip protection, rock-solid DDS™ clocking, bullet-proof drivers, renowned reliability, and award-winning sound.

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Hybrid technology in a mobile interface...

The UltraLite-mk3 Hybrid
10 x 14 FireWire • USB 2.0 audio interface



Compatible with
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Hybrid
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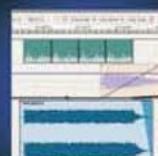
16-bus mixer
for monitoring
and live mixing

Modeled EQ,
compression,
and reverb

Stand-alone
operation with
LCD control

Tuner and
advanced audio
analysis tools

AudioDesk®
workstation
software





Elysia Alpha Compressor Plug-in | £228

Mastering quality compression within your DAW?
Marco Migliari enters the digital realm of esoteric audio and unveils Germany's finest



laptop. The Master plug-in is a dual-mono design, and familiar controls are laid out on the top row – threshold, attack, release and ratio. Both attack and release have a useful 'auto fast' option that tracks the dynamic content of the material – an attack set to 100ms will automatically dip to lower values for fast and loud transients and then return to nominal.

An important option is the Feed Forward button, which radically changes the compressor's topology by moving the sidechain feed from before the compression stage to after: this turns the Alpha Compressor into a much harder-sounding audio processor and yields surprising amounts of gain reduction and even negative ratios, and also influences attack values – a sort of 'overdrive' button when more extreme behaviour is needed.



WHAT IS IT?

Stereo Mastering Compressor plug-in with built-in audio processing

CONTACT

Who: Unity Audio Ltd
 Tel: +44 (0)1440 785843
 Web: elysia.com

HIGHLIGHTS

- 1 Mid/Side processing
- 2 Niveau and sidechain audio filters
- 3 Parallel compression mixer

Elysia are a young German company, made up of a partnership between a former SPL designer (responsible for the Transient Designer, among other projects) and a marketing guru, specialising in hi-end professional audio processors.

Discrete class-A circuitry, complete absence of integrated devices and unusual topologies are some of the common highlights for Elysia's hardware products.

The hardware Alpha Compressor fully embraces the company's esoteric beliefs and is intended for top-end mastering studios – its RRP price of over £8,500 clearly makes it a wild dream for most. The software version, programmed by Brainworx, is surprisingly affordable and aims at delivering the same uncompromising quality and functionality as its slightly higher-priced hardware counterpart.

Test drive

The Alpha Compressor plug-in requires an iLok account and hardware dongle to activate it and run it in your DAW. There are two versions of the plug-in you can choose from: the Alpha Mix, available both in mono and stereo format, and the Alpha Master that is stereo only.

The Mix is effectively a stripped down version of the Master. The plug-in features a nice and easy to read GUI, painstakingly modelled on the looks and functions of its hardware counterpart, with the only notable difference of the Transformer button, replaced by the Warm button on the software version.

Basic controls

At first sight, it's hard not to be overwhelmed by the sheer number of knobs and buttons – the GUI takes up most of the available screen width on a

Equalisation, sidechain and output

The middle row hosts two by-passable sets of equalisation controls: a clever Niveau filter (see the box on the next page for more) with positive/negative gain adjustment and frequency range (including a handy x10 button) and a filter for the compressor's sidechain – this latter one continuously adjustable into either a low-pass or a high-pass with variable attenuation. Each channel also features a make-up gain control and a simple matrix to enable 100% dry (Direct) or 100% processed (Compressed) signal. If both buttons are pushed, a Mix control allows to blend dry and compressed signal for parallel processing.

Just like the hardware unit, two further options are available on the output of each channel. The Soft Clip control acts like a limiter but instead of

squaring out the output in a brickwall fashion it introduces a subtle saturation that results more in a 'rounding-out' of the waveform. This allows to push the make up gain by several dB more with little change to the sound, until extreme settings make the distortion more apparent.

The 'Warm' button replaces the switchable audio transformers that are present on the hardware unit. This option has some impact on the music as the harmonic content is modified and the 'warming' effect takes place, though still well within the realm of mastering subtleties.

The Channel Link button gangs all mirrored controls on both left and right channel and also applies the resulting compression to both – this means that the channel with the loudest signal will impose its compression values to the other. The MS Mode button turns the Alpha Master into a Middle+Side mastering plug-in (see box to the right). In this mode, the link button is not effective on the Niveau filter, the mix and gain stage as well as the Warm button. This is to allow some degree of tweaking between channels.

Alpha Mix

I started off using the Alpha Mix plug-in, as it's easier to get a sound using first the simplified version. Three functions from the Master version are removed here – Niveau filter, Soft Clip and M+S Mode. The plug-in is a joy to use, and a particular credit is due to the Auto Fast Attack and Release

Niveau Filters and M+S Processing

A Niveau filter, also known as a tilt EQ control, simultaneously boosts the frequencies above (or below) the selected one while cutting the ones below (or above). While not useful for deep sound sculpting, in mastering such EQ can prove invaluable as it gives the option to modify the mutual relationship between bass and treble with one knob, so that even a small change can make an audible

difference. Middle and Side is a stereo mastering technique that originates from the popular M+S recording technique: a coincident pair of microphones – one cardioid (Middle) and one figure-of-eight (Side) – are placed at a 90° angle with each other, the cardioid one facing the sound source. Stereo information is then decoded with the equations: Left=M+S and Right=M-S. In a mastering environment, M+S

information can be retrieved from a standard L+R pair using the reverse equations: Middle = L+R and Side = L-R. This allows to process centre and lateral information separately, before recombining them. The M+S button on the Alpha Master plug-in extracts the M+S information, places it in the left and right channel respectively and automatically re-combines them into stereo after processing.



distorted. When I moved up to the Master version, I truly enjoyed the M+S option – I'm familiar with M+S compressors, but the Alpha Master makes it an easy choice with plenty of give for even the most awkward settings. Also notable is the ease of use and musicality of the Niveau filter that make it a simple and effective tool.

The Soft Clip option sounds good at moderate settings, but I found that when pushed too hard it gives out a

section with the Make Up gain – an auto-gain option for the clipper would be quite handy.

Conclusion

This plug-in is a real achievement for its raw musicality and sheer number of unusual but much needed functions. While not recommended to those that need a simple fix, I cannot think of a better mastering compressor plug-in or indeed for mix buss compression.

Due to its oversampling design, it is fairly power-hungry so I would not recommend it for repeated channel strip use, though it would feature

well on selected instruments. **FM**

The Auto Fast Attack and Release options are deservedly the best I've heard in any compressor

options, which are deservedly the best I've heard in any compressor.

There's a smoothness of operation here that can easily range from subtle, invisible compression to heavy and

raspy sound that isn't always usable as a distortion trick. I also found it difficult to maintain a given balance between channels while in M+S Mode while trying to push level into the Soft Clip



Alpha Mix works in both mono and stereo modes

SPECS

System requirements

PC: Intel compatible CPU (at least 1GHz), 256MB RAM, Windows 2000 or higher, Pro Tools 7 or higher or a VST compatible host

Mac: Intel or PPC CPU (at least 1GHz), 256MB RAM, Mac OS X 10.4 or higher, Pro Tools 7.0 or higher or a VST/AU compatible host

RTAS / TDM / AU / VST / VENUE compatible DAW

iLok USB dongle

ALTERNATIVES



iZotope Ozone 4 \$250

Complete mastering package, with multi-band EQ, compression, limiting, stereo spread, reverb and harmonic exciter. Complex but comprehensive one-stop mastering solution, including M+S processing and 64-bit internal buss.

izotope.com



Cytomic The Glue \$99

A good sounding buss compressor, with built-in sidechain and mix control for parallel compression. Won't do mastering, but great for mixing.

cytomic.com



PSP MasterComp \$249

There are two plug-ins in this package, one for mixing and one for mastering. Another 64-bit processor with exceptional sonic qualities.

pspaudioware.com

FutureMusic VERDICT

STABILITY

VALUE

EASE OF USE

VERSATILITY

RESULTS

Powerful mastering-quality plug-in featuring some unusual and exciting functions.

Korg microPiano | £299

The latest addition to Korg's popular 'micro' range is the tiny microPiano. Is it as good as it looks?

Dan 'JD73' Goldman gets tinkling

WHAT IS IT?

A mini-keyed portable electric piano featuring sounds from the Korg SP-170

CONTACT

Who: Korg UK
Tel: +44 (0)1908 857100
Web: korg.co.uk

HIGHLIGHTS

- 1 Portable and looks great
- 2 Some good pianos and electric pianos onboard
- 3 Surprisingly easy to play

SPECS

Keyboard:
61-key Natural Touch
mini-keyboard (velocity
sensitive)

Sound Generator:
Stereo Sampling System

Maximum Polyphony:
120 notes / 60 notes
(Stereo)

Sounds:
61 Total (includes 25 Short
Phrase Sounds)

Sound Programs:
Pianos: 12 Total
Electric Pianos: 5 Total
Clavs: 2 Total
Harpischords: 3 Total
Ton Pianos: 2 Total
Vibraphones: 2 Total
Marimbas: 2 Total
Celeste: 1 Total
Kalimbas: 2 Total
Steel Drums: 2 Total
Musical Boxes: 3 Total
Organs: 9 Total
Flutes: 2 Total
Accordion: 1 Total
Strings: 5 Total
Harps: 2 Total
Bells: 6 Total

Demo Songs:
40 songs

Jacks:
Headphone/line output
(stereo mini), Damper Pedal
Jack (for use with an
optional damper pedal)

Dimensions (W x D x H):
782 x 291 x 140mm

Weight:
5.2kg

The mini-keyed microKorg has become hugely popular since its launch back in 2002 and has since spawned the

microSampler, microStation and the upgraded microKorg XL. This latest microPiano builds on this now familiar 'micro' concept but instead applies it to piano, electric piano, strings and various other percussive sounds – steel pans or celeste anyone?

It feels solid enough to instill confidence, yet is lightweight too. The mini keyboard is also surprisingly playable, to the extent that I would actually consider using this as a serious instrument at gigs and in the studio, though I wish the keyboard had more octaves for authentic piano playing.

Portapiano

Offering up 61 varied sounds – changed by holding the Sounds button and pressing any of the keys – the highlights include the piano, electric piano and the piano/string layers. They are great and inspiring to play, though many are too swamped in reverb. After a few moments with the microPiano, I felt

inspired by its simple concept and general sound and the fact that you can mess around with it just about anywhere (it can be battery powered too) is a massive bonus – this would be great to throw in the car or take on holiday.

It's a shame the other onboard sounds aren't as good or as usable, including celestes, a not so good clavinet, steel pans, vibes, toy pianos, pipe organs and some other phrases and demo songs. These in particular are unnecessary filler and to me cheapen the overall feel but I suppose they might appeal to the home piano market.

Much more useful and versatile sounds should have been put onboard for the money though. The built-in speakers are of adequate quality yet underpowered but opening/shutting the lid gets you some extra options in terms of projecting the sound.

However, pushing these speakers is not an option so for any gigging you'll need to connect it to a powered speaker or PA, though you could mic it up... Unfortunately, having only a 3.5mm output (which doubles as a headphone jack) makes it a pain to connect to any

pro gear. A proper jack output is sorely missed and a big oversight.

Also – get ready for this – no USB port and no MIDI. As such the microPiano is therefore a closed shop, unable to integrate with other studio gear and computers. No matter how much you might love the sounds you're always going to have to play them. This is a missed opportunity when you consider the microPiano's price.

Micro machines

All in all the microPiano is a mixed bag. It generally sounds, looks and feels good and plays well but it falls way short in terms of connectivity, and is a pain to fit on a stand. Yes, it's unique and I'm sure it will find its quirky place at some gigs, in the home and as a convenient practice piano but it's a real shame that it won't be taken seriously by pros and as such sits rather uneasily with the rest of the fun and portable but undeniably useful and powerful Korg micro range.

While we admire its looks and enjoyed having it in the office, in the real world we'd always stump up the extra £80 and get a 'proper' microStation from Korg instead. **FM**

FutureMusic VERDICT

BUILD

VALUE

EASE OF USE

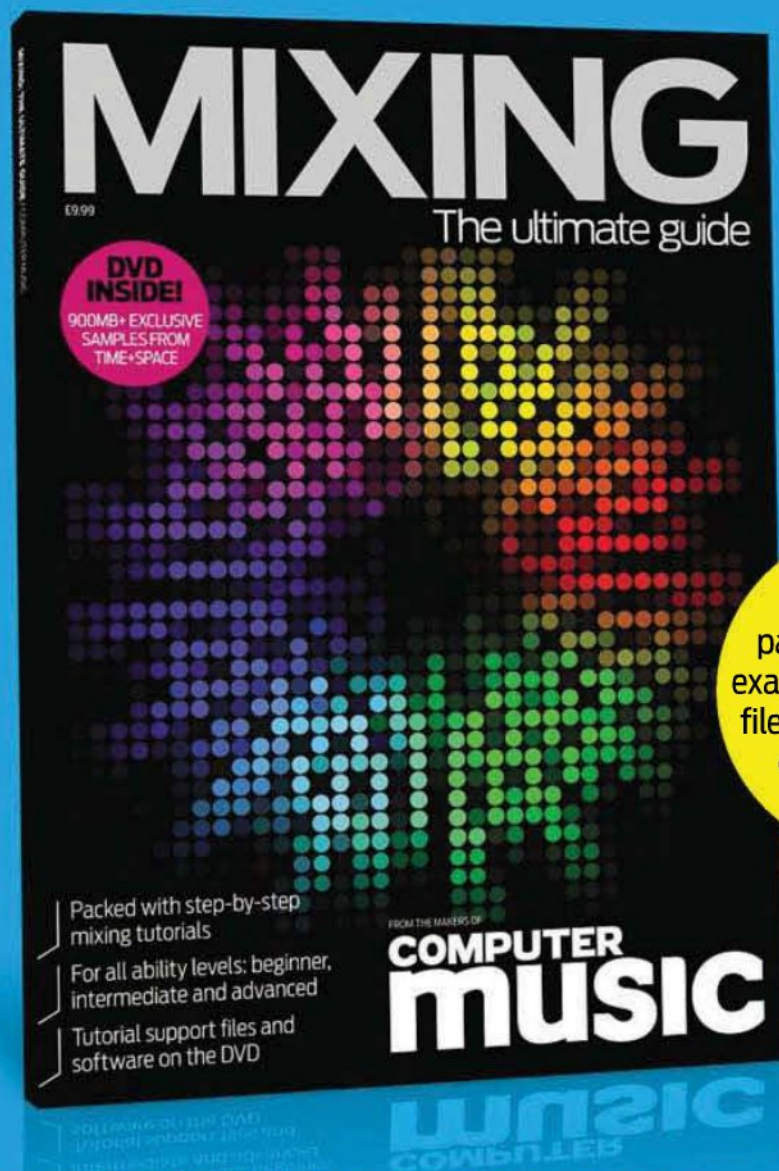
VERSATILITY

RESULTS

Some good sounds onboard but ultimately falls short on the connectivity and price front.



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WHAT IS IT?

Virtual recreation of the early '80s alphaSyntauri additive synth.

CONTACT

Who: Audio Damage
Web: audiodamage.com

HIGHLIGHTS

- 1 Software emulation of classic alphaSyntauri additive synth
- 2 Two wavetable oscillators each with 16 partials
- 3 Two LFOs each routable to nine modulation destinations



Audio Damage Phosphor | \$59

Audio Damage's latest emulates a forgotten '80s gem. **Greg Scarth** blasts off to alphaSyntauri

Over the last few years, Audio Damage have built a reputation as seriously eclectic developers,

releasing everything from versatile effects to modelled emulations of vintage gear. For Phosphor, Audio Damage have chosen one of the less obvious early '80s synths to emulate.

With most of the classic synths already recreated in software form, it's becoming increasingly difficult for software developers to find inspiration for retro-inspired products. The Syntari Corporation's alphaSyntauri may not be a household name, but it played a major role in bringing digital synths to the consumer market.

Partial arts

Just like the alphaSyntauri, Phosphor employs a relatively simple architecture

consisting of two wavetable oscillators (each with its own envelope generator) and two LFOs for modulation.

Rather than generating a harmonically rich square, triangle or sawtooth wave and then stripping away harmonics by filtering the signal, additive synths construct harmonically rich waves by adding together partials – sine wave harmonics of the fundamental frequency – in order to build up the sound. Phosphor's uncluttered interface belies its extremely flexible sound engine. In comparison to more modern additive synths, 16 partials may seem like it could restrict the synth's sonic range but, flicking through the presets, any fears are quickly allayed.

It's impressive to hear just how wide Phosphor's scope is – from warm bass to filthy leads, cold digital pads to clean

organs and keys, the plug-in proves adept at just about any task.

By default, Phosphor's output is significantly cleaner than the sound produced from the alphaSyntauri's 8-bit MusicSystem cards. However, if you're looking for a real taste of '80s digital grime, tiny Space Invader-style buttons enable a vintage lo-fi mode for each oscillator and control section, introducing aliasing and grunge to the signal and allowing the synth to offer an even more realistic impersonation of the original. It's a great option, adding grit and dirt to the sound without the need to resort to placing a bitcrusher or overdrive in the signal chain. The addition of a stereo delay section also allows for some handy echo processing, with each oscillator being fed to its own delay line and cross-feedback options to create ping-pong effects.

No artificial additives

Most of us are so familiar with analogue-style subtractive synthesis these days that any other method seems alien at first. As a result, judging Phosphor's ease of use objectively is slightly tricky. Editing is certainly nowhere near as complex as FM synthesis or as overwhelming as modular synths can be, but it does take a bit of getting used to the idea of building up sounds from partials rather than using filters to strip them down.

Phosphor's filters only affect the wet outputs of the delay lines, so the overall sound depends primarily on the oscillator settings. Unlike most additive software synths, the alphaSynTauri didn't allow the levels of individual partials to be automated and, likewise, Phosphor relies on the envelope generator to control each oscillator's overall amplitude rather than allowing each oscillator's harmonic content to change over time.

It soon becomes apparent that the smallest tweaks of the two oscillators and their respective envelopes can lead to complex, evolving timbres as the harmonic content of the output changes dramatically. The key to creating shifting, evolving sounds with Phosphor lies in setting slightly different amplitude envelopes for each oscillator and taking advantage of the various LFO modulation options. The cross-modulation options in particular are incredibly effective for creating interesting sounds. Go overboard and you'll end up with viciously aggressive distorted sounds and metallic frequency modulation effects, but apply just a smidgen of cross-mod to one or both oscillators and you'll easily find a sweet spot. It shouldn't take long to get the hang of the way the sum of the two oscillators is crucial and understand that even the most subtle adjustment of certain settings can have a dramatic effect on the overall sound.

Phosphor is a surprisingly versatile synth which is capable of producing some truly unique sounds



Phosphor's simple layout makes it easy to learn

Journey to alphaSyntauri

In 1980, the vast majority of synths were analogue. The first mass-market digital synths were still a few years away, while the majority of sample-based instruments such as the Fairlight and Synclavier were expensive for all but the most wealthy musicians.

The Syntauri Corporation's alphaSyntauri offered a much more affordable alternative to the astronomically-priced exotica. Rather than developing a fully custom hardware processing unit, the company instead chose to turn to the recently released Apple II Plus computer and its eight expansion card slots. Announced in 1979 and released the following



year, the alphaSyntauri setup offered 16-note polyphony, patch memory and velocity sensitivity, while later software updates would also add 16-track sequencing, score editing and user-drawn waveforms.

The Apple was at the heart of the system, running the Alpha Plus software which interfaced with Mountain Computer's MusicSystem 8-bit audio

expansion cards. At \$1,500, the alphaSyntauri still wasn't cheap, but it undercut the likes of the Synclavier and PPG's early digital synths by many thousands of dollars. Alongside Passport Designs' Soundchaser and Crumar's GDS and Synergy, the alphaSyntauri takes its place as one of the unsung heroes of early digital synthesis.

Alpha male

Inevitably, Phosphor raises the question of whether a couple more tweaks to the alphaSyntauri concept would have made the plug-in easier to use, better sounding or more versatile. The addition of a traditional analogue-style filter would undoubtedly make editing easier

Phosphor is a surprisingly versatile synth which is capable of producing some truly unique sounds along with a broad range of staples. The editing system may initially seem unfamiliar to subtractive synth fans, but the simplicity of the layout and impressive power of the modulation options make

it easy get to grips with creating sounds. Audio Damage have stayed true to the spirit of the original alphaSyntauri. With a highly

useable set of 80 factory presets and a very reasonable price, Phosphor is a refreshing alternative to the hundreds of VA soft synths on the market. **FM**

FutureMusic VERDICT

STABILITY

VALUE

EASE OF USE

VERSATILITY

RESULTS

A simple, flexible route into additive synthesis with a surprisingly versatile sonic range.

SPECS

System requirements

PC: VST 2.0 host. Windows XP, Vista or Windows 7

Mac: VST or AU host.
Intel Mac with OS X 10.5
or newer

Two wavetable oscillators, each with dedicated amplitude envelope, noise sources and cross-modulation. Two LFOs (pulse, sine, saw or random with waveshape controls), free-running or tempo-synced. Stereo delay with tempo sync capability. Lo-fi mode for oscillators and oscillator control sections.

ALTERNATIVES



Expert Sleepers

Minky Starshine

\$29

The name sounds like something you'd come up with using fridge magnets, but Minky Starshine offers a bargain taste of additive synthesis world, albeit with a less friendly interface.

expert-sleepers.co.uk



Image-Line Morphine

\$159

FL Studio fans will be familiar with the extensive features of the Morphine additive synth, also available separately as a VST/AU plug-in. Windows users should also check out the more basic Ogun (\$79).

image-line.com



**Camel Audio
Alchemy**

£179

The successor to the excellent Cameleon 5000 plug-in, Alchemy offers a range of sample-based additive options among its many synthesis features. A seriously powerful synth.

camelaudio.com



Studio Devil VGA II | \$79



The lil' devil of guitar amp plug-ins gets expanded.
Robbie Stamp picks and strums



WHAT IS IT?

Guitar amp modelling plug-in

CONTACT

Who: Studio Devil
Email: info@studiodevil.com
Web: studiodevil.com

HIGHLIGHTS

- 1 High-quality cabinet IRs
- 2 Range of gutsy tones
- 3 Simple GUI

SPECS

Windows: XP/Vista/Win7

Mac: OS X 10.4 or later

Amp models: 18 via combinations of Style, Channel and gain Type

Cabinet models: 18 from Red Wire Impulses and 2 from the original VGA

Effects/Utilities: Delay/reverb, tremolo/chorus, noise gate and tuner

Amp controls: Gain, Volume, Bass, Mids, Treble, and Presence

Compatibility: VST, RTAS and AU

Sample Rate support: 44.1kHz to 192kHz

Authentication: Web-based license key activation code

The first Studio Devil Virtual Guitar Amp (VGA) packed a surprisingly wide range of upfront amp tones into a simple GUI with low CPU drain. For this second outing Gallo Engineering have made a few alterations and additions that have only slightly increased the GUI size and kept the excellent processing efficiency. The most significant change is the expansion of the cabinet modelling section from two models to twenty. The additions are a tuner and two effects blocks in the form of modulation (tremolo/chorus) and delay (reverb/delay).

Setting up an amp in VGA II has changed little from the original version. Eighteen models are selected via the combination of the Style (Classic, British and Modern), Channel (Clean, Crunch and Lead) and gain Type (I and II, the latter being boosted/more aggressive). The various combinations are deliberately modelled on existing amps (Marshall, Fender, Vox, etc.), but this is not a gallery for amp mimicry, rather a flexible tool for achieving a wide range of amplifier and cabinet tones. The new drop down list of cabinet emulations offer the original Studio Devil Stack and Combo cabinets as well

as eighteen impulse responses made by Red Wire, a company specialising in high-quality cabinet impulse responses (IRs). These IRs add a real finesse to VGA II and truly enhance the range and sense of responsive realism.

This also highlights the quality of the amp modelling more than previously making amp selection, channel/gain setting and tone balancing a more subtle affair. For quick setups the default Auto-Match setting assigns a pre-selected cab for each of the eighteen amp switch combinations.

Heavy metal

As with the original version, VGA II generally sounds thicker and heavier than other plug-ins and tends to sound more like a close mic'd amp. The tone controls have a lot of range so this can be easily balanced to a less forward sound for clean picking or light, twangy funk chops. For distorted tones the VGA II can deliver a whole range of full bottomed chugs with plenty of punch as well as screaming bombastic leads with the sustain that comes from mercilessly overdriving amplifier circuits.

I would happily leave it all there and say well done, but there are a few more additions. The chromatic tuner is as

simple as it comes and works great. The modulation effect offers a switch between tremolo and chorus with two knobs: Level and Speed. Both of these effects are relatively subtle but deliver enough range and depth to be useful. The second effect has a switch for choosing delay or reverb and, again, features two knobs: Level and Time.

The delay offers a semi-tape decay tonality that makes it an effective addition despite the lack of feedback. The reverb is also simple and produces a room-like reverb that definitely helps lift the guitar sound out of the speakers.

Amped up

The VGA II is an appreciable step forward that really expands the tonal possibilities without adding unnecessary clutter. The tuner and effects add extra value to a sensibly-priced product, but the new cabinet IRs add a whole lot more, allowing the modelling heart of this plug-in to really breathe.

The easy interface and Auto-Match function make amp selection immediate with great results, and yet there are rich rewards to be had from spending time tweaking and refining. The more I use it, the more I like it. **FM**

FutureMusic VERDICT	
STABILITY	■■■■■■■■■■
VALUE	■■■■■■■■■■
EASE OF USE	■■■■■■■■■■
VERSATILITY	■■■■■■■■■■
RESULTS	■■■■■■■■■■

A great sounding guitar amp plug-in that deftly matches simplicity with tonal range.



PRIME LOOPS

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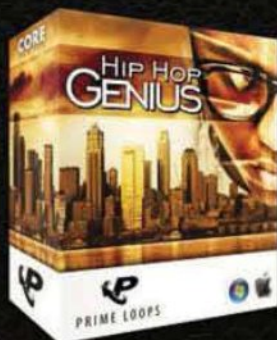
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Mini Reviews

The latest musical bits and pieces racked and rated

Exspect EX296 Time Speaker Dock | £50

exspect.co.uk

This is your usual mix of dock, speaker and radio. The radio is the usual affair – pretty terrible sounding, with the on-board speaker never exceeding 'kitchen radio' quality. While the clock is undoubtedly clever, it's actually too retro for our tastes. Plus, we found the app very fiddly and the whole unit rather intrusively bright. Good effort, but slightly flawed. *Daniel Griffiths*

5/10



Alesis VideoTrack | £99

alesis.com

Alesis entry into the crowded marketplace of portable field recorders has stepped up a gear with the VideoTrack. As the name suggests, this unit has added a video camera to the SD-card based stereo mic recorder format. The inclusion of the video is a great addition and will undoubtedly be a very useful tool in the studio for quick clips and especially for documentation of unit settings, sessions, rehearsals and mic placements. The quality isn't amazing at 640x480 and is best described as standard mobile phone quality. However, the audio side of things is top notch and with the price bracket of under a hundred pounds the combination of the two elements means that it really could be a very useful addition for the studio. *Will Seelig*

8/10



LA Garde Robe | £20

be-ez.com

These stylish-looking laptop bags are both well designed and well built, with a host of different (often garish) colour combinations. They're primarily aimed at the 13" MacBooks but will accommodate most 13" laptops. The colour schemes may not be for everyone, but if you're looking for something a bit different, these might be up your street. We were particularly impressed by the tough, car-seatbelt-type strap and the materials used for the bag itself, but you will certainly need to add the tough laptop sleeve as an extra to feel like your precious laptop is really safe. *Chris Barker*

Chris Barker

7/10

LA Robe Chic Marine | £17

be-ez.com

On its own, this is just another laptop sleeve, albeit a very nice one. But added to the LA Garde Robe bag (right), you have a great value companion for your precious portable friend. The only gripe is why these are two separate products and this sleeve isn't just included with its satchel sidekick? And for that reason, it seems rather over-priced. *Chris Barker*

6/10



Etymotic HF3 Headphones | £129

etymotic.com

Without doubt our favourite iPhone headphones. There's a full range of detachable earplugs to suit any ear, amazingly sleek and unobtrusive

looks and a gorgeous matt 'quality plastic' finish. Etymotic's can be a bit of an effort to get into the right place, but master the 'up and in' manoeuvre and you're rewarded with gorgeous warm bass and total isolation. We've previously loved the HF2s but the HF3 excels thanks to a further tuned response and a new, sleeker mic/remote unit. *Daniel Griffiths*

10/10



Mophie Workbook for iPad | £39

mophie.com

Now this is more like it. The Mophie Workbook (in white 'leather') is a gorgeously chunky, ever-so-slightly plump and curvaceous way to store

your cold hard 'Pad. An elasticated strap keeps the cover closed in classic college textbook style and an amazing, secure, hinge-n-velcro flap means you can display and use it at infinite angles. We're not usually fans of adding to the bulk of gear but the Workbook adds a top class, stitching and 'luggage' feel that'll make your iPad feel like Diddy. *Daniel Griffiths*

9/10



Deeper House
Vol 2 – 6pod9 | £20
loopmasters.com

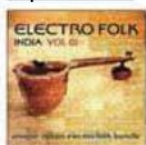


Having won awards with Vol 1, 6pod9 has returned to bring you Deep House Vol 2. Aimed at the Funky Tech House crowd

who like a bit of Soul, this 400MB collection has 125bpm firmly covered with bass, drum, synth/keys as well as a smattering of vocal samples. If you crave the sound of labels such as Freerange and Plastic City or acts like Jimpster or Aki Bergen, then this is the pack to send your soul higher. **Roger Watson**

8/10

Electro Folk India
Vol 1 – EarthMoments | £25
loopmasters.com



From the same stable that brought you Balkan Drums (reviewed a few issues back) comes this cracking 719MB

pack. As the name suggests this is a collection of Indian folk instruments such as Sitar, Tabla, Dotara and Konnakol and others. However the live recordings have then been tweaked off the map producing some pretty darn must-have sounds. These can then be added to pretty much any kind of track to give that 'great sound – what is it?' vibe. Awesome. **Roger Watson**

8/10

Electro – Sample Magic | £47
soundstosample.com



The full Electro download includes 740+MB of loops, sampler patches and a 14-page booklet. Once you've unzipped

you get a collection that sits around 128bpm and is not shy of getting the masher out. Flitting between Indie-Dance and peaktime mainroom filth, this pack comes with all the necessities to produce a big hitter of a tune – mono synth basses, floor wrecking Euro synth runs, bouncing beats and all the synth shrieks your 'big build' needs. **Roger Watson**

9/10

Glitched Vocals pt.1 – Waveform Recordings | £15
soundstosample.com



I've always been a big fan of vocal samples, possibly because I have a voice like a traumatised ape having dental work,

but they can lift a track in a way that no other instrument can. Thankfully Waveform Recordings have put together a 150 loop pack featuring male and female vocal

hooks that have been thoroughly mashed. Broken down into one/two syllable builders, loops with more of a souly vibe and rhythm heavy loops, these drop into any Tech/House track (most are 125bpm). If you're looking for that little 'ah' factor then at this price you can't go wrong. **Roger Watson**

8/10

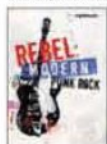
The Paradise Sessions | £61
timespace.com



Zero-G have struck gold once again with this collection of 35 construction kits focusing on latin- and lounge-influenced house. There's a real early-90s Masters At Work vibe here, with deep soulful grooves and mellow drum sounds. Mainly clocking in at the 120-125bpm range, the loops are incredibly versatile for a range of Electronic genres. The drum sounds in particular are the stars of the show, so it's great to see that an additional folder of 47 120bpm drum loops has been thrown in for good measure. The 24-bit samples are provided in Acidized WAV, Apple Loops AIFF and REX2 formats, plus ready-made EXS24, Kontakt and NN-XT instruments to make life even easier. Fantastic. **Greg Scarth**

9/10

Rebel Modern Punk Rock | £66
timespace.com



In a world where Johnny Rotten advertises butter and Top Shop sell Ramones t-shirts, a Punk sample pack maybe isn't so crazy. The 25 construction kits on offer here take their cue from '90s/2000s American Punk – think Green Day and Blink 182 rather than the spirit of 1976. Unfortunately it's all a bit slick to be really exciting and the loops aren't particularly versatile. You'd probably be better off with a cheap guitar and a fuzzbox. **Greg Scarth**

5/10

Dark Percussive House and Techno – Steve Lawler | £35
loopmasters.com



Steve Lawler's long and illustrious career has culminated in this Artist Series sample pack. Forget the sets at some of the world's best clubs, this is what he's been waiting for – 1.3GB of deep, subliminal bass loops, club ready drums (which ship as tops, percussion, full loops) and some Latin for your hips. Elsewhere you'll find synth loops full of atmosphere, bass hits, FX and 30 vocal samples to sink your teeth into. 46 instrument patches for the usual platforms finish what is a meaty pack for the Techno heads out there. **Roger Watson**

8/10

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Q&A

Our panel of experts answer your music-making questions, from hardware issues to software ideas, with tips and tricks along the way

DSP discussion

Glenn Tucker asks:

Q I've been thinking about buying a DSP system – either an SSL Duende or a UAD-2 package – for a while now but I recently saw that TC Electronic had discontinued their PowerCore platform.

This has made me a bit twitchy: do you think that this means that systems like this are going to die out? Obviously, I don't want to invest in a plug-in platform that's not going to be around for very long, so I could do with some guidance.

Mark Gyver replies:

A It's a shame that TC have decided to cease PowerCore development – users are being offered crossgrades to a UAD-2 system but that's not going to stop them from feeling very disappointed. This doesn't mean that similar platforms are going to suffer the same fate, but there are changes on the horizon.

These relate specifically to SSL's Duende. Although it hasn't been 'officially' announced at the time of writing, an employee of the company revealed on a forum several months

ago that a native version of Duende – one that runs without external hardware – is in development (see the post here bit.ly/fz8Kqv).

So, you may choose to wait and see how that all pans out, though it did also say in that forum post that existing Duende owners will get "a free cross-grade of every plug-in they own," and at least if you buy the hardware version you'll have the option of keeping the plug-ins off your computer's CPU.

As for Universal Audio, they're continuing to go down the hardware DSP route: two new versions of the UAD-2, the FireWire-enabled Satellite Duo and Quad, were launched at the 2011 Winter NAMM show. In the end, though, it comes down to the plug-ins – you need to choose the platform that offers the processing tools that will be most useful to you.

Keeping your filters on track

Terry Williamson asks:

Q A couple of my synthesizers have filter 'key tracking' knobs. When I increase this the

filter cutoff also increases. How is this different than just adjusting the cutoff, or even increasing the envelope depth setting?

Doug Kraul replies:

A Key tracking affects the filter cutoff frequency based on the note played. A positive setting causes a succession of notes played up the scale to increase the filter's cutoff frequency. A negative key track setting reverses the change: playing higher notes reduces the filter's cutoff frequency.

Most synthesizers choose a pitch like middle-C as the neutral pitch where the filter cutoff remains constant regardless of how you adjust the key track setting. Think about this in terms of a control source sent to the filter cutoff. The control source is zero when the neutral note is played. It increases for notes above the neutral note, and become progressively more negative for notes below it. If the neutral pitch is not specified in the synth's manual you can experiment to find it. Play likely candidate pitches and then move the key track amount. You will not hear the cutoff change when you have found the neutral note.

Key tracking is sometimes used to insure that a patch sounds consistent across a pitch range. A key track setting of 100 percent causes the filter cutoff to exactly follow (track) the pitch change. If you play a note an octave higher the cutoff frequency would double.

You can employ filter tracking to make your patches are more natural sounding as you play different notes. Suppose the sound is perfect when you play a low note but is too shrill for higher notes. Apply some negative key tracking to a low-pass filter to reduce brightness at higher pitches. One final trick involves using filters that self oscillate at high resonance settings. If you set your filter to self oscillate, and its key tracking is set to 100 percent, you can play scales on the filter. Handy if you need a sine wave oscillator.

Can I fake my way to inspired Dance production?

Dorsey Lane asks:

Q I compose and produce songs in a couple of different Dance music genres but lately I am

THE EXPERTS

Mark Gyver computer music expert



With 15 years of music production experience, Mark knows everything (and more) about the current and classic software market.

Doug Kraul technology author



Doug Kraul is an electronics and computer industry innovator, who has designed analogue modular synthesizers and MIDI devices.

Dan Goldman artist/producer



Aka JD73, Dan is a session keyboardist, producer and remixer, specialising in vintage gear, mixing and production techniques.

To send in your queries you can email us at futuremusic@futurenet.co.uk and we'll pass them on to the relevant expert. Or write to **Future Music Q&A, 30 Monmouth Street, Bath BA1 2BW**

UAD-2 For All

The launch of the UAD-2 Satellite means that you can now use UAD-platform plug-ins via an external FireWire box.



Human Nature

Alex Homewood asks:

Q I'm struggling to make my beats sound human enough and was thinking you guys at *FM* could give me some tips. I use my mouse and Logic and generally write my beats in on the grid and then quantise to 1/16th. I've tried playing my beats in without quantise but they just sound terrible!

Dan Goldman replies:

A Getting a human feel to beats is the holy grail of beat making. Obviously when working with a real drummer, this isn't an issue but when trying to recreate the sound and feel, it's a different story and altogether much harder to emulate.

Playing in beats in real-time using a pad controller such as an

Akai MPD or Korg padControl will go a long way to giving a more realistic human feel to your beats. Next up, I know you've tried writing your beats without quantise but I think you should persevere with this. It's not easy but it's one of those things that you will get much better at with practice. Also, playing along on pads to your favourite records will go a long way to helping you develop your rhythmic feel which can then be applied to your beat programming.

Further to this, quantising can also be your friend and doesn't have to be so rigid. Why not play in your beats freehand onto one of Logic's audio instrument channels, then split each element onto its own track and quantise each one differently while also experimenting with the

strength and swing parameters, so that the quantise doesn't make the beat sound too robotic. Also use the delay function to lay back beats or make them push a little to give an edgier sound. I like to lay back hi-hats using the delay function, which works a treat for certain musical styles. Why not experiment with Logic's transform window? It's a pretty deep set of tools that allows you to randomise crucial components, including velocity, note length and pitch, not forgetting Logic's hyper editor too, which can get you deeper into programming.

Finally, don't forget that if you want a live sound, you need to use some great samples that react well to your playing so make sure you investigate the many sample libraries that are out there along with programs such as BFD2 and Maschine. Using some or all of these tips will get you on your way to more realistic sounding beats.

Playing in your beats rather than programming them will go a long way to creating a human feel

finding the whole process a bit stale. I would like to experiment with some different song forms or elements.

Are there any good sources for me to investigate?

Doug Kraul replies:

A My first recommendation would be to look at some 'generic' songwriting books or articles, or something on basic composition. These can offer you an overview of how songs are constructed, and their form. You will recognise which of the forms the songs you have been making follow and could then perhaps alter the form using ideas from these resources.

For example, some Dance music uses eight and sixteen bar sections. Blues music, on the other hand, uses twelve bar sections. So you could try writing a Dance song based on twelve or twenty-four bar sections, or try to mix eight and twelve in the same song. Experiment and see what happens. Another possible source for inspiration is a 'fake book'. These show popular songs in a skeleton



Hybrid Interface

The MOTU 828mk3 Hybrid pulls the clever trick of being both USB- and FireWire-compatible.

form of sections and chord changes. The chord changes can often be applied to other songs to good effect. Try writing a Dance song using both the structure and chord changes of a commonly recognised popular song. Even if this song does not work you may invoke some fresh ideas!

Two busses at once

Daryl Ridgley asks:

Q I'm looking for an audio interface and for reasons too tedious to explain (it basically involves me having to use different computers with different ports) it would be useful for me if I could have one that

supports both USB and FireWire. Could you tell me if such a thing exists? Alternatively, is there some kind of adapter that I can use that would convert one to the other?

Mark Gyver replies:

A To deal with your second question first, no you can't simply put an adapter on the end of a USB cable and plug it into a FireWire port (or vice versa). These are two separate bus technologies with different specifications, so I'm afraid that option isn't viable.

I do have better news, though: MOTU recently announced a new Hybrid version of their trusty 828

interface. The 828mk3 Hybrid (to give it its full title) meets your brief by sporting both USB 2.0 and FireWire ports, and with 28 inputs and 30 outputs, I'm guessing it'd give you all the connectivity that you require, too.

At almost £700 it's not exactly cheap, but if MOTU's previous audio interfaces are anything to go by, it'll certainly be good quality.

Drum machine samples

Graham Mayall asks:

Q Can you recommend me a good source for drum machine sounds? I'm after a good collection of

What is Filter FM?

Joanna Able asks:

Q I'm curious about a synthesis technique called 'filter FM'. I saw a mention of it on a discussion board about how to synthesize a realistic trumpet sound. Would you explain what it is and demonstrate how it's done?

Doug Kraul replies:

A Filter frequency modulation refers to using an audio-rate oscillator to modulate a filter's cutoff frequency. The technique can be applied to nearly any filter type, though it's commonly used with a

sharp four-pole low-pass, or a band-pass filter. Filter FM has a lot in common with conventional FM oscillator methods, including sonic complexity that often defies simple analysis. So it's best understood through experimentation. Briefly when you modulate a filter's

cutoff frequency at audio rates you cause rapid phase changes to each of the sound's spectral components. Frequency components close to the cutoff's centre are influenced the most. Modulating the spectral components' phase creates a sound that is similar to a frequency-modulated oscillator.

The sharper the filter the greater the effect, which is why this technique is often used with high resonance

settings. Filter FM is a popular analogue modular synthesis technique but sadly few analogue, digital, or software synths offer it. It's challenging to implement in digital synthesizers since 'audio rate' filter modulation creates all sorts of DSP challenges. Reason's Thor is one software instrument that includes Filter FM so we'll use it to demonstrate the 'splat' sound heard during an over blown brass horn's attack phase.



1 Start with an initialised Thor patch. Enable Osc3 – we will use this to modulate the filter. Osc3 is a good choice as its easy to remove it from the mixer's audio. Set Osc1 to sawtooth, Osc3 to sine. Turn Osc3's mixer level all the way down.



2 Use one of the lower right modulation slots so you can scale the modulation source with two controls. Select Osc3 as the source with Filter 1 Frequency (FM) the destination. Assign 'ModEnv' to 'Scale 1' and 'Velocity' to 'Scale 2' so that the modulation envelope and velocity control FM amount.



3 Now it's time to experiment. Try different pitch intervals between oscillator 1 and 3 as this greatly affects the sound. Also play with the cutoff frequency and resonance settings. The settings shown here sound similar to a brass instrument when overblown. Other even extreme effects are possible too.

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classic machines that I can either sample up or import into my DAW. Obviously I'd love to get some real old machines but I don't have the funds or the space!

They need to be good quality samples throughout, so well-recorded and mastered is ideal.

Dan Goldman replies:

A Thankfully there are lots of options out there that have taken care of all the sampling and mapping for us eliminating all those headaches and allowing us to just enjoy making great beats! Here are a

couple of recommendations. The first is MOTU BPM 1.5, a piece of software that I reviewed in its original form some time ago but that now features one of the most extensive collections of both digital and analogue machine samples around in its 1.5 incarnation.

Beatbox Anthology, as it's known, is just that – a trip through some of the most well-known and less well-known machines that have helped shape modern music. And you won't be disappointed! Pretty much every machine you could want is covered and they all sound great, having being expertly sampled and mastered. It's fairly reasonably priced and the bonus is it comes with a great MPC-style software interface that loads up into your DAW as a plug-in – it's pretty much self-contained.

My second recommendation is something that all iPhone users should check out. It's an app available from the app store that covers a load of the great machines – Roland, Simmons, Linn, Sequential and more – and can be played directly from the iPhone's touch screen.

The app is called Vintage Drum and is made by Outofthebit. Again, the sounds are top notch and super-authentic. You can easily play along into Logic using the iPhone's headphone output, then chop up the sounds, sample them and mangle them. Within seconds you'll be bashing out some great sounding electronic beats. Plus, with the arrival of the Akai SynthStation 49 and Core MIDI in general, playing these apps from controllers elevates them from novelty toys to serious music-making resources.

Native Instruments' Maschine is a little more expensive than BPM but also offers you comprehensive sampling capabilities as well as a huge library of old-skool and modern drum sounds alike. It might be a better investment in the long run, if you're interested in building up your own library by sampling kicks, snares and other drum parts from your own record collection.



iOS' Vintage Drum by Outofthebit provides lots of vintage sounds while Maschine is a great resource



Not Mad for iPad

Karl Anderson asks:

Q I recently saw that Korg had released the iMS-20 synth/sequencer for less than a tanner and was pretty excited. However, then I discovered that it's an iPad only app... and I haven't got an iPad.

So my question is: why can't I get this (and the iElectrife) for my Mac? Surely it's not to do with power as I know that my iMac is much more powerful than an iPad. Also, how is that iPad apps like this sell for £10 while software synths on the Mac can cost more than £100. It just doesn't seem right – I'm worried that

companies like Korg might end up stopping Mac development and just doing iPad stuff.

Mark Gyver replies:

A You've raised some interesting points here Karl, not only about which platforms companies choose to develop for but also about software pricing. First up, you're right when you say that your Mac would be able to run the iMS-20, but it's not the kind of application that we've typically seen on OS X. Remember that, like all iOS apps, it runs standalone rather than as a plug-in, so in its present

form, it wouldn't be able to integrate directly into your DAW. In Korg's defence, they've been selling a plug-in version of their MS-20 synth for years as part of their Legacy Collection bundle, and they recently announced that this and all the other Legacy synths can now be bought individually for \$50 each. Obviously, though, that's still significantly more than the iMS-20, so why the price disparity?

I can only speculate on that, but you have to look at what other software is selling for in the App Store – if Korg released a \$50 iOS app it'd look pretty expensive compared to the

competition. If you're in the App Store, you're immediately in front of the eyeballs of a massive audience, so developers can afford to sell for less.

So will developers start abandoning the Mac and PC in favour of the iPad? I'd say it's unlikely, but we are seeing two different markets emerging. What's more, these may start to blur now that Apple have launched their Mac App Store – plug-ins can't be sold because of the way they install, so we may see more standalone apps. These are likely to be more casual and less involved than plug-ins, but should also be cheaper.

Q Jonathan Scott asks: I'm a big Stevie Wonder fan and wanted to ask if you could show me how to tweak Logic's EVD6 to sound more like Stevie's clav on *Superstition*. I've learned how to play the riff but I'm not quite getting the sound I'm after with the stock Logic presets in EVD6. I know it's not going to be exactly the same but if you could help me get anywhere close to that original sound I'll be eternally grateful!

A Dan Goldman replies: The sound on *Superstition* is probably one of the most well known examples of the clavinet around. It is pretty hard to get spot on as Stevie had his clav modded with a bespoke preamp to get the sound just as he wanted. But I'm always up for a challenge and EVD6 in Logic is a pretty good plug-in for the job, let's see how we get on!



1 First load up an instance of EVD6 into an audio instrument channel in Logic. Make sure it's in mono, as all clavinetts are. EVD6 loads up with a default preset which isn't the best sounding clav in the world but it is a good starting point. First off, you'll find that the sound has a little too much release on it which gets in the way of that tight sound. So, set the release slider to -0.52.



2 Now that we have tightened up the release portion of the sound, let's have a look at the attack. Stevie's clav has a really punchy attack. However, there aren't really any controls for the attack portion of the sound on EVD6 so bring up the Envelope plug-in to add some more attack. Here I've set the attack gain slider to 56% and the attack time dial to 167ms.



3 Now let's have a look at the pickups. Stevie's tone is a thinner type of clav tone so let's switch the C/D slider to the C position that uses the upper pickup. This gets much closer to the tone we are after. We can further refine the tone now by moving the pickup itself on the graphic display. The upper part of the pickup should be set to 98 and the lower to 95.



4 To add a little more body to the decay of the sound, set the string decay slider to 0.60. Also, let's funk up the sound with a little compression. Bring up Logic's compressor plug-in, set it to VCA mode and set threshold to -30.5, attack to 17.5 and ratio to 2.8:1. This evens out the sound but makes it sound closer to the tone and feel we are after.



5 Now let's add a little distortion and EQ. Set the distortion tone slider to 500Hz and distortion gain to 1dB. Using Amp Designer, select the Silverface amp, Silverface combo and 2x12 cab with a condenser or dynamic mic. Set the gain and bass to five, mid to seven, treble to eight and presence to nine to bring some brightness back.



6 For a final touch and to stay authentic to the original recording, let's add some reverb with a good dose of predelay. This finishes the sound off nicely. I'm using the Averb with a predelay time of 108ms, density/time of 50%, reflectivity of 20%, room size of 40 and mix of 3%. There we have it, as close as you can get to Stevie's clav sound in Logic! **FM**

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Demos



Are you unsigned, under-appreciated and looking for your first break? Get your tracks right on track!

Demo Of The Month



SELECTED KIT

Hardware

- > MacBook Pro
- > Sennheiser HD280 Pro Headphones
- > Arturia Analog Experience The Player 25

Software

- > Ableton Live 8
- > Arturia Minimoog V



Brian Armando Los Angeles Resonator

Contact: soundcloud.com/don-del-salvador



We don't know if it's the sunny, American, college-life origins of this track that make it sound

'glamorous' but they certainly help.

This is this month's standout mix. It's big, powerful and super-warm. The way that opening piano gives way to the throbbing melodic undercurrent of the track at 0:30 is absolutely awesome. There's so much detail in your vocal snippets and your mix of high and dry sounds and lush reverb swamps is superb. We've literally been playing this alongside pro productions and it's not

jarring one bit. And all this with so little gear? We're impressed.

First trick is to nail a great chord progression and this *Pjanoo*-style, vamping riff is a great jumping off point for your beats. Love to know just what you're using for reverb there – we're talking tails of 30 seconds plus in length but it never feels soupy as your drums keep on cutting through. And the way the track just keeps on getting bigger (around the 4:30 mark) is amazingly intense. Some great, highly unconventional sounds and another superb drop at 5:00...

As Charlie Sheen recently said "What's not to like?" Genius.

The Artist



Name:
Brian Armando
Where:
Orlando, Florida
My track: "This is an uplifting combination of vocal samples, pads and pianos."

Great track. Want to be in the mag?

"Of course I want to be in the mag. I'd be more than happy to answer some questions and am so up for being in a feature in *Future Music*. I'd love for my track to be on the disc! I've been reading *Future Music* for about two years now so it's a great honor."

Which bit of this track are you most proud of?

"I'm most proud of the pads. All the pads were made using the Minimoog-V. I used the chorus and delay in the Minimoog-V, then I put some reverb on and sent them to a delay, multiple compressors and a resonator at the end of the line."

If we were to give you £5,000 for gear what would you spend it on?

"I would definitely get a Minimoog Voyager XL."

What are you working on right now?

"Currently, I am working on a full Trance solo album when I'm not busy with school."

The Best of the Rest...

COAL Until I Die

hispanic.com/rhynout_hs



"I'd describe this track as a cool Ambient track with a nice groove that's also mesmerising and haunting," writes

the man at the controls, Carlos Bonilla Martinez. We couldn't agree more. There's certainly sense of the wistful and mysterious about this, almost soundtrack-like voyage.

"I'm really proud of the vocal contribution of John Morin to this demo," he says. "And the guitar

sound too, cause it doesn't sound like a guitar. And I love the palm muting bass track as well." There's certainly some great performances on there too. The vocals are especially impassioned and giving the different parts of the track different vocal treatments and stereo placements

makes it sound very pro. And – while it's an old trick – we like the shimmering, stereo roto-speaker effect that's on your drums. It gives a nice mysterious, wide, dubby sound.

"For this track I used an Mbox 2, KRK V4 monitors, a Behringer B1 mic, Washburn Bantam bass, Epiphone Les Paul recording into Ableton Live and Pro Tools. Though I'd love to get a new Fender Telecaster and a great synth – most likely a Virus

T1." It certainly sounds like you've got the skills to do that lot justice. Nice work, looking forward to hearing more from you.

Sound Grenade Smooth Duppy

soundcloud.com/rob-wood



It's not often that we wish a demo would go on for longer (ouch) but at just 2:35 in

length we reckon that Rob Wood is having a laugh. Come on, we want more! So what's the best bit (given that there isn't a great deal of 'bit')? "That'd be the sub bassline and the deep atmospheric synth line," says Rob. "I used the Korg MS-20 from their Legacy Collection plug-ins for the sub bass sound and the toxic for the main synth line too. Both work really well in a chilled out Dub track. I'd like to invest in some analogue hardware synths though, and a decent mixing desk as right now I'm working on a number of collaborations with various producers and vocalists across many genres, including Drum 'n' Bass, Dubstep and Breakbeat." We love the heavy, spacious mix so be sure to send us the results.

Siike92 Oh Captain My Captain Obvious!

soundcloud.com/siike92



Quantisation: Who needs it? Well, you could argue that this track could do with a generous slice but we it when

someone goes arse-out to the rules and makes something truly original.

We're reminded of the trippier moments from Animal Collective or the more 'substance-enhanced' experiments from Primal Scream's 90's *Screamadelica* rebirth.

Plenty of amazing sounds going on here and a great collage of reversed and inter-mingling noise. We can easily imagine this one playing during a particularly angsty moment in a US teen drama or vampire flick.

Love the spooky music box effect that takes over the track from 2:08 and proves that for all the meandering timing and lazy plucking there's a great little tune going on here. Love it.

Insight System Blind Vision

reverbation.com/insightsystem



Yes! A snare drum like a machine-gun reloading and plenty of shimmering buzzing delayed synth. It's like a cleaner, Trancier Front 242. "I'd describe this as an Electronic breaks song with melodies. It's the result of influences



SELECTED KIT

Hardware

- > Windows PC
- > M-Audio Audiophile
- > M-Audio KeyRig 49
- > KRK RokIt R6
- > Akai MPC2000XL
- > Korg microKorg
- > Roland Juno-106

Software

- > Cubase 4
- > Lennar Digital Sylenth1
- > U-he Ace
- > Celemony Melodyne

FAVOURITE GEAR

- > "We love Sylenth1."

Darkhill Diamond Girls

Contact: myspace.com/darkhill_lastname

What starts out as some old skool Breakbeat

quickly morphs into uplifting Pop House as soon as that vocal hits at 0:16 and everything is made HUGE with some insane splashy reverb hits that really point to the dancefloor.

This track's innate mystery continues right through to 1:15 when the beat drops. Love the little 'off note' at the end of the eight bar phrase, but we're a little dubious as to whether there's enough weight in that buzzy, middy bassline?

A supplement 808 to the kick or new sub-bass layer to the riff would fill this out and give it a little extra warm and rumble.

There's a great mix of styles here and that breakbeat really sets this one apart. "We'd describe this track as Vocal Club, with lots of energy and big hooks. It's very inspired by people like Stonebridge and Deadmau5," say its makers say Michael Nielsen & Tonny Svensson. "In fact Stonebridge has really been supportive of us, and played the track out." Wow. You're in good company already!

Hot Pick



SELECTED KIT

Hardware

- > Acer Aspire 6920G Windows Vista 32-bit
- > Edirol PCR-500 MIDI controller
- > M-Audio Fast Track Pro soundcard
- > Behringer MS20 monitors

Software

- > Image-Line FL Studio 9
- > LennarDigital Sylenth1
- > Native Instruments FM8
- > reFX Nexus
- > Rob Pappen Predator
- > Image-Line Drummaxx

FAVOURITE GEAR

- > "I really love FL Studio. You can start making a track very quickly."



Paris Nadine's Theme

Contact: soundcloud.com/paris76

The first second of this sounds like that synth is going to kick out Duran Duran's *Save A Prayer*. And it turns out that that's no coincidence as there's a wealth of '80s influences at play here.

Vocal 'ahh' lines from the Pet Shop Boys heyday and some big swamped reverbs on the drums remind us of 'gear overload' era 808 State. We'd certainly like to hear this one with a few sends pulled down to zero. By all means give your break a spot treatment but do try to avoid blanket reverbs on your entire

drum buss. There's plenty of thunderous interplay with your kits and loops but it's all getting a little lost.

While we love the incredible searing sound of your leads (such as at 1:57) perhaps they could play something a little tighter and less random? There's definitely a miss-hit note in there that sounds a little dodgy.

You may find the track easier to mix if you didn't place everything centre stage too. Monoing and panning your denser sounds out could give this track more breathing space. But great work!

The Artist



Name: Paris Papalias
Where: Thessaloniki, Greece
My track: "It's a synth-based track."

I really wanted to catch a sound that reminds you of the '80s with a more modern drumloop. I think future retro Italo Disco describes this tune perfectly!"

Which bit of this track are you most proud of?

"I like the intro synth lead which is from Sylenth1. It guides directly to the '80s spirit. Also the reverb on the snare drum and clap with a stereo effect gives that spacey feeling which fits with the vocal pad. My favourite part is the break with the synth lead - from Sylenth1 too - at 01:41. The background bass is from the Predator and the master channel also has reverb on it for a more old-school feeling!"

If we were to give you £5,000 for gear what would you spend it on?

"I would buy a Virus TI and a couple of old school Yamaha and Roland synths plus a more powerful laptop."

from many artist that I like such as CJ Bolland, System 7, William Orbit and Freaky Chakra," says its maker Javier Sebastian Cotroneo.

We love the intertwining elements at play here and the way everything locks together. The little glimpses of Breakbeat at 2:19 really help the track and give a funkier feeling. "I like the long and atmospheric pad in the middle of the song. There's a 303 line that I really like, making the song more intense." It can certainly be an effort keeping a track like this varied and interesting but you've pulled it off. If anything don't be afraid to strip a track down even further for your breakdowns and play with the dynamics of sounds. At present the mix feels very fixed with nothing 'jumping out'. Try a few one-off spot effects to give interest. Otherwise, brilliant track!

Juan Cassette Juan Lonely Imperfect Boy

soundcloud.com/juancassettejuan



Love the chord progression and the obvious intention of making something rather special here. You're really waiting for the vocal to drop and when it does it sounds great.

"My favourite bit is the strings in the chorus line which I made with Rapture 32 LE. Then I like the congas, the kick and my vocals." Good choice, but we're rank your vocals above the congas! Though that kick is pretty impressive.

Overall it's the curious dub effects and off-kilter timing that's divided opinion here. When the kick

drops at 1:00, things make more sense and really tie the track together though, dispelling any doubt. And we LOVE the explosion at 1:28! The toms, the build, the tension and some superb soaring vocals. Perhaps a little double tracking would have thickened these and made more of an event of this moment because it's a real winner. Try sidechaining your vocal against the rest of the track in those big choruses so that you get all the swell of the music but there's still room around your words.

But this big, exciting passionate Pop production is one of this month's highlights. Great work.

NastyNate Dream

soundcloud.com/nastynate-slo



There's a lovely build at the start of this one and you're really waiting for that full-on drop. It's a curious mix of Stadium House and Minimal with some nice, tiny, ticking effects but a large sidechained wash of atmosphere. Strimming away all the effects at 1:57 to expose gaps in the track is genius and is an ideal respite from those chiming synths and there's some really nice, 'unplaceable' taps, hisses and tones in among your rhythm track.

We love the cheesy melody (on a cheesy organ) and the focus it brings and the whole affair feels huge, powerful and important thanks to your careful building and dramatic reverby drops.

It's textbook House and we just wish there was more of it! **FM**

Hot Pick



SELECTED KIT

Hardware

- > PC running i7 processor and 12Gb memory
- > Traktor Kontrol S4 (doubles up as soundcard)
- > Roland PCR MIDI keyboard
- > E-mu Mo'Phatt
- > E-mu Xtreme Lead-1
- > Behringer BCF2000
- > B&W 602 S2 monitors

Software

- > Sonar 8.5 Producer
- > Rapture
- > Dimension Pro
- > NI Kontakt
- > Ozone 4
- > Guitar Rig 4
- > GRM Tools VST bundle
- > Vengeance Producer Suite Philta

FAVOURITE GEAR

- > "E-MU Xtreme Lead-1 and GRM Tools VST filter."



Jason Rose Everything I Need

Contact: soundcloud.com/j_rose

There's a real crisp, excitement to this one. You know that it's all going to go

off and this complex and cunning track teases just the right amount before delivering. The chopped up vocals, ebbing and flowing 'ahhs' and restrained but dangerous bass make this something rather special.

"I really love turning a stale sample into something very nice with the help of a band-pass filter and Guitar Rig 4 amp," says the tracks maker, Jason Rose. "Then I put everything through a duck gate which became the basis

of the song." There's certainly some serious filter work going here with the effect essentially sitting over the entire track giving the feeling that a DJ is working it live. Nice move!

If we had one criticism it would be to ask if that 'everything I need' vocal line is really necessary? It feels a little 'standard issue', plucked from a sample bank and rather at odds with the cleverness that's all over the rest of the track.

How about some more of those chopped vocals and 'ahhhs' instead? Can't get enough of 'em!

For our favourite...

A superb **sE X1** microphone



sE's hand-made production process manifests itself not only in the build quality, which is excellent, but in the performance of the X1 too. A great all-rounder

Future Music issue 223

Unsigned and Unloved? Get Your Tracks on These Pages!

If you're an amateur music maker wanting to take the next step then we want to help



1 Non pros please!

Are you unsigned, non-MCPS or PRS registered and making music? Our *Demos* pages are for you. We want to broadcast your work to the world! Head to futuremusic.co.uk, our virtual home.



2 Look for the SoundCloud DropBox

We're big fans of SoundCloud, the online audio sharing service that let's you effortlessly pass your audio around. Check out soundcloud.com to get your own SoundCloud box. Ours is on the right.



3 Click on the box and upload

Click on *Future Music's* DropBox then click on 'Choose files'. MP3s only please. YOU MUST add a description – your name, address, band name, track name – and give us your email address too!



4 Start work on that bio...

If your track is selected, we'll email you and ask you a bunch of questions. We're always on deadline, so a concise reply is appreciated. Please put your name, artist and track on all correspondence!

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Zoom H1 Bundle

Mobile digital audio recorder

24bit/96kHz linear PCM, real X-Y mic arrangement, built-in monitor speaker, auto recording level, lo-cut filter, timestamp, track mark function, A/D and D/A conversion, 128 times oversampling, recording media: micro SD memory card and micro SDHC memory card (up to 16GB), USB 2.0, incl. 2GB micro SD card. Bundle incl. the t.bone HP-66 headphone and 2m USB cable.

€ 88.- **€ 83.-**

order code 253718

Zoom H2 4GB Bundle

Mobile recorder

24bit/96kHz, USB interface, record 360° sound as 2-channel data or 4-channel data simultaneously, mic/line input, headphone output, perfect for interviews, podcasts, meetings and live recording. Incl. USB cable, stand, power supply, windscreen and 1GB SD card. Bundle includes additional 4GB SD card.

€ 159.- **€ 135.-**

order code 203048

Zoom Q3 HD

Handy video audio recorder

Built-in stereo condenser mics with true X/Y configuration, 2.4" LCD display, video resolution up to full HD 1080p, MPEG-4 AVC / H.264(MOV), Mini-HDMI and NTSC/PAL TV out, 44.1/48kHz 16/24bit Linear PCM or AAC, accepts up to 32GB SDHC cards, auto record level, uses 2 standard AA batteries or NiMH rechargeable batteries, USB 2.0 with built-in cable, headphone out, Windows and Mac OS compatible, incl. 2GB SD card.

€ 244.- **€ 207.-**

order code 254939

Edirol R-09 HR 4GB SD Card Bundle

24bit/96kHz mp3/WAV recorder

Up to 320kbps mp3 playback and recording, recording on SD or SDHC card (up to 8GB), integrated stereo condenser mic, OLED display, built-in preview speaker, incl. wireless remote control with split function, USB 2.0, stereo mic in, stereo line in, incl. power supply, 512MB SD card, USB cable, Cakewalk Pyro AudioCreator LE, wireless remote controller and small table mounting plate. Bundle incl. 4GB SD card.

€ 295.- **€ 250.-**

o. code 207377

Zoom H4 N Wizzoo Bundle

24bit/96kHz digital recorder

Perfect for interviews, podcasts, meetings and live recordings. 2 built-in stereo microphones, provides 24V or 48V phantom power, USB port, includes windscreen, USB cable, cover and Cubase LE4. Bundle includes 4GB SD card, Superlux HD681 stereo headphone and Wizzoo Publishing, Mobile Recording Thomann Special Edition by Kai Schwirzke.

€ 339.- **€ 287.-**

o. code 232016

Zoom R16 Bundle

USB audio interface and DAW controller

16-track playback and 8-tracks recording, 24bit/48kHz PCM recording, internal stereo condenser mic, 8 mic ins, 2 outs, 8 balanced XLR / 1/4" TRS connections, internal effects, Mackie Control emulation via USB, works as USB storage, support for Win XP/Vista and Mac OS, incl. Steinberg Cubase LE4 and 1GB SD card. Bundle incl. the t.bone MLS66 stereo headphones and 4GB SD card.

€ 349.- **€ 296.-**

order code 245233

Tascam DP-02

Digital 8-track recorder with 40GB HDD

CD-RW drive, LCD display, 2x TRS mic/line ins (1 switchable to guitar in), 2x XLR mic ins with phantom power, external FX send with stereo return, stereo line out (RCA), S/PDIF digital out (optical), headphone out, MIDI out for MIDI timecode or clock, USB 2.0 port, internal multi-FX and reverb processor. Dimensions: 41.6 x 6.5 x 29.9cm. Weight: 4.5kg

€ 411.- **€ 348.-**

order code 139934

Tascam 2488 NEO

24-track hard disk recorder

24bit/44.1kHz, 8x mic/line inputs (4x XLR with phantom power), internal FX processor, 16x CD-RW drive (red book compliant, import/export WAV files and backup hard drive), new effects for mastering, 250 virtual tracks, high speed USB 2.0 connects to PC or Mac® for data backup and SMF/WAV file exchange, 80GB hard drive. Weight: 8kg

€ 738.- **€ 625.-**

order code 219928

Edirol R-44

24bit/192kHz 4-track field recorder

4x XLR/1/4" TRS inputs with 48V phantom power, 4x RCA outs, digital I/O, internal stereo mic, integrated speaker, SD Card slot (supports SDHC cards), pre-record function, USB 2.0 connection, OLED display. May be powered via battery, camera battery or power supply.

€ 785.- **€ 665.-**

order code 205740

Boss BR-1600 CD

8-track hard disk recorder

8x mic ins with phantom power and 8x TRS ins, guitar/bass in, digital I/O (coax), MIDI I/O, 2x headphone outs, V-Link, built-in FX processor with effects for mic/vocal recording including mic modelling, auto tune, vocal harmonizer, amp modelling from the Boss GT-6 and GT-6B, compressor and EQ on all 8 input channels, built-in drum machine, 80GB hard drive and internal CD-RW writer.

€ 1135.- **€ 961.-**

order code 166686

Hercules DJ Control MP3 e2

Portable USB DJ controller

2x jogwheels, 1x crossfader and 2x volume faders, 6x level equalizer, 2 buttons to load tracks, automatic loops, USB bus-powered, incl. cover and Virtual DJ DMC Edition for PC and Mac.

€ 79.- **€ 67.-**

order code 237201

Native Instruments Traktor Kontrol X1

USB DJ controller bag bundle

Instant recognition by Traktor, software controlled backlit buttons, fits perfectly alongside a standard club mixer, super-intuitive loop and cue control section, 8 knobs and 8 buttons, push encoders, expandable (connect two X1s to control four decks), incl. Traktor LE, Kore2 Player (incl. selection library) and MIDI templates for controlling other DJ and performance software. Bundle incl. X1 bag.

€ 211.- **€ 179.-**

order code 243915

Behringer DDM 4000

32bit digital DJ mixer

Beat-synchronized sampler, 4 multi-FX sections, 2 patented BPM counters, digital crossfader and MIDI, 4x phono/line stereo channels. 2x mic inputs with gain, EQ, talk function and FX. 4x stereo channels with gain, programmable parametric 3-band EQ with kill function, fader curve control and flexible crossfader.

€ 299.- **€ 253.-**

order code 206918

Pioneer CDJ-350

Single CD player

Plays MP3, AAC, WAV, AIFF, USB (flash recorder, disc drives), USB A/B connection, includes Recordbox music management software, beat display function for better scratch and looping performance, auto beat loop function, dimensions: 21.8 x 29.6 x 10.8cm, weight: 2.7kg, system requirements: Windows VISTA/XP, Mac OS X 10.4 or higher.

€ 589.- **€ 499.-**

order code 249908

Native Instruments Traktor Kontrol S4

DJ Audio interface and controller

4-channel mixer with ergonomic layout and 2 high-res jog wheels, 2 analog inputs with phono and mic preamp for CD player or external audio gear, 4-deck-mixing and effects, loop recorder, 2 customizable FX, 24bit/96kHz, MIDI I/O, headphone output, Win XP or higher, Mac OS X 10.5 or higher (Intel), USB 2.0 bus power.

€ 849.- **€ 719.-**

order code 253480

Behringer UB1202

12-channel mixer

2/2 bus, 4x stereo line ins, 4x mic ins with low cut, +48V, 1 post fader FX send, peak LEDs on all mono channels, 1x aux (post), 2-track I/O, control room out, external power supply.

€ 64.- **€ 54.-**

order code 158998

Alesis Multimix 4 USB

4-channel mixer with digital output

16bit, 44.1kHz signal on USB, 4x line level ins, 2x XLR ins with gain and switchable 48V phantom power, high impedance guitar input, 2-channel EQ on mic ins, multicolour LED metering, main and headphone outs with independent level controls, incl. power supply. Dimensions: 15.2 x 19.6 x 5cm. Weight: 0.6kg.

€ 95.- **€ 80.-**

order code 235244

Behringer Xenyx X1222 USB

16-channel mixer

6 mic ins with 48V phantom power, low cut, internal 24bit FX, 16 presets, 2 stereo ins, 3-band EQ, 7-band master EQ, weight: 3.7kg, incl. energyXT2.5 Compact music production software for Windows XP, Vista (32bit), Mac OS X and Linux.

€ 195.- **€ 165.-**

order code 243146

Soundcraft EFX 8

8-channel mixing desk

8x mono inputs, 2x stereo inputs, inserts on all channels, 1x FX send, 1x aux send (pre/post), 48V phantom power, solo/mute switch, integrated Lexicon FX with 32 presets, peak LEDs on all channels, integrated power supply. Dimensions: 33 x 9.1 x 36.2cm. Weight: 4.6kg. Optional rackmount available.

€ 289.- **€ 245.-**

order code 118879

Behringer Xenyx X2442 USB

24-channel mixer with 60mm faders

10x mic ins with 48V phantom power, 75Hz low cut, compressor, 24bit multi FX with 16 presets, internal USB sound card, 2x stereo ins, 3-band EQ with parametric mids, 4x aux (pre/post), insert, Peak LED and mute each channel, 2-track I/O, XLR main out, 4x sub groups, internal power supply, includes 19" rack kit and Energy XT2.5 compact music production software.

€ 311.- **€ 263.-**

o. code 242913

Behringer SX2442FX

24-channel mixing desk

16x XLR mic ins, Xenyx mic preamps, 3-band-EQ, 2 xFX processors with 100 presets, stereo 9-band graphic EQ, FBQ feedback detection system, 4x subgroups, 4x auxes per channel, internal power supply.

€ 419.- **€ 355.-**

order code 217454

SX3242FX

32 channels.

order code 217456

€ 469.- **€ 397.-**

Mackie Onyx 24.4

Live console

20x mono ins, 4-band EQ with full parametric mids and fixed lo/hi, 2x stereo ins, 4x subgroups, 3x outs, 48V phantom power, 30dB pad, phase reverse and low cut, inserts per channel, 6x2 matrix, 4 mute scenes, talkback, main insert, 1x BNC lamp connection, internal power supply.

€ 966.- **€ 818.-**

o. code 193356

Mackie Onyx 32.4

38 mono ins.

order code 194635

€ 1150.- **€ 974.-**

Allen & Heath WZ' 16:2 DX

16-channel mixer

16x mono ins with insert/direct out, pad, 100Hz HP and 4-Band-EQ with parametric mids, switchable 48V phantom power, 6x aux, 2x stereo aux returns, PFL, mute, phones, master insert and outs, mono out, A/B out, 2x Digitech FX processors, MIDI input, internal power supply.

€ 979.- **€ 829.-**

order code 123316

suitable flightcase

order code 161855

€ 182.- **€ 154.-**

Mackie Onyx 1640i

Compact 16-channel mixer

16x mic/line ins, inserts ans direct outs on each channel, 4-band EQ, 2 parametric EQs, 6 pre/post auxes (switchable), switchable phantom power per channel, 4 sub groups, control room out, internal talkback mic, ProTools M-powered compatible (officially licensed), integrated FireWire access point, incl. rackmount. Dimensions: 61.7 x 44.2 x 19.1cm. Weight: 13.5kg.

€ 1299.- **€ 1100.-**

order code 236561

Presonus Studioline 16.4.2

16-channel digital mixer

Built-in 32x18 FireWire audio interface, 'Fat-Channel' processing with 4-band EQ, compressors, limiters and gates. 16x inputs, 6x auxiliary mixes, 4x subgroups, 16x Class A XMAX mic preamps, 44.1kHz & 48kHz sample rate, 2x master DSP FX, talkback. Dimensions: 43.7 x 17.5 x 56.8cm (WxHxD).

€ 2199.- **€ 1863.-**

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Dübbiq Stylophone Beatbox

Vintage drum synthesizer
Remake of the original, mini-sized format, built-in speaker, MP3 audio input, metal foil as pads/keys, playable with a special (included) pen, loop recording, pitch-shifting, speed up, slow down and scratching, headphone out, 3 sounds (beatbox, percussion and bass), requires 3x AA batteries (not included).

order code 249148
£28.- **£24.-**

Akai MPKmini

USB/MIDI controller keyboard
25 velocity-sensitive mini keys, 8 MPC-style pads (2 banks, 16 total), 8 assignable O-link knobs, built-in arpeggiator (resolution, range and patterns, tap-tempo button), dedicated octave up/down and sustain buttons, program recall button to restore up to 4 separate global settings, USB powered, incl. software editor and sample player software.

o. code 254954
£99.- **£84.-**

Novation XioSynth49

Synthesizer and controller keyboard
49 keys with Novation quality synthesizer, USB audio interface and the „Xpression“ pad and pitch/mod joystick, ultra-low latency 2-channel I/O audio interface, X-Gator patch programmer, 60 sounds programmed by internationally acclaimed artists and producers, powered via USB bus-power, AA batteries (not included) or included PSU. No drivers required for Win XP and Mac OS X (plug-and-play).

order code 196672
£238.- **£202.-**

M-Audio Venom

49-key virtual analog synthesizer
12-voice polyphony, 4-part multitimbral, 512 patches, 256 multi patches, reverb, delay, chorus, flanger, phaser, compression, EQ, distortion, bit reduction, decimation, tap tempo and manual BPM control, arpeggiator, built-in USB 2.0 audio interface, 24bit/44.1kHz, headphone out, MIDI I/O, 4 rotary encoders, pitch bend and modulation wheel, LC display, Vyxex Venom software editor.

order code 259652
£549.- **£465.-**

Moog Little Phatty Stage II Thomann Ed.

Analogue synthesizer with 37 keys
MIDI over USB, direct USB to computer connection allows the use of the Little Phatty editor, arpeggio and tap tempo function, 2 oscillators, 1 low-pass filter (classic Moog Ladder), 4-stage analogue Envelope generators, real analog control, 100 user presets, Thomann Edition (red back, red display, pitch wheel and mod-wheel, black sideovers).

order code 251804
£1111.- **£941.-**

Behringer U-Control UCA 202

USB audio interface
48kHz converter, 2x RCA I/O, headphone output with dedicated level control (mini-jack), S/PDIF optical output, bus powered, plug and play for Windows and Mac.

order code 191768
£24.70 **£21.-**

M-Audio Fast Track USB

USB audio interface
24bit/48kHz, 1x analog input, 2x analog output, input jack or XLR, headphone output, direct monitoring, for Win and MAC OS X, incl. ProTools M-Powered Essential Software.

order code 246876
£69.- **£58.-**

ESI ESPIO 10e

24bit/96kHz PCIe express audio interface
PCIe card with external 19" interface, 8x analog ins (2x with mic preamp and 2 Hi-Z instrument), +48V phantom power, up to 8x analog ins and outs, coaxial S/PDIF I/O, 2x headphone outs, 2x MIDI I/Os, support for DirectWIRE 3.0, ESDM driver: MME, DirectSound, ASIO 2.0 support, Windows 7/Vista/XP compatible, power supply optional, incl. Steinberg Cubase LE 4.

order code 230632
£155.- **£131.-**

Focusrite Saffire 6 USB

USB audio interface
2 preamps with 48V phantom power, Hi-Z instrument input with -10dB pad, 24bit/48kHz, MIDI I/O, headphone output, 105dB, noise (mic in): THD+N = 0.0025%, 2x combo ins for mic/line/instrument, 4x analogue outs, Focusrite plug-in Suite, Xcite+ bundle and USB cable, for Mac OS X or Windows. Weight: 1kg.

order code 236371
£168.- **£142.-**

M-Audio Fast Track Pro

USB audio interface
4x4 24bit/44.1kHz, stereo in up to 24bit/96kHz, USB powered, 2x mic/instrument preamps with switchable phantom power, 2x inserts, 2x balanced line outs, 4x additional RCA outs, S/PDIF coaxial I/O, S/PDIF out (AC-3/DTS surround sound compatible), MIDI I/O, compatible with both Mac and PC.

order code 184360
£179.- **£152.-**

Presonus Firestudio Project

FireWire audio interface
24bit/96kHz, 8x XMAX Class A mic preamps, 8x analog mic/line ins, 2x instrument ins, multi-segment LED display input and output levels, balanced send/return, zero latency monitoring with FireControl mixer/router, headphone output, 8x input level meters, includes Presonus Studio One Artist recording software. Dimensions: 19"/1U.

order code 199889
£379.- **£321.-**

Apogee Duet Bundle

FireWire audio interface
24bit/96kHz, 2 channels, Firewire 400 I/O, breakout cable with 2 XLR mic ins, 2x 1/4" jack instrument ins, 2x 1/4" jack monitor outs, multi-segment LED display input and output levels, multi-function controller knob, headphone out, Maestro software for advanced control and low latency mixing, compatible with any Core Audio compliant audio application, compatible with Mac OS X Core Audio. Bundle incl. original Apogee carry case and 2GB USB stick.

o. code 209773
£425.- **£360.-**

MOTU Ultralite MKIII Hybrid

FireWire and USB audio interface
24bit/192kHz, 2x mic/instrument ins, 6x bal. ins and 10x outs (1/4" TRS), 48V phantom power, S/PDIF I/O, headphone out, CueMix FX, internal DSP, LCD display, suitable for use as a standalone mixer, compatible with Windows and Mac, supports WDM, ASIO and Core Audio, incl. AudioDesk software for Mac.

order code 239141
£479.- **£406.-**

AVID Pro Tools Mbox Pro

FireWire audio interface
24bit/192kHz, 8x 8 simultaneous I/O channels, 4 mic ins with 48V phantom power and high pass filter, 4 line ins, 2 unbal. line ins, 6 bal. line outs, 2 headphone outs, S/PDIF I/O, MIDI I/O, WordClock I/O, built-in guitar tuner, bus powered, incl. Pro Tools LE, for Win XP and higher, Mac OS X 10.5.8 and higher, ASIO, Core Audio, WDM, MME and multi client driver.

order code 254238
£625.- **£529.-**

RME Fireface UFX

USB/FireWire interface
Up to 192kHz, 30 I/O channels, 12 analog inputs, 4x mic/instrument preamp (48V phantom power), 12 analog outputs, AES/EBU I/O, 2x ADAT I/O, WordClock I/O, 2x MIDI I/O, FireWire 400, USB 2.0, TotalMix FX Software, built-in monitor controller, SteadyClock, DIGICheck, stand-alone operation with setup recall, 19"/1U, for Win XP SP2/Vista/Win7 and Mac OS X 10.5.

order code 255180
£1925.- **£1630.-**

Sennheiser E 822 S

Dynamic vocal microphone
On/off switch, cardioid pattern, 80Hz-15kHz, nearly zero feedback, metal body, nearly no handling noise, clip not included, Made in Germany!

order code 200050
£40.- **£34.-**

Sennheiser E 822 S Live-Bundle
Includes 6m XLR microphone cable, microphone holder and Millennium MS-2005 mic stand.

order code 200054
£49.- **£42.-**

Shure SM57 Bundle

Bundle containing:
Shure SM57LC - dynamic mic for snare, toms or electric guitar, an allrounder with a good frequency response for clean instrumental reproduction, cardioid polar pattern. Includes clip, carrying bag, the ssnake SM10BK mic cable (XLR female - XLR male, 10m, colour: Black).

order code 194570
£99.- **£84.-**

Shure SM58 Bundle

Bundle containing:
Shure SM58 LC (dynamic vocal microphone, cardioid polar pattern, 50Hz-15kHz, includes clip and bag), the ssnake SM6BK microphone cable (XLR female - XLR male, 6m, finish: black), Millennium MS-2005 boom mic stand. Finish: Black

order code 169587
£111.- **£94.-**

Rode NT5-MP

Condenser microphone stereo bundle
2 matched small diaphragm condenser microphones, 0.5" gold sputtered capsule, cardioid, 20Hz-20kHz, excellent for drum overheads, acoustic guitar and stereo live recordings. Including plastic case, microphone clips and wind screens.

order code 154595
£279.- **£236.-**

JZ Microphones BT-201/IS

2 small diaphragm condenser microphones
Polar pattern: cardioid, transducer type: electrostatic, operating principle: pressure gradient, diaphragms active diameter: 13mm, frequency response: 20Hz - 20kHz, impedance: 500, S/N Ratio DIN/IEC 651 A-weighted: 82dB-A, max. SPL 0.5% THD @ 10000: 140dB, requires 48V phantom power, gold plated contacts, dimensions: 16.2 x 2.4cm.

order code 260035
£579.- **£490.-**

the t.bone SC440 USB

USB condenser studio microphone
USB connection for direct access to Mac and PC (not compatible with Windows Vista!), cardioid polar pattern, 20Hz-18kHz, includes plastic case.

order code 197603
£57.- **£48.-**

Rode NT1-A Complete Vocal Recording Solution

Large diaphragm microphone
20Hz-20kHz, 100Ω impedance, 132dB dynamic range, 137dB max SPL, includes SM6 deluxe shockmount, 6m cable and Peter Freeman „Studio Secrets“ tutorial DVD.

order code 235937
£185.- **£157.-**

Shure SM 7 B

Studio microphone
Dynamic studio microphone with cardioid polar pattern, 50Hz-20kHz, bass rolloff switch, mid-boost switch, 150°, shielded against broadband interference, fixed stand adapter, XLR connector, includes windscreen.

order code 129929
£379.- **£321.-**

JZ Microphones Vintage 47

Condenser microphone
Polar pattern: cardioid, transducer type: electrostatic, operating principle: pressure gradient, diaphragms active diameter: 25mm, frequency response: 20Hz - 20kHz, impedance: 500, S/N Ratio DIN/IEC 651 A-weighted: 87dB-A, max. SPL 0.5% THD @ 10000: 134dB, requires 48V phantom power, gold plated contacts.

order code 260040
£966.- **£818.-**

JZ Microphones Vintage 67

Condenser microphone
Polar pattern: cardioid, transducer type: electrostatic, operating principle: pressure gradient, diaphragms active diameter: 25mm, frequency response: 20Hz - 20kHz, impedance: 500, S/N Ratio DIN/IEC 651 A-weighted: 87dB-A, max. SPL 0.5% THD @ 10000: 134dB, requires 48V phantom power, gold plated contacts.

order code 260041
£966.- **£818.-**

tc Helicon VoiceTone Correct

Vocal performer
Combines pitch correction with tone and dynamic shaping that puts a recorded gloss on live vocals, pitch correction, adjustable auto-smooth compression, multi-band auto-shape EQ, silencing smoothing de-ess algorithm, accurate input pitch and correction display, clean, studio quality mic pre-amp with phantom power, dimensions: 13 x 13.2 x 4.1cm, weight: 0.72kg.

order code 117111
£133.- **£113.-**

dbx 266 XL

Stereo compressor/limiter/gate
Patented OverEasy technology (attack & release times), XLR I/O, -10V/-4dB switch, stereo link, dbx sound.

order code 131808
£135.- **£114.-**

dbx 166 XL
2-channel compressor/limiter/gate, stereo or dual mono, OverEasy or hard knee mode, PeakStop limiting.

order code 131035
£211.- **£179.-**

Universal Audio 710 Twin-Fifty Bundle

1-channel mic/line/DI preamp
Dual path 310V class A valve & transimpedance solid state preamp, +70dB gain, 48V phantom power, -15dB pad, phase invert, 75Hz low cut filter. Bundle includes UAD-2 Solo PCIe DSP card, VST and AU support, LiveTrack™ low-latency live monitoring/recording mode, Mix Essentials II (1176SE Limiting Amplifier Emulation, RealVerb Pro, CS-1 Channel Strip, Pultec EQP-1A EQ Emulation).

order code 244200
£688.- **£591.-**

tc electronic M3000

Dual engine multi FX processor
Two simultaneous reverb or effects, award winning intuitive user-interface, 600 factory presets and multiple I/O formats, AES/EBU (24bit), S/PDIF (24bit), 44.1kHz & 48 kHz sampling rates. Dimensions: 19"/1U.

order code 131732
£966.- **£818.-**

tc electronic Finalizer 96k

Studio mastering processor
Gain maximizer, 96kHz 24bit AD/DA, multi-band compressor/expander, 3-band spectral stereo image and un-correlated dithering, format conversion AES/EBU, S/PDIF and Tos-link, enter and exit at any sample rate e.g. 32, 44.1, 48, 88.2 and 96kHz (even asynchronous conversion is possible), manual or auto fade tool.

order code 133460
£1245.- **£1055.-**

KRK RP5 Rokit G2

Active studio monitor
45W, 5" + 1" speakers, 53Hz-20kHz, magnetically shielded. Dimensions: 27.6 x 18.5 x 25cm. Weight: 8kg. Unit price!

order code 213024
£144.- **£122.-**

KRK RP8 Rokit G2
8" + 1", 140W.

order code 213090
£235.- **£199.-**

Genelec 8020BPM

Active 2-way studio monitor
Power switch, 66Hz-20kHz (±2.5dB), 105dB SPL peak @ 1m, 95dB SPL @ 1m, 105mm (4") high efficiency bass driver, 19mm (3/4") metal dome tweeter with Directivity Control Waveguide, 3kHz crossover, magnetically shielded, aluminum cabinet, includes wall bracket. Power per channel: 20W (bass), 20W (treble). Dimensions: 22.6 x 15.1 x 14.2mm. Weight: 3.7kg. Unit price!

o. code 235038
£289.- **£245.-**

Yamaha HS50M Stativ-Set

Active 2-way studio monitor
70W bi-amped bass reflex system, 5" woofer, 3/4" tweeter, 55Hz-20kHz, XLR & TRS ins, adjustable input level, mid EQ, room control, high trim, switchable low cut, fully magnetically shielded. Bundle with 2x HS50M and 1 pair Millennium BS-500 adjustable nearfield monitor stands.

order code 244787
£338.- **£286.-**

Adam A7X

2-way active bassreflex nearfield monitor
7" carbon/rohcacel/glass woofer with 100W, X-A.R.T. tweeter with 35W, shelving filter tweeter: >5kHz ~ ±6dB, shelving filter woofer: <300Hz ~ ±6dB, frequency range: 42Hz - 50kHz, crossover frequency: 2.5kHz, SPL max. / pair 1m: 114dB, gain: +14dB / -8dB, gain tweeter: ±4dB, THD 90dB/1m > 100Hz: <0.5%, inputs XLR and RCA, input impedance: 30kΩ, dimensions: 20.1 x 33.7 x 28cm, weight: 9.3kg. Unit price.

o. code 245513
£439.- **£372.-**

Yamaha HS80M stand bundle

Active 2-way studio monitor package
120W bi-amped bass reflex speaker, 8" woofer, 1" tweeter, 42Hz-20kHz, XLR & jack input, mid EQ, room control, high trim, switchable low cut, magnetically shielded. Bundle includes 2x HS80M and 1 pair of Millennium BS-500 nearfield stands.

o. code 227555
£538.- **£456.-**

Gear Chart

Are you giving your music a fresh kick? In the market for new kit? Finally putting together that dream set up? Then you'll need *FM's* exclusive guide to all our favourite gear

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Hardware Synths



Dave Smith Instruments Tetra | £552

Review FM219 Super Mopho meets cut-down Prophet '08 in this fantastic analogue polyphonic synth.



Dave Smith Instruments Prophet 08 | £1,499

Review FM194 A beast of analogue power. Warm, fat and wooden-ended – what more do you want?



Moog Slim Phatty | £699

Review FM235 Get that huge Moog sound at a fraction of the price and space of a fully-fledged Phatty. Chain them together for poly mode.



Clavia Nord Wave | £1,395

Review FM196 If you liked the Nord Lead you'll love the Wave. It's more versatile and sounds fantastic.



Moog Taurus 3 | £2,042

Review FM226 With more lows than an Eastenders omnibus, this beast will blow your socks off. Modern features make this a dream to use.

Soft Synths



FXpansion D.CAM Synth Squad | £179

Review FM217 A powerful synth collection from FXpansion, favoured by Electro House heroes.



Rob Papen SubBoomBass | £89

Review FM215 Another superb synth from Rob Papen that caters for all your bass-in-your-face needs.



Spectrasonics Trilian | £215

Review FM224 A long-awaited update to the monster of all bass software. An instant classic.



XILS Labs Poly KB | €149

Review FM228 A lush sounding recreation of the classic and rare. Poly Kobl. Great tones with the benefits of MIDI and automation.



u-he Zebra 2.1 | \$199

Review FM183 Subtractive and analogue synthesis with an ultra-phat sound. Ideal for shaking ground and wrecking speakers. In a good way.

MIDI Controllers



Novation LaunchPad | £149

Review FM220 Great features at an amazing price make this Ableton controller a performance dream.



Akai APC20 | £170

Review FM227 A more compact, better-value version of Akai's Ableton front end. Robust build and great features make this very gig-worthy.



Livid Instruments Block | £349

Review FM223 Built out of wood and metal, the Block is a great alternative to the more mainstream controllers.



Native Instruments Kontrol X1 | €199

Review FM223 An intuitive, well-built controller at a great price. If you're a Traktor user, try this.



Vestax VCM-600 | £649

Review FM216 A fantastic way to control Ableton Live. Vestax deliver a well built, fun and feature packed DJ style performance controller.

How Our Chart Works

We've fought, bitched, whinged and racked-up all our favourite gear that's available today into our Gear Chart. If it makes an appearance on these pages, then it's well worth a look. We've

appraised the hardware in terms of its price point, performance and usability, along with the fond memories and sheer joy factor of cranking it up for the first time. We're not saying that keyboard number six is 'better' than keyboard number seven, for example. We're saying that you should have a think about the music you want to make, read our recommendations below, and check out the gear that sounds cool. Each month we'll be updating our charts with new finds and introducing new lists to keep things fresh. Special mention to the Digital Audio Workstation bit at the back, which should help you nail your ideal recording solution. We out.

The FM Awards

Editor's choice. If you see this little flag tagged on to one of our reviews it's impressed us above and beyond the usual excellence.

Platinum. Buy these. Unless you've got a perfectly good alternative or produce your music on comb and paper.

Value. A special chapeau to bits of gear that deliver the goods without breaking the bank. Value awards mean great gear at even better prices.

The Charts This Month...

120	Hardware Synths	From two-octave upstarts to two-grand monsters
120	Soft Synths	Our pick of sound-producing software
120	MIDI Controllers	The best performance and studio controllers in town
122	Monitors	Record, mix and master with confidence
122	Keyboard Controllers	Everything you need from portables to studio staples
122	Audio Interfaces	Get audio into your computer with quality and style
122	Effects and Manglers	Warp your sound and break new ground
124	Performance Samplers	Take control of your audio live and direct
124	High-end Audio Plug-ins	Treat yourself to the best that money can buy
124	Field Recorders	Record your band or go searching for found sound
124	Microphones	The best mics around for everyone's budget
125	eBay Classic Retro Finds	Keep an eye out for our suggested list of nostalgic love
125	Ways To Stand Out	Dare to be different and reap the rewards
125	Digital Audio Workstations	Which DAW is best for the music you want to make?

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Roland Gaia SH-01 | £579

Review FM227 No menus with hands-on controls all over. Despite the rosey presets, Roland are back to what they do best.



tomoberheim SEM | €950

Review FM232 A classic returns. Creamy filters and powerful oscillators with modular capabilities



M-Audio Venom | £390

Review FM237 Fantastic value considering its features. A great starting point for people that want DAW integration and a fab synth.



Novation UltraNova | £599

Review FM237 A jack of all trades, with a keen, fresh sound. Priced well it's an ideal step outside the box.



Minimoog Voyager XL | £4,084

Review FM237 Incredible sound and amazing features but a wallet bustin' price makes it super-specialist.



Spectrasonics Omnisphere | £299

Review FM207 Great sounding, flexible and unique, this is truly a powerhouse of sound design.



u-he Ace Synth | €69

Review FM227 At such a low price, you can't go wrong with this software modular synth. Patches are clear and crisp and it's all very fun to use.



Waldorf Largo | £175

Review FM217 Waldorf take their Blofeld sound and technology and create a powerful and unique soft synth. Check it out.



Arturia Jupiter-8V | £150

Review FM189 One of the definitive, all-time great poly synths is now a plug that delivers thunderous bass as powerful as its searing leads.



SonicProjects OP-X Pro II | \$99

Review FM238 A recreation of a legendary analogue synth, including some very famous preset sounds.



Novation Nocturn | £69

Review FM199 Your cheapest entry into the world of Automap, the Nocturn is a mini bargain.



Akai APC40 | £400

Review FM215 Although there's still a few things that could be addressed, this is still the best option for performing with Ableton Live.



Akai LPD8 & LPK25 | £45 each

Review FM224 A better keyboard design and build than its rivals. Shame about the short throw rotaries.



Korg nanos | from £36

Review FM209 The keyboard lets the series down, but these portable controllers are still a bargain. They're bundled with great software, too.



Behringer BCF-2000 | £140

Review FM153 Eight 100mm motorised faders for such a low price, this is still a great controller.

Gear Chart

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Monitors



Event Opal | £2,498

Review FM215 Easily the best active monitors you can get for this price. Our reviewer bought a pair and the rest of the *FM* team want a pair too!



Focal JM Labs Twin 6 BE | £829 each

Review FM206 These are some of the best sounding speakers we've ever heard. Worth every penny.



Genelec 8040 | £1,000

Review FM181 Genelecs are always a favourite with *FM* and most of our experts use them so it's no surprise that we love these.



Samson Rubicon R5A | £235

Review FM181 Trustworthy for reference monitoring but priced at an unbelievable level. Get some in.



Acoustic Energy AE22 | £899

Review FM201 For accurate mixing, these are one of the best sets we've used. Very highly recommended.

Keyboard Controllers



M-Audio Axiom Pro 49 | £318

Review FM216 Our reviewer found this to be the most tightly integrated DAW controller ever.



Novation Nocturn 25 | £190

Review FM221 A well-rounded well-priced controller that does plenty of great work with Automap 3.3.



Roland A-800 Pro | £319

Review FM235 A solid controller from a renowned brand. Plus, the MIDI and USB connections on the side give it a handy edge.



Akai MPK49 | £299

Review FM197 A well made deck that's the control section from the legendary MPC with 49 keys strapped to the front. Sleek.



CME VX5 | £499

Review FM192 It's built like a tank and adds some awesome motorised faders into the mix. An excellent professional choice.

Audio Interfaces



Roland Octa-Capture | £479

Review FM235 An impressive interface with flexible routing, effects and plenty of I/O. Bravo Roland!



M-Audio ProFire | £359

Review FM202 A brilliant interface that includes the great Octane Mic Pres, making it a superb recording solution at an amazing price.



MOTU UltraLite-mk3 | £425

Review FM234 Compact, yet fully featured. Fantastic onboard effects and routing options.



Apogee Duet | £329

Review FM200 Getting the quality Apogee sound on the move is now easier than ever thanks to this tiny silver wonder.



RME Fireface UC | £746

Review FM219 Robust reliability, rock-solid build quality and the trusted RME sound. Plus it's now on a lovely USB connection.

Effects Plug-ins and Sound Manglers



Korg Monotron | £59

Review FM229 A genuine MS20 filter with audio input, a fat analogue oscillator and LFO make this a must-have studio toy for everyone.



Rodec / Sherman Restyler | £649

Review FM219 A live filter that sounds good enough for the studio. Missing MIDI, but worth a look.



Moog Filtatron | £6

Review FM235 If you're an iOS user this app is unmissable. From live use to chaining alongside your synths in the studio, it sounds fantastic.



Peavey ReValver MkIII | £179

Review FM208 This amp-modelling software lets you delve deep into the amps circuits for true soft-modding.



Evol Fucifier | £1,996

Review FM228 The oddest outboard we've reviewed produces the most inspiring sound at a price that will keep the faint-of-heart away.

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**PMC DB1S-AII** | £2,056

Review FM225 You get what you pay for with these monitors. Adding a PMC sub will help you feel the real bottom end though.

**KRK Rokit RP5 G2** | £270

Review FM205 These are so nice to work with our reviewer bought a set for his own studio. Great value monitors with a great punch.

**Adam A5 Studio Monitors** | £499

Review FM209 Though they're at the budget end of the Adam range, these compact near-fields still deliver.

**Unity Audio The Rock** | £1,750

Review FM232 One of the most brutally honest studio speakers – The Rock's can handle anything.

**APS IO Active Monitors** | £919

Review FM216 These provide an honest listening experience that could threaten the big boys.

**M-Audio Axiom 49** | £270

Review FM232 Much of the power of its older Pro brother but that handy bit cheaper.

**Novation 49SL Compact** | £269

Review FM193 The stripped-down alternative to a full-size SL. Cheaper, but still packed with unique features.

**Akai MPK88** | £600

Review FM226 A few minor issues considering the high price, but a great weighted hammer action keybed redeems this controller.

**M-Audio Mid Air 25** | £199

Review FM181 Not only can you sling it in a bag, but you can also stride to the front of the stage thanks to its wireless power too.

**Korg microKontrol** | £275

Review FM143 Great build quality and looks and while its reduced-sized keys are an acquired taste, it's certainly more portable as a result.

**Metric Halo ULN-2 DSP** | £1,279

Review FM206 Great sound, onboard DSP and some of the best pres we've ever heard inside an interface.

**Echo Audiofire Pre8** | £579

Review FM228 A very high-quality interface from Echo Audio – heavy on I/O and mic pre quality.

**Apogee One** | £161

Review FM230 The same high quality Apogee sound you'd expect but with a simple design and limited I/O to keep costs down.

**Presonus FireStudio Mobile** | £269

Review FM224 Not the cheapest mobile interface, but great I/O make it worth a look.

**Mackie BlackJack** | £149

Review FM233 A fantastic option for the portable recorder or producers on a budget. Great pres, latency-free monitoring and a solid build quality.

**Electro-Harmonix Voice Box** | £160

Review FM213 Give this a decent input and it will output robot voices or perfect harmonies with ease.

**OTO Biscuit** | £529

Review FM225 Gorgeous design details and fantastic for anyone who fancies a bit of lo-fi 8-bit computer game crunch in their music.

**TC Helicon VoiceTone Synth** | £225

Review FM221 A few teething problems, but this is still a fantastic hardware vocoding and tuning tool.

**Audioease Speakerphone 2** | £400

Review FM217 This creative and comprehensive speaker emulator adds air to your sounds and mixes.

**Avid Digidesign Eleven Rack** | £789

Review FM222 It's a guitar processor that makes re-amping a breeze. Plus it's a Pro Tools interface to boot!

Gear Chart

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Performance Samplers



Korg microSampler | £436

Review FM219 Easy to use sampling with some clever extras. Another micro-dominator from Korg.



Akai MPC 5000 | £1,549

Review FM203 The 5000 isn't perfect, but it's without a doubt the best pad-ridden studio-in-a-box on the market. Check it out.



Roland SP-555 | £410

Review FM195 The latest in Roland's line is packed with features. A durable and flexible partner for the loop experimentalist.



Roland SP-404SX | £289

Review FM220 This new update tweaks the original SP-404 but lacks anything really special, so it doesn't climb any places in our chart.



Korg Electribe ESX-1 SD | £516

Review FM231 This classic has been given a new lease of life with an SD card slot and new sounds.

High-end Audio Plug-ins



Celemony Melodyne Editor | £319

Review FM222 A plug-in that has the potential to change music production forever. A killer tool for every genre.



Slate Digital FG-X | from £149

Review FM233 A revolutionary new mastering plug-in from Slate. Hear it and believe it!



Elysia Alpha Compressor | £228

Review FM238 Fab-sounding mixing and mastering tool based on the luxurious classic hardware.



Brainworx bx_XL | €298

Review FM234 Another must-have mastering tool from Brainworx with Mid/Side and dual-band limiting to get the most from your final mix.



Brainworx bx_digital | €398

Review FM200 There's no other plug-in quite like BX's top of the line mastering tool - incredible software.

Field Recorders



Tascam HD-P2 | £729

Review FM186 Built to last and definitely the pro's choice. A multitude of formats and mic settings and superlative sound too.



Roland R-09HR | £259

Review FM204 This flagship recorder will produce crystal clear, 24-bit 96kHz recordings, all from the palm of your hand.



M-Audio MicroTrack II | £229

Review FM202 Not only does this new version look better, but it's also cheaper. A superb update.



Yamaha PocketTrak | £260

Review FM202 This ultra-compact 2GB recorder is a really useful weapon in your recording arsenal.



Edirol R-44 | £499

Review FM205 Record four tracks simultaneously via its quality pre-amps. If you need the flexibility it does the lot and more besides.

Microphones



Newmann Retro NR47 | £999

Review FM225 Despite the choice of name, this mic definitely delivers the classic sound. Bargain.



sE X1 and Project Reflexion Filter Bundle | £169

Review FM223 Unbelievable value for a robust recording solution.



Blue Bottle Rocket Stage One | £600

Review FM222 Interchangeable capsules make this great sounding mic even more of a must-buy.



Sontronics Saturn | £699

Review FM227 It looks drop-dead gorgeous and has a flexible airy sound that suits many different recording situations.



AKG C214 | £450

Review FM205 As part of the classic AKG family, this mic sets itself up nicely to be a recording bargain that holds its own around the studio.

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eBay Classic Retro Finds

**Roland HS-60** | £250

Released 1984 Same guts as the Juno-106 but the ugly built-in speakers mean it's often overlooked.

**Boss Micro Rack Series** | £40-£100

Released 1986 These gritty little half-rack digital FX boxes are great value for adding some character.

**Yamaha MK-100** | £30

Released 1983 Bargain analogue style workstation that has limited synthesis options but a great programmable drum computer.

**Oberheim Matrix 1000** | £200

Released 1987 1000 presets from the Matrix 6 make this 1U a fantastic analogue sound source.

**Korg EX800** | £100

Released 1984 This rack-mount version of the Poly800 has a similar sound to the Roland Juno but with the added bonus of a sequencer.

Ways To Stand Out

**Apple iPad** | from £429

Review FM228 The first mainstream tablet offers an unparalleled hands-on user experience that's great for making music.

**Snyderphonics Manta** | £398

Review FM218 Space-age-style control with incredible good looks and amazing control possibilities.

**Yamaha Tenori-on** | £599

Review FM193 The amazing lights-in-a-frame synth 'n' sequencer that'll test the way you think about music. Grab one while stocks last.

**Reactable** | €9,700

Review TBA Very expensive but visually impressive and usable interactive synth and performance table. The future has arrived!

**Jazz Mutant Lemur** | £1,799

Review FM166 Techni-coloured touchscreen controller. Why not put a camera on it feeding a projector?

Digital Audio Workstations

Best All-in-one Solution

**Logic Studio** | £399

Review FM218

The home studio regular and all-in-one studio package turns 9.1, adding 64-bit support – if your Mac can handle it.

Best features include:

- > Incredible time-stretching with Flex Audio technology.
- > New amp designer and pedal board options for guitarists.
- > The best and biggest range of 'built-in' plugs and synths of our favourite DAWs.

Good and bad:

Fantastic Flex Audio raises Logic's appeal even further and despite that stealthy price increase to £399, it remains a bit of a bargain all told.

Best Combo of Ease and Power

**Cubase 6** | £508

Review FM237

Cubase 6 comes with the highest price tag of its closest competitors. But an expansive feature set still makes it a worthy choice.

Best features include:

- > The new timestretch and pitch-shift algorithms sound great.
- > New multi-track editing features.
- > Amp Rack for guitarists.
- > Massively in-depth MIDI and audio editing capabilities.

Good and bad:

It's caught up in terms of built-in features, Cubase 6 still suffers from an old multi-windowed user interface and a steep price tag. Multi-monitor screens is a must.

Best for Recording Audio

**Pro Tools 9** | £499

Review FM235

The industry standard DAW gets a much needed overhaul, ditches the hardware requirements and adds vital features such as automatic delay compensation and a higher track count.

Best features include:

- > For mixing, recording, processing and editing audio it's still the industry standard DAW.
- > Now that it's hardware independent, you can edit on a laptop on the go.

Good and bad:

Small steps for a DAW, but a giant leap for Tools users. More much needed updates should come soon.

Best for Jamming and Creating

**Ableton Live 8** | £315

Review FM214

Bigger and better than ever. If you like chucking loops together and experimenting then this is for you. Flexible and creative, it'll spark ideas you wouldn't otherwise have.

Best features include:

- > Instantly beat-match any audio and trigger samples in time. DJs can use this instead of decks.
- > Flexible routing and modulation options let you mess and mangle.

Good and bad:

It's a dream for mixing and messing. It's getting a little costly (thanks to that bulging library content) but the cheaper versions remain a bargain and a real studio essential.

Best Bangs for your Bucks

**SONAR X1** | £379

Review FM235

A complete overhaul in the workflow and interface design of SONAR make the new X1 version the simplest, most accessible version yet. The addition of the new Pro Channel in the mixer steps up SONAR's game even further.

Best features include:

- > Instruments bundle – so many sounds and possibilities included.
- > The ProChannel delivers high-quality compression, EQ and more from within the mixer.

Good and bad:

New workflow makes SONAR more accessible, but you'll want multiple screens to get the most out of it.

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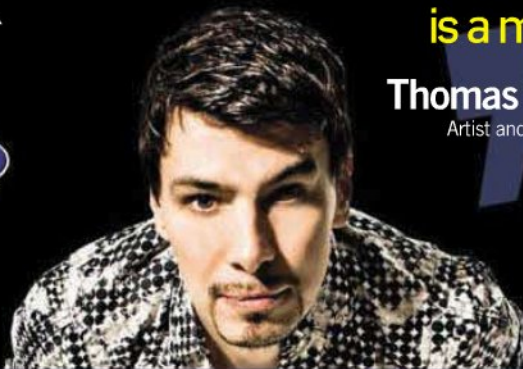
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Thomas Gold
Artist and Producer



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