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Welcome

Best in Show



This month, we're in the company of true studio royalty. Most famous hardware earns its reputation on stage with the stars. It could be bold caps emblazoned on the back of a keyboard, a logo on a kick drum or the distinctive globe and band of a Shure SM58.

However true legends keep a lower profile and their influence doesn't just affect the hearts and minds of live audiences but work their magic on recordings that will last forever. And, despite decades of innovation, they're still a vital part of hits today simply because they still can't be bettered.

Our *Studio Classics* feature on page 36 gets you up close with ten all-time-classic studio gems. Learn how they work and hear what they sound like on DVD. And even if you're not lucky enough to meet one any time soon, the principles and knowledge you gain will help make your music sound great no matter which gear you apply them to.

Speaking of legends (seems the magazine is brimming with them this month) we speak to Bernard Sumner on page 66 about his new studio project (and *Blue Monday* – of course), and Patric La Funk, D.Ramirez and Steve Duda bring the royal ruckus on video on our DVD.

Just enough room to insist that you check out our XL, star-studded reviews section (it all starts on page 83) and demand that you come back next month for more. Cheers!

Daniel

Daniel Griffiths, Editor
daniel.griffiths@futurenet.com

EXPERT CONTRIBUTORS THIS MONTH...

Marco Migliari
producer, engineer



Marco has worked with the best. Not only world class artists but the best studio gear that man has ever made. He's at the controls for our Studio Classics feature. Familiarise yourself with greatness from page 36.

Greg Scarth
music scientist



Greg returns with a passion for plug-ins and a desire for distortion this month, as he tackles our *Knowledge Base* regulars. Dig in to the science and feel your studio wisdom expand, all from page 64.

Robbie Stamp
artist, producer



Robbie gets his eager hands on the Thermionic Little Bustard this month, and gives its valve-summing features a good seeing to. Find out if it's worth the price tag from page 104.

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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 was a mixture of music and food. Interviewing Patric La Funk and having him create a track from scratch was great fun. It's no easy task to work like that on camera and he did a great job. Having a track evolve before your ears and eyes and seeing the way that he made decisions on what he wanted was very interesting. This experience was added to when, after the filming, we were taken to his family's restaurant to try the local speciality of asparagus soup. A great finish to a great day.

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



DVD HIGHLIGHTS

Studio Classics

A collection of clean and 'wet' audio examples of 10 famous pieces of studio kit from hardware history. Use our main feature this month as a reference and enjoy!

Nerve Masterclass



The third instalment of the *ICON* Masterclass features D. Ramirez and Steve Duda giving you a guided tour of Xfer's fantastic Nerve drum synth and sampler

Knowledge Base: Distortion

Learn how harmonics, bitcrushing, valves and solid-state can effect and enhance your mix and music...

From the Vaults: Minimal Techno

500 An awesome collection of samples and instruments guaranteed to groove the dancefloor

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SM18 ULTIMATE FX



"Sample Magic return with a painstakingly grafted volume of sterling special effects

– 1.1GB of tension-builders, falls, rises, impacts, crashes, FX hits, tape squeals, vinyl noise and layered FX – all tempo matched to fit seamlessly into virtually every genre of Dance music, but also cinematic and soundtrack applications."

S2S DISCO ELECTRO



"Renowned US producer Jon Pagnato of LA Riots opens his elusive sample vaults

for the first time, exclusively for Sounds to Sample. Taking in the best of Electro, Nu-Disco and Tech-House, *Disco Electro* is a shimmering collection of 450 128bpm drum loops, tops, bass, synth, music, FX and one-shots."

S2S TRIBAL TECH GROOVES



"The authentic flavours of Latin and African tribal percussion combine with the

hypnotic groove aesthetic of Tech-House for this exclusive pack of 200 rhythmic loops."

ZERO G ELECTRO HOUSE



"Produced using a combination of analogue classics and nu-school wizardry,

Zero-G's *Electro House* combines the sound of Nu-Disco with the grit of big room Electro bass. Featuring over 1,000 WAVs and Apple Loops, this hefty collection weighs in at a whopping 1.6GB of up-to-the-minute 24-bit inspiration."

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 useable...

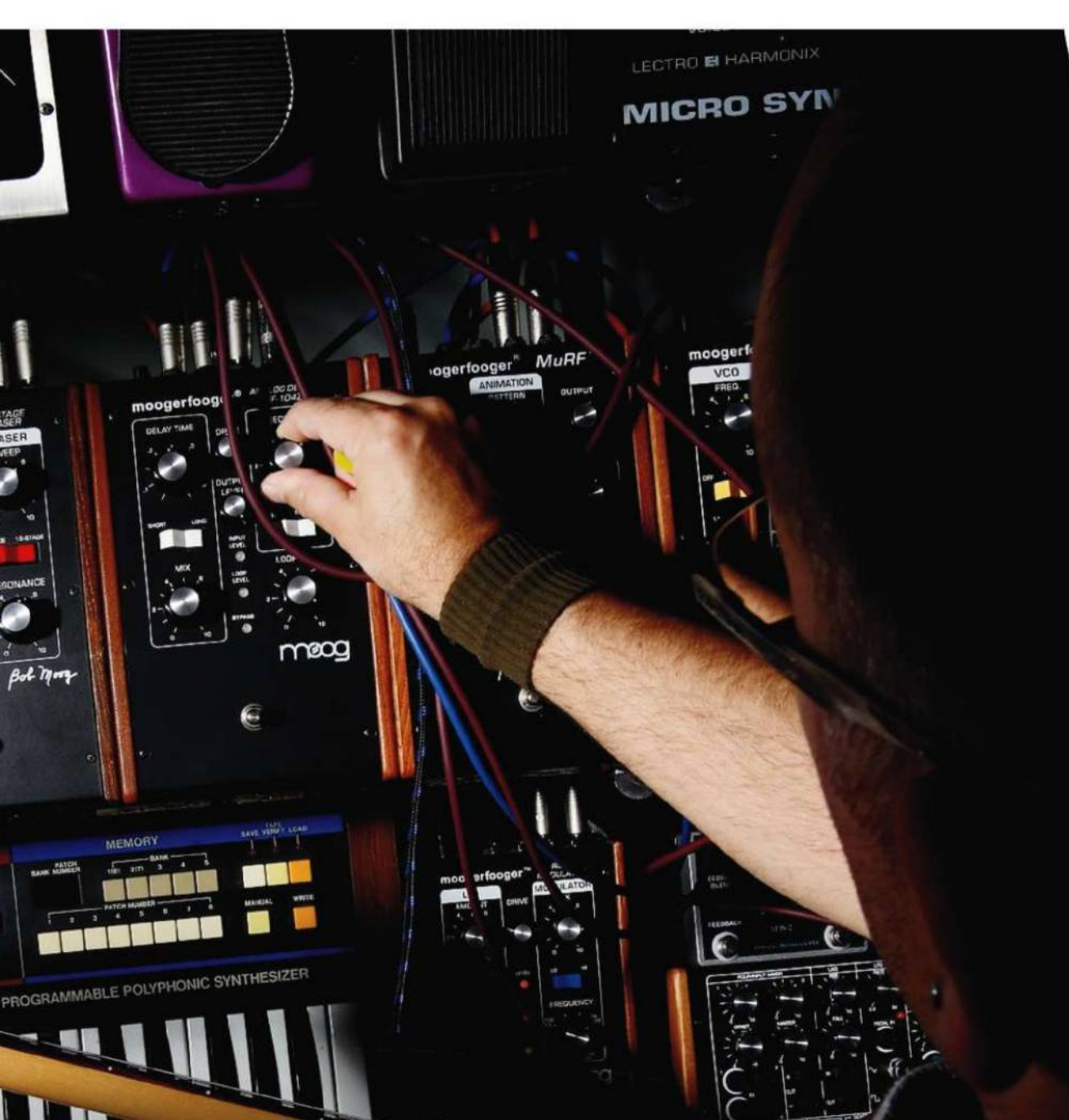


Random convolution impulse responses

"Convolution reverb is amazing pieces of software, with their ability to replicate actual rooms or halls and apply that sense of unique space to whatever you fire through them. As well as being able to record your own impulses most convolution reverbs allow the import of any stereo WAV or AIFF file to use as an impulse response. This opens up some great possibilities for sonic experimentation. In making this collection we used a wide and, at times, pretty random array of WAV files to create some weird, wonderful and downright odd sounding reverb effects. We found synth sweeps, dub effects and foley real life recording worked very well as IR sources as did experimenting with the depth, wet / dry balance, envelope and length of the reverb."

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GEAR USED



Ambience
Groove Criminals
use:
Moogerfooger
CP-251 control
processor

"Basically a box that works with control voltages rather than audio signals, the CP-251 opens up a world of voltage control for the Moogerfooger range. With nearly every 'Fooger control having a corresponding CV input jack, the CP-251 dramatically expands the sound mangling possibilities."



Future Garage
Cyclick Samples
use: Gear Used:
Philips Stereo
mic

"At just under 10cm tall this is a dinky 1970s stereo mic that has more than a hint of *Space 1999* about it, but it's a bit of a gem for percussion. Though there is a reasonable LF response, it's really all about the mids, which are very forward. Cheap as chips too – just change the ends for XLRs, whack it into a decent preamp and you're away."

THE MAKING OF YOUR UNIQUE FM SAMPLES...

Ambience

Put your tracks in a totally new space

This month's samples are very different partners in crime. Cyclick Samples has created a pack all about the swing thing with Future Garage, while Groove Criminal has set about getting the right atmosphere. To get a better idea of how Groove Criminals created these 'other-worldly' samples, we caught up with him in the GC HQ. "For this month's samples we dipped into the gloomier corners of Ambient music to bring you some darker-toned soundscapes and sonic manipulations. For creating the soundscapes, pitch-shifting and

time-stretching were the first ports of call, effects-wise, with delay and reverb a close second. "We followed the favoured method of grabbing a small section of source sound, from a synth line or foley recording, stretching and pitching it, layering it against another sound or texture, before being stretched and/or pitched again. "Different modulation and panning effects were then used to add movement to the sounds, while some reverb and delay gave them all a sense of space."

1,000 samples

Plank spanker

To accompany the dark Ambient theme we also created some heavily effected guitar washes, textures and drones. These planks were then slammed through the Moogerfooger array (Low-pass, Phaser, Freqbox, Ring mod, MuRF, and Delay). Some sustain and distortion was added before hitting the 'Foogers while the extra swell came from our 'tape reverse' pedal. All of this mangling was then cut up and sent through Guitar Rig 3 or pitch shifted for even more manipulation or left raw and noisy!"

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Ohm Code

Livid Instruments return with yet another sexy hand-crafted controller

Texas' finest Livid Instruments have continued to supply some of the most aesthetically pleasing controllers on the market over the past few years. It's not just about good looks though, Livid's high-quality controllers have become renowned for their flexibility, with customisation being a big part of their mantra. The original Ohm, the Ohm 64, and more recently the Ohm Block, have all caught the attention of DJs, VJs and live performers, and now it's the turn of the Ohm Code – a rotary-heavy controller made to standalone or to slot into your current setup. With each knob being clickable and with a dedicated LED to keep you in the know, the Code could happily fill the gap between Ableton Live-style clip launching and excessive knob needs.

We spoke to Livid co-founder Jay Smith to try and crack the Code...

FM: Where do you see the Code slotting in to a performance setup?

Jay Smith: "Code really stands up as a single performance unit, but its compact size and flexibility will make it ideal for integrating into existing setups. For example, a turntablist might just need something to use with his Traktor setup for effects and EQ, or someone using the block with Live might need additional controls for effects. But really Code is packed full of features.

"Given that each encoder also acts as a button, it can work as a grid of triggers and analogue controls at the same time. For me personally, I would use

this for my Device Rack in Live and the Ohm64 for triggering, clips, transport and track controls. But if you were looking for a single controller that you can pack in your backpack to work with all your software, Code is perfect."

Talk us through the Code's features.

"First and foremost, it's built around rotaries. It has 36 endless encoders with an LED ring around them to show position. Each encoder is also a push button and has an addressable LED for the button action right below the encoder. There are 13 push buttons with backlight LEDs that line up with the columns and rows of the encoders.

"The encoders have two modes: absolute and increment / decrement, and everything is re-mappable with the Code editor software. The software will also let you create 'shiftable' functions so for example, you can hold a button down to change all the encoder CC values, to give you easy access to 72 encoders.

"Code is also bus-powered and class compliant so no drivers or power cords are needed. It also has standard MIDI In and Out ports to use with other MIDI compatible hardware. Finally, it's designed from formed anodised aluminium (the same thing you see on the MacBook Pros) and the end caps are crafted with mahogany, with a tung oil finish."

Are you concerned with the iPad's controller potential? Do you have plans to develop for it?

"Not concerned, excited. The iPad as a music controller is a big question mark. Everyone thinks it's going to be great, but no one actually knows how it will be realised. We do have integration plans, but I don't see the iPad or other touch surface controllers replacing real physical controls, just augmenting it. We don't see it as something that will overtake us.

"If you take some historical perspective, it's pretty clear that synthesizers did not replace guitars, they just joined the same band. People are going to want their tactile controls, it's as simple as that. We just have to keep it interesting, useful, and beautiful."

What are Livid's future controller plans?

"We do have a few new controllers in the works. We plan on expanding our family of controllers, while improving our flagship products. We don't design 'disposable' products, so we won't be abandoning our current offerings and customers. We are adding equipment to our manufacturing facility that will allow us to do more, and offer more options.

"We are developing things that integrate into touch devices, as well as adding more expression control to our current line. In a world where everything is being shipped off to China for cheap manufacturing, we are growing, bringing everything closer to home, and improving on quality and craft." **FM**

WANT TO KNOW MORE?

The Ohm Code will be released in the UK soon. Pricing TBC. lividinstruments.com





Image Line FL Studio 9.5

Image Line have just released the new beta version of FL Studio for hungry users to test. **Bruce Aisher** jumped on the list and gave 9.5 a whirl

It's been just 10 months since the introduction of Image Line's FL Studio 9, and we've had four updates. This brings us to the latest (and potentially greatest) of these – FL9.5. Before we proceed, it's worth pointing out that what we've been looking at is the beta-testing version of the software, and it comes with the usual disclaimer that some features may change between now and the full release.

Unlike some software developers, Image Line rely heavily on beta-testing to large groups of existing users to iron out potential problems prior to release, and tend to have quite a healthy ongoing update

schedule. For those new to FL, it's a DAW system that comes from simple audio sample, step-sequenced origins to take in all the usual features that a fully formed production system should have. It comes in a number of different versions depending on your requirements, with a large number of well-regarded plug-ins available to purchase as optional extras.

Squeeze me

Since FL9.0 and prior to the latest beta there have been some important additions as well as the usual range of bug fixes. To get us up to speed, it's worth pointing out a few of the more significant ones.

We now have VST3 plug-in support, MP3 export to Edison the sample editor, some Plug-in Delay Compensation tweaking (more on this in the *First Hour with* column), a new synth (Harmless), a new effect (Fruity Convolver), improved Sytrus rendering quality and host of editing and selection tweaks.

Clearly VST3 plug-in support is the most important of all these and reflects the greater pick up of this standard among plug-in developers.

Beta to the max

This brings us neatly to FL9.5 (beta), and the headline feature additions are quite compelling.

The plug-in Wrapper now has support for 64-bit plug-ins, automatically detecting them and opening them in 64-bit 'Bridged' mode. This mode also allows all 32 or 64-bit plug-ins to be run as a separate process with their own memory allocation.

This does potentially allow for better use of memory in a 32-bit OS, and gets around some of the current issues with sample-playback instruments and their resource requirements. Equally, Audio Clips & Sampler Channels offer a 'keep on disk' option that opens the sample in a separately allocated memory space.

Plug-in Delay Compensation is now fully automatic if required. This is a very important feature for any DAW, and has arguably been one of the most significant missing features in FL for a some time.

The mixer now has an improved (larger) overall view with wider tracks and new option to display 'Waveforms' in real-time – a feature seen recently in Steinberg's Nuendo.

Playlist track heights are now separately sizeable using a simple drag between track names (and globally via the size box at the top right of the playlist window).

Among the many other additions you will also find that in Song mode, the Piano roll now moves in sync with the Playlist, you can copy and paste automation values and a new 'Ctrl+B' function has been added to make it easy to duplicated selected events.

Bits and pieces

Of course, there is ongoing talk of Image Line's plans for a 64-bit version of the program that would allow 64-bit plug-ins to run without the need of a 'bridge'.

In reality, of course, as with many other pieces of software, legacy 32-bit plug-in support would then be required. Clearly they will have to take the plunge at some point but the next few years looks like being a (slightly frustrating) transition phase for music tech-heads across the board.

So, this update looks as though it will provide an answer to many of the outstanding feature requests from users, and pave the way for FL10 in the future. Watch this space. **FM**

WANT TO KNOW MORE?

Keep your eye on *FM* for a full review of FL Studio 9.5 flstudio.com

Your First Hour With...

We take you through your first run of Image Line's new update

Dynamic Mixer
The new mixer view & waveform metering is easier on the eye when 'Wide tracks' is enabled. Individual track waveforms can also be displayed vertically in each track strip to give a more accurate representation of audio activity.

Audio Settings
FL has always had quite a comprehensive audio setup section for tweaking the audio quality and performance hit with your chosen audio card. FL9.5 adds two more ASIO options for possible decreased CPU load.

64-bit Bridge
Plug-in bridging not only enables the use of 64-bit plug-ins, but also provides the opportunity to reduce the memory footprint of FL. Memory-hungry plug-ins can now utilise their own memory space – a real boon in 32-bit operating systems.

Plug-in Fixes
Plug-in Delay Compensation is now fully automatic, making it possible to tweak the Look Ahead parameter in Maximus (for example) and know that its audio buffer has been correctly compensated in the overall signal chain.

Track Height
One of the various aesthetic tweaks is the ability to adjust the Playlist track heights. This is very useful when working on automation or other detailed track work. There is also the option to lock the height of tracks when you regularly need to see their contents in detail.

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Axiom Heroes

M-Audio update one of their most popular ranges as the Axiom controllers get a tasty new refresh

The mightily-popular controllers from M-Audio are getting a splash of new features as M-Audio present the new Axiom 25, Axiom 49 and

Axiom 61 USB MIDI keyboards. The biggest change is the addition of DirectLink technology, but M-Audio have also added an improved keybed and redesigned the user interface.

The DirectLink technology automatically maps keyboard controls to common mixer and virtual instrument parameters, making it simpler to get hands-on control over your mix and your music without any complicated set up or user configuration required. According to M-Audio, DirectLink works with all the major DAWs including Pro Tools, Ableton Live, Logic Pro and Cubase.

Although it's only a refresh of the line this time around, it's good to see M-Audio building on these value-for-money controllers that have become increasingly popular. We'll take a look at them in more detail in a future issue of *FM*.

WANT TO KNOW MORE?

The new Axioms should drop before the end of Sept, starting at £200. maudio.com

NI News

Stop the press! NI preview new goodies

Those Berlin boys are at it again – just as we finally master the X1, it's time for another Traktor shake up.

This time though, it looks like it's going to be one of the biggest ones yet. From what we can make out in these last-minute screenshots that dropped in our mailbox, it looks like NI have answered the prayers of legions of in-the-box Traktor DJs by providing a dedicated mixer control surface with what looks like a built-in

soundcard. Details are incredibly scarce at the moment, but we're incredibly excited to get our hands on this. Knowing how tightly the X1 integrated, and the quality of the current NI interface range, having a self-contained four-channel Traktor control system, with jog wheels to boot, may just have other manufacturers shaking in their boots.

There also seems to be a hefty update to the software itself, with a new 'Sample Bank' section, which we

can only assume is for sampling on the fly, with triggers on the new hardware, something which may appeal to the Ableton Live DJ crowd. At this stage, pricing and availability are a distant world away.

In other NI news, a long-awaited Reaktor refurbishment is currently in public beta, with the new Reaktor 5.5. Although there are no final details as of yet, the bullet point list of updates should certainly get the modular moguls excited, with a new revised one-window GUI, additive and modal synthesis capabilities, a new structure bookmarks feature and now instruments can be loaded as ensembles, and vice-versa. Reviews soon. nativeinstruments.com



Test Tube

Hot on the heels of our classic gear feature [see page 36], Softube have announced the availability of their fantastic-looking Tube-Tech PE1C. Based on the Pultec-style equaliser, its glossy blue good-looks provide a recreation of the passive, tube-based EQ that still finds itself in the world's biggest studios. It's priced at an introductory offer of \$229 (Native) or \$329 (TDM/Native). The introductory offer will last until August 16 2010 and after that, the price will be \$279 and \$449. If you want to give it a go there's a full 20 day demo at softube.com

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Return of the Mackie

Whether you're after a compact and portable interface or a robust, rackable studio workhorse, Mackie may have the solution...

Aside from a few FireWire mixers Mackie have had a bit of an absence from the computer side of production kit. Now their back with two audio interfaces, the Onyx Blackjack and Onyx Blackbird. Both of the interfaces come with the usual high-quality Onyx mic pres and Cirrus Logic AD/DA converters. The smaller Blackjack interface is a 2x2 USB model with a rugged compact desktop design. There are two mic pres which also have D.I.s for recordings guitars. There's true

analogue direct monitoring with separate level controls for your monitors and your headphones, plus it's all bus-powered, so great for mobile recording situations too. The larger Onyx Blackbird is a 1U rackmount affair which hosts eight Onyx pres in a 16x16 FireWire interface. There's an 8x8 ADAT port, wordclock I/O and what Mackie are calling 'Super Channels' on the front. These front inputs have dedicated low-cut switches, phantom power and the same true hardware monitoring for latency free tracking.

Mackie also provides their Blackbird Control DSP Matrix Mixer software, which allows users to route any input to any output and set up independent mixes. These routing options include the main outs, monitor outs, alt outs and dual headphone outputs. The Onyx Blackjack will be £210 (249 Euros) while the Onyx Blackbird will be priced at £499 (599 Euros).

WANT TO KNOW MORE?

Pick up *FM* next month for more on the Blackjack and Blackbird mackie.com



Just In Case

Sontronics roll up with a new bundle of mics based around their successful STC-80 dynamic mic. Packed in a spy-like case are four of the STC's plus their mic clips and is aimed at producers, bands and live engineers who want a solid solution for drums, guitars, vocals and more. If the robust case isn't enough protective peace of mind, then the usual Sontronics lifetime warranty should be. The set is available now for a suggested retail of £299 sontronics.com



Reverb Ruboff

Windows users might find this nifty little VST useful for rescuing shabby recordings or creative sample use. DyVision Reverb Remover claims to be able to remove the reverb from an audio signal while also having the ability to achieve de-essing and background noise reduction. DyVision are very keen to point out that the technology is not a gating or a transient shaping, but employs a new approach to reverb removal. At £40 it could be a bargain. dyvision.co.uk

MUSIC TO OUR EARS

The FM Playlist

What we're listening to this month...



Chromeo

Don't Turn The Lights On

Eagerly awaiting the new album *Business Casual* from the Synth Pop duo. *Chris, Reviews Editor*



Aeroplane

We Can't Fly

One of the most anticipated albums of the year delivers a genre-hopping journey. *Ace, Declan, Prod Assistant*



Goldfrapp

Enjoying the effects of this brightly produced Long Player and sunny weather on the drive home. *Phil, Art Editor*



Seiji goodies

Podcast Bugz in the Attic and Seiji's podcast is a must for exclusive cuts. Shame it's not daily. *Will, DVD Editor*

Palmer Pocket Amp

Is that a guitar amp in your pocket, or are you just...

Designed as a practice tool, but apparently equally as happy on stage or in the studio, the Palmer Pocket Rocket is a guitar preamp and speaker simulator with a selection of modes and controls.

Built into a tough-looking, die-cast aluminium case, The Pocket Amp can serve up clean and dirty amp sounds with its speaker simulator and switchable amp selections including clean, crunch and heavy options. There's also speaker and mic position simulations plus control



for drive, level, treble and bass to tweak your sound further. It's all powered from a 9V battery and even has a 3.5mm jack aux input for the odd teary-eyed lonely jam session.

palmer-germany.com



Pioneer CDJ-850

Another month, another Pioneer product, this time, right in the middle of their CDJ line

Pioneer are slowly refreshing and updating their line to be compatible with their RekordBox software. With all the same control features as the rest of their professional line, it seems Pioneer is hoping their shiny new silver CDJ-850 will be a feeder product to their CDJ-900 and 2000 lines. The one thing that is missing is the ProDJ Link over LAN, but other than that many features remain and as refresh of

the features of the existing CDJ-800 mkII it's an amazing upgrade on specs alone. It comes with USB key input and USB on the rear for using the CDJs with DJ software over the HID protocol.

At £799, it's still quite an expensive piece of kit for the home DJ. But for someone who wants to get to grips with the layout of the club standard and begin to use RekordBox fully, or for those stingy club and bar owners this could be a sensible option. Pioneerdj.com

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www.timespace.com

Future Music presents...

PRODUCER SESSIONS **LIVE**



Look! New stuff! Come to *Future Music's* live event. Meet stars. Learn loads. Make music

Don't forget this year we're running our very own, intimate live event in London. And we want you to come along. And this month's big news is that **TICKETS ARE ON SALE NOW!** (Big enough for you?)

Just head to producersessionslive.com and get them while they're HOT! Yes, our friends at the SAE school in London are turning over their entire flagship studio facility in Shoreditch, London to us on

September 25th and 26th. Producer Sessions Live is your chance to learn from the pros and get hands on with the latest and greatest music making gear. The teams from *Future Music* and sister mag *Computer Music* will be there, overseeing two days of tutorials, gear demos and essential advice for up-and-coming producers.

There's gear from the world's hottest manufacturers lined up for you to try out. But the highlight of the show is a line-up of star producers

and world-class demonstrators who'll be showing how the hits were made in a series of lectures.

So far, we've arranged classes from the awesome Freemasons, Danny Byrd, Dave Spoon, London Elektricity and Tommy D and now, dancefloor destroyer, sample hero and all-round nice guy Sharooz has joined the party. He'll be taking you through some of his tracks and remixes, which have been played by the likes of Pete Tong, David Guetta and 2 Many DJs.

Also recently confirmed are Dance duo Alex Blanco and Jon Carter. As a producer, band-member, DJ and remixer, Jon has travelled the globe, producing, DJing and gigging. Alex Blanco has produced tracks and remixes with (or for) everybody from Seb Fontaine to Simply Red.

They'll all be showing you how they made their hits live on stage and answering your production questions. And with tickets from just £8 it's rude not to get involved!

WANT TO KNOW MORE?

Head to producersessionslive.com for all the details and follow [prodsessionlive](https://twitter.com/prodsessionlive) on Twitter for the latest additions and announcements as they happen.

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London Music Show 2010

The biggest music show in the UK is now in the safest hands in the business. Do not miss it

Doing anything on the 8th to the 10th of October? We certainly are. We'll be at the UK's premier music

show, now being run by Future Publishing, the folk that make *Future Music*, *Computer Music*, *Guitarist*, *Rhythm*, *MusicRadar.com* and countless more music brands.

The 2009 show attracted over 22,000 musicians, engineers and producers from every ability level and musical genre. And with us running

the show we're all set to bust that figure wide open.

The big news is that *Future Music* and *Computer Music* will be running our very own Sound and Recording Technology Zone. There'll be presentations on stage across all three days of the show, aimed at giving *FM* readers the knowledge they love, from tutorials on your first loop-based production to advanced mastering techniques for pros. And keep your eyes peeled for celebrity guests too.

Meanwhile over in the *Guitarist* Zone you can expect the staff of *Guitarist*, *Total Guitar* and *Guitar Techniques* to be doing likewise. And drummers get their own section, hosted by *Rhythm* magazine. Plus, legendary producer Steve Levine will be on hand to answer your production questions and take you through how production has changed over the past 25 years. The show all kicks off on Friday the 8th October at 10am, running until 6pm, while on Saturday

the 9th, and Sunday the 10th the show runs from 10am til 5pm.

It's all taking place at London's immaculate ExCel exhibition centre nestling in their famous docklands.

Tickets go on sale soon so check out londonmusicshow.com to register your interest. See you there!

WANT TO KNOW MORE?

Head to londonmusicshow.com for the latest ticket info, or follow the show on Twitter at twitter.com/LondonMusicShow



THE LITTLE VILLAIN GROWS UP

"THE ADDED SAMPLE MEMORY AND KEYBOARD REALLY PLACE THIS WITH THE BIG BOYS." - FUTURE MUSIC 211



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ECHO

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THE
CLASSIC
ALBUM



A Guy Called Gerald

28 Gun Bad Boy

Juice Box, 1993

Roy Spencer calls for a reload on the story behind the first full-length album of the Jungle era as he speaks to Dance music pioneer A Guy Called Gerald

Since the 1980s, A Guy Called Gerald has been at the forefront of Dance music. Whether it's providing the meat for early 808 State classics such as *Pacific State* or pushing us with the pulsating rhythm of seminal cuts such as his own

Voodoo Ray, he's been the name to watch and 'wow' over. We join him now, circa '93, at his third album. Again, forever innovating.

A Guy Called Gerald has been on lockdown in his own Machine Room studio in his native Manchester, experimenting with breakbeats. His

childhood influences of Reggae and Hip Hop are being taken through the blender and pitched up into bpm's that would help to set the benchmark for a style of music that would be known as Jungle – and become Drum 'n' Bass. The album is the epochal *28 Gun Bad Boy* – the first LP of the Jungle generation. A melting pot of styles, wild invention and brave new worlds explored with a trusty sampler, it's considered the defining album that brought the Jungle movement out of the Rave era.

To keep his connection to the underground, and to material consistently in the clubs, Gerald had started a Dance sub-label called Subspace with his then-major label home, Sony – but the creaky major just couldn't understand the concept of the white label.

"It was a little too underground at the time," says Gerald. "So I decided to just move on and started my own label, Juice Box, and distributed through Deltra."

Under his own management, and at his own pace, he was now truly free to push whatever boundaries began to face his wandering mind.

Thinking back, Gerald breaks down his situation at that time: "I think the main thing about the *28 Gun Bad Boy* album was the feeling of freedom. I'd just been through the restrictive phase with Sony and this was a celebration of freedom."

Most of the album's tracks would be released as white labels in short print runs. And when the full album dropped, a large chunk would be mixed in a classic DJ style. "The inspiration for the whole thing was the mix-tape format," Gerald explains. "People were taping DJ sets and I wanted to use that as a concept for the album. As I'd already released a few 12-inches, the idea was to mix some of them into one track for the album."

The music itself took on the sound of pure proto-Jungle: Electro stabs, pitched up breaks, swarthy pads, sped-up vocals, bad-boy attitude and a big sense of Rave urgency. It was the sound of now. The club sound. Specifically, the Juice Box parties in Manchester.

"For me, that time was the early days of Jungle, and I suppose experimentation was the main influence... Every day was a new musical pathway. We weren't actually thinking of being influenced by any one person. The main influence was the people that were coming to the Juice Box parties we were doing."

Gerald estimates that the album sold somewhere in the region of 5,000 – 10,000 copies. "There weren't so many mainstream people interested in that type of Dance music," he says. "There were pirate radio stations and a few underground record shops spread around the UK. There was no press or reviews about the release. It was underground. For the underground."

Track by track with a Guy Called Gerald

"Mix (Cops/Anything/28 Gun Bad Boy/Sunshine/ Like A Drug/Ses Makes You Wise/Free Africa/King Of The Jungle)"

"The whole idea of the mix was to showcase the music from my label, as all these tunes had been released over the previous year on my label, Juice Box."



LIKE IT? TRY THESE...



808 State Newbuild

Manchester meets Chicago on this '88 Acid classic. A Guy Called Gerald makes up the numbers in this early incarnation of the band, and adds the beats.

ADD THESE TO YOUR PLAYLIST:

Talk; Sync/Swim



A Guy Called Gerald Hot Lemonade

Gerald's bedroom studio debut. He took the baton passed over the Atlantic from the likes of Juan Atkins and Derrick May, and ran with it. *Voodoo Ray* became the biggest Indie 12-inch of '89.

ADD THESE TO YOUR PLAYLIST:

Voodoo Ray; Rhythm Of Life



A Guy Called Gerald Black Secret Technology

Taking the Jungle experiments of *28 Gun Bad Boy* and refining them into this scientific Afro-Breakbeat long player. Up there with Goldie's *Timeless*.

ADD THESE TO YOUR PLAYLIST:

Finley's Rainbow (Slow Motion Mix); Energy (Extended Mix)



A Guy Called Gerald Tronic Jazz: The Berlin Sessions

The second part of the *Berlin Sessions* moves on from Acid Techno to the pure digital Electro Funk of this release. "I was deliberately trying to create a retro feel using software," says Gerald.

ADD THESE TO YOUR PLAYLIST:

People Moover; The Dip

"I had a friend, who did a DJ mix for me, by the name of Kurt. I just got the new Juice Box record bag, packed it full of tunes, got in the car and drove over to Cheetham Hill, where Kurt lived. I got to his house, plugged in the DAT machine and Kurt did the mix. I was going to do it myself, but I thought as I'd produced all the tracks, it's hard to hear the music in the way somebody else would hear it. As far as DJs go, Kurt was pretty clever when it comes to sound production.

"I started production of the album with this mix track, and I wanted the mix to introduce a flow into the album. As far as I was aware, there had never been a Jungle Techno album before. There had been loads of mix-tapes, so I wanted to have that mix-tape feeling as an intro."

Money Honey

"I remember being in the studio, the sun coming through the skylight, and having the bass pumped right up. I needed to make a track to express a situation. I'd just finished a relationship and it was the perfect way of expressing the situation.

"I would love to break down some of the production techniques, but you don't get nothing for nothing. I was trying out a new technique of sampling – breaking the syllables of the sample into key groups, which made it easier to manipulate the syncopation of how the vocal came across. This was pre me using

In the Studio with... A Guy Called Gerald

"It was made at the Machine Room Studio, Ducie House, in the city centre of Manchester. I had two Akai S950 samplers, an Akai MPC60 sequencer and a Soundtracs Quartz 32-channel in-line mixing desk, with built-in phantom patchbay. There was an old Otari tape machine, and for the outboard gear I was using a Lexicon reverb and a Lexicon delay, two Yamaha SBX90s and a couple of microphones. Software-wise, I had an Atari ST running Cubase, version 1 or 1.5, which I used as a

means of automating the desk.

"A lot of the tracks were made with hardware, and it was a mixture of early digital and analogue. Basically, there was a lot of experimentation with recording onto tape. I started off with a four-track tape machine and ended up with a 24-channel machine. I used to do a lot of overdubbing and dropping in and bouncing back and forward from DAT tape to two-inch tape. It was a multi-layered system where each layer could be manipulated at any

time. The way I'm picturing it in my head now is the layout of the desk was like a grid. All the sounds had access to any piece of outboard gear at any moment during the mix.

"To do this now, you would need a system where you can multi-layer and have each individual channel have access to, say, all your VST effects/plugin.

"The multi-track was the most vital bit of kit in there. I used to use it as a notepad to arrange the tracks. It was the focal point in the studio; it kept it all sync'd together."



position straight after the mix to cool things down a bit."

Got A Feeling

"I remember being in the studio at night; it was really hot, as I

to, because I felt that I had been totally abused at the time by the major side of the recording industry. In fact, *28 Gun Bad Boy* was a gesture and a 'fuck you' to the major record labels. I decided I wanted to

do my music kind of ghetto style."

Universe 2000

"I wanted to make a track that was more of a cross-platform of breaks and

My A&R man doesn't know how close it came to me spraying his brains over the wall of his office

Recycle. I wanted a deep but funky, skipping kind of vibe.

"The drums were all Breakbeat – I would sample breaks and layer them. In those days, you had to personalise your sound to show you knew what you were doing. It was before the days of DJs making music. I don't think the Hip Hop guys had even discovered the MPC60 by then.

"I never had to model my music on any other music that was out there. It was part of a series of tracks I was doing at the time, and I needed to make it. I needed to mellow it out a bit and I needed to put this track in

remember. I can't remember why, but I felt like I needed to move really fast – I remember getting on this racing bike I had. Luckily, I did that and didn't get into the car. I put my DAT machine on and headphones and went out on the Kingsway, which was the highway in front of where I was living. I can be a pretty powerful bike rider and I think I let rip down the middle of this road, heading towards a hill. All I can remember is the feeling of weightlessness as the speed increased – amazing.

"I remember thinking that I was just gonna sample anything I wanted

straight four-four. I was also exercising myself at chopping up breaks, and this was the beginning of the beginning for me with break-chopping.

"You have to take into consideration that by 1992 I was a veteran B-Boy, meaning Old Skool breakdancer. I put B-Boying into production of my music, unlike a lot of the Hip-Hop that you hear today which doesn't sound like it's got anything to do with B-Boying. I was working on a technique of using old school breaks, doubling them up, layering them and re-sampling the

loops. I also used another technique in combination with this: sampling the chords and then triggering it from the MPC60 – the predecessor to the MPC2000.”

The Track

“This started out as Breakbeat track that I started to introduce more and more Rave elements to. It was one of my favourites at the time.

“I was trying new ideas out all the time, still do: I have a no-fear approach to my production. I was lucky in the way I got into the whole music system – I never had to suck any cock. I was going for the sound of freedom. The thing with me is I have a habit of not being that arsed about the latest music, especially when it comes to the people who’ve jumped on the bandwagon trying to tell you what to do.”

Forever Changing

“The lyrics go, ‘changing forever, moving on... I’m heading for the place where the past becomes the future’. It was a track about people not pushing the boundaries – everything kind of seemed staid. This was the declaration that I’d be forever

New Material

“My most recent thing is the album, *Tronic Jazz: The Berlin Sessions*, which came out in May on Laboratory Instinct, a great label here in Berlin. Four vinyl releases of the album tracks came out each month from June to September.

“*Tronic Jazz* has 13 different flavours of digital Electro Funk composed in the many styles I’ve moulded over the last 20 or so years. It was an experiment, delving into the world of the soft synths to find ways to sculpt analogue sounds from digital waveform. I wanted to show that you don’t necessarily need to have these machines to make these sounds. I needed to do this after visiting friends who had

taken on the vintage analog fetish I had in the mid-to-late ‘80s. You know? Getting the ‘Old Skool, analogue warm sound’. Back then, these machines were all I could afford. From this, admittedly, my sound was born – I still feel this is the basis of my sound today, but I don’t believe anybody needs the machines to do it. I feel a part of the experiment is to progress regardless of musical trend.

“I mainly use one piece of software for doing almost everything – Reason from Propellerheads. Personally, I find that limitation forces creativity.

“I have no particular production style. I start with sounds and sculpt and shape them. I try to stay away from things that have been or are popular, sound-wise and feeling-wise.”



wanted to maim or kill one of these record company fuckers back then.

“Things had gone downhill a little bit since I walked away from Sony. My house was out of the area and some friends had to leave and stay at my place so they wouldn’t get in trouble with gangs that were looking for them in the inner city.

“We had to be very cautious, because if anyone saw them, it would have dragged me into the situation. So I had to hang about with a dude

“This tune, and *Like A Drug* off the track 1 mix, was how this fast Breakbeat music was beginning to feel to me. This feeling was totally the feeling of being high on just shocking out and dancing. It was from the innocent days of just shocking out. The music was just for shocking out to – I still had a lot of anger in me and it really helped to diffuse it.”

Disneyband

“*Disneyband* was fun to do. I always wanted to do a track sampling some well-known people who’d never appeared on a record together (as far as I was aware) and so I did. It was inspired by a few sounds I’d found on the Roland JD-800, which had just come out.

“I was also inspired by the weed. As you might imagine, there was a little bit of ganja smoking going on around the studio... Ses is Sensimilla. But we all grew up with ganja and its doctrines. I learnt certain things from Rastas about Popes and the Black Star Line, but one of the important things I learned was about meditation and how to

meditate with natural ganja without intoxicating oneself.”

Wonderful World

“Another feel-good tune. The kind of stuff I imagined being played somewhere really hot and sunny like Ibiza. Me and my brother would have loved to have gone over and performed it live. It was my brother David on vocals, and Elaine on female vocals.

“The album was made at a time in Manchester where you could hear people practicing with their automatic weapons in the park. Most people I knew wore windbreakers, baseball caps with ear protection, and they’d have balaclavas with them. I kind of detached myself from that whole major record label bullshit with their soppy cries of trying to get me to do tracks with vocals. I was full of anger. My A&R man doesn’t know how close it came to me spraying his brains over the back wall of his office. Sounds a bit hardcore, I know, but they had refused to give me back my multi-track tapes with unfinished material that I’d been working on for years.” **FM**

The music was just for shocking out to – I still had a lot of anger in me and it really helped to diffuse it

changing, not going back to *Voodoo Ray*, which at the time, as you could imagine, people were constantly asking me to do. It’s still happening even now...”

28 Gun Bad Boy

“I mastered all my stuff at The Hit Factory, Sony’s mastering studios and I didn’t have to pay a penny. I thought that was funny, as I’d already stopped working with them and they didn’t realise they were my boy. I really

who was carrying firearms and bulletproof jackets when we were driving around.”

The Freak Inside

“It was another experimental crossover. It started off as an Acid track – this was one of the later versions I did, where I wrote a Breakbeat to go with the bassline. It was a pretty up-tempo number, so I had to be very careful with the melody, ‘cos I wanted it balanced.

NEED TO KNOW

Five essential facts about...

A Guy Called Gerald and 28 Gun Bad Boy

1 Work originally started on the album in 1990 and it was finally finished in 1993.

2 The watchword for *28 Gun Bad Boy* was experimentation. “A lot of work started from a new way of trying to do something,” says Gerald.

3 Gerald has lived in Berlin since 2004. Before that, he lived in London and New York.

4 After refusing to water down his work’s underground vibes for major label, Sony, his second album, *Hi Life Lo Profile*, was shelved.

5 Gerald recently lost six months’ work due to a computer meltdown: “It’s all part of the training and the creative process – having to let go...”

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A few essential bits of information about...

SNAP! Studios, London, UK



ADDRESS

167a Hermitage Road
London
N4 1LZ
UK

WHO RUNS IT?

Marco Pasquariello, Engineer/Producer

PHONE

+44 (0)207 2814 478

WEBSITE

snapstudios.co.uk

Y'know, we can't honestly recall the last time we visited a studio carpeted with Astroturf. But it's a

genius move. Easy to clean, hardwearing and just the thing for brightening up the corridors of a recording studio where gear and space are in abundance but – as per every famous recording space – natural light is not.

Snap has existed in its current form for four months, being the result of major renovation works by owner Mark Thompson of the famous Funky Junk gear company. After previously owning a smaller studio in London's Wood Green, Mark decided to expand his operation providing both a full studio facility for hire and a great place to house his incredible selection of analogue goodies and vintage gear.

"A lot of the gear we have here is gear that Mark has found over the years and is part of his personal collection," says Studio Manager and House Engineer Marco Pasquariello.

"He's seen a million-and-one Neve preamp modules, so you can imagine, the ones here are the best! Mark's been collecting for the last 25 years with the vision of putting it into somewhere like this. We wanted to create a place that had top quality vintage gear but was going out at an affordable price. People who couldn't normally afford this level of gear can afford to record here."

The SNAP! team's work consisted of completely changing the layout of the studio, specifically repurposing the existing, perfectly-ample live room as a brand new, super-spacious control room. "There's nothing worse than a cramped control room, is there?" asks Marco. "It's actually about the same size as our live room. In fact we changed every wall in the entire studio apart from one wall in the kitchen. And the front door."

There are actually two studios at SNAP! The large main studio is blessed with that sized live area and equally generous control room, while Studio Two is the ideal place to



Neve 53 Series Console

"We're adding flying faders to this soon. Is that going to be hard? Oh yeah! We've had custom-made faders as the ones from the Martin sound system are too big for the console so we've had to have smaller ones made up. But it's going to be fantastic. A '70s Neve with flying faders!"

INTRODUCING...

L-R

Marco Pasquariello
Studio Manager/House Engineer

Ben McLusky
General Assistant/Tape Op

Angie Kuzma
Marketing/PR

**Pro Tools HD3
with Prism
Converters**

"It's an Intel Quad Core Power Mac with 8GB of RAM. Let's just say that you don't struggle for power here. We run the monitor on Ethernet so you can use a keyboard and screen from any room and still use this computer."





In The Spotlight



"When we designed the lighting, I knew I really wanted to do this. This is how it was done in classic studios through the golden era. These are

VARIACS, made by

Westwick Installations and they're totally silent. When we cut vocals we put the booth under these lights so you've got that really intimate thing with the artist through to the control room.

"The lights act like a spotlight and create such a great vibe. The relationship between the two rooms when the lights are down makes such a difference. And we can create the same effect with lighting zones around the whole live area."



Otari MX80

"The romance of tape! It's exciting! You can record your drums to tape and the rest to Pro Tools. I don't think you can get a better sound and lots of clients are very keen to give it a try. To make this as easy and cheap as possible, we let them record to rental reel which we rent out at £50 and we replace it when it needs replacing."

Neve 2262

"These are very similar to the 2254s, and identical to the 33609 discrete. They're really nice for the mix buss and really nice for drums. They're just really nice, full stop."



Hammond C3

"We've got a full Leslie system too. What can I say? It's a classic and this is a very nice example."

Bösendorfer Imperial Piano

"It's a beast. It was at Air Studios in the early '80s. It records really well and it's in amazing condition and sounds great in this room. This piano through the Neve console is a match made in heaven."

Telefunken ELA M 251

"This is the Holy Grail vocal mic. For the right female voice through the Neve and the Fairchild it's just ridiculous. We've got so many mics. The up-to-date list is on our website."



prepare projects or continue working in a little downtime. That said, it's still equipped with a full SSL AWS 900 desk with 24 ins and outs on Lynx Aurora converters. It even has its own vocal booth across the Astroturfed corridor.

It's also where a lot of SNAP!'s boutique outboard rarities come to stay, with Funky Junk's new finds being put through their paces at Studio Two before making their way to lucky new owners. "It's intended as a budget room, but the gear here is first class, enough to do a full mix" says Marco. "There's an 1176's here, an LA-2A, Mayfair pre/EQs..." The gear is as unusual as it is impressive and it's commonplace to see some bizarre one-offs in Studio Two's rack, ready to be pressed into service in the full

It's intended as a budget room, but the gear here is first class

studio if the project demands it, or if the ever-ambitious team simply want to try something new.

"And if someone just wanted to come in and cut a vocal on a U47 or an ELA M for a day, this is going out at a price that's going to suit everyone," explains Marco.

In Studio One's live room, it's easy to see where the care (and money) in SNAP!'s construction has gone. "This oak floor was from a church hall in Yorkshire," says Marco. "It was black when we got it but we cleaned it up, laid it down and it sounds phenomenal. I've been taking ambients off the floor while miking up drums and the tone you get from it was wonderful. There's a bit of ping to the room but it sounds really natural but because we have the hessian panels for control you have a lot of options when you're tracking in here.

"We're running really short cable runs too, on directional Vovox cables. The 16 lines under the window in the live room terminate at GPOs on the patchbay and everything from the console to the converters, all the monitor feeds run on Vovox."

It's been said that a modern music production facility is complete

with good food and parking and SNAP! delivers on both. There plenty of access to local shops – the Manor House location makes it a simple tube ride away – and the kitchen and lounge are more than capable of feeding a band and entertaining them with DVDs and videogames during downtime. Plus, the studio extends to include a gated yard capable of hiding six cars with plenty of on-street loading and unloading too.

"And we're going at a price where people can afford to spend time and experiment with things they normally wouldn't have the time to try. Rather than playing it safe on sessions, people can be a bit more daring and try stuff out because they're not watching the clock like they would at other places." One of the studio's less

obvious – but highly commendable – features is its use of a balanced mains power system throughout. Now such things are rare but the abundance of vintage gear at SNAP! and the

dedication of the studio's team meant that their refit of the old studio simply had to have no expense spared.

"Everything audio runs on balanced power," explains Marco. "By law we have to have these South African-style plugs and then we have breakout boxes to 13 amp sockets. In fact, there are three complete mains systems. There's the balanced power for the gear, 'dirty' power for lights, kettles etc, and then we've got a complete American 110V system because a lot of people bring in 110V gear and by its nature that's balanced as well. It's all about the noise floor. It's exceptionally low and working with vintage gear, you want it as low as possible. You can literally hear the difference. That Neve console – it's just so quiet for a 1972 console.

"We did A/B tests with the balanced power on and off. The sound tightens, you can hear the tails of reverbs, the stereo widens... fact is we've never worked in here with it switched off!" Sounds good to us. **FM**

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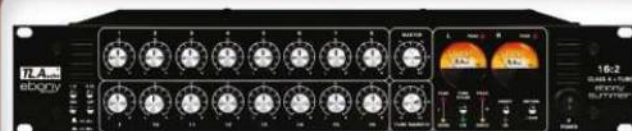
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ON THE RADAR

Don Diablo

Holland has more top-flight Dance producers per square mile than any other country. We chew the fat with yet another Dutch talent

Don Diablo aka Don Pepijn Schipper was born in 1980 in a small Dutch town near the German border. He began as a producer, releasing his first E.P. at the tender age of fifteen. A string of different aliases saw him making music in a multitude of different styles. Later, he signed to a sub-label of EMI and soon after the 'Don Diablo' brand was born.

We caught up with up with the prolific producer to talk studio kit and discover what's next for the Dutch Don.

FM: What are your favourite tools in the studio?

Don Diablo: "I used to be a big hardware freak, but that's slowly changed over the years. I really got hooked on all the audio editing opportunities that have developed over the past few years. I like making new sounds by stacking different ideas and samples on top of each other with several added effects, creating totally new sounds that are hard to place.

"My favourite plug-ins are the NI Pro-53, IK Multimedia Samplemoo and Kontakt 3. Besides that, I have a few Korgs and, at the moment, I'm using the Moog Little Phatty quite a lot. I'm also really happy with my Focusrite Producer Pack for all the vocal recordings – it just saves you a lot of cleaning up afterwards. Lately I've been using the Pioneer DJM-800 mixer to record real-time effects, loops, delays and filters on the fly. I use a lot of live instruments in my studio as well, nothing beats the sound of a really funky bassline played live on a real bass guitar that is hooked up through a dirty old amplifier that still smells of last night's beer."

What are you using to produce?

"As a sequencer I use Nuendo, hooked up the Apogee Rosetta 800 interface and the Mackie DxB mixer. I don't know a lot of other producers who use

Nuendo, but it hasn't failed me yet and in combination with the Mackie and the Rosetta it allows me to work exactly the way I want to, especially as I also make a lot of music for movies and games. The video import functions are perfect for syncing audio with video and it's very user friendly to say the least."

What studio tech are you looking to purchase next?

"I am not looking for anything in particular at the moment, at least not anything new. Vintage synths are a different story – I love buying them, even when I am not going to actively use them in the studio.

"I would love to add the Korg MS-20 to my collection right now. When I buy a new hardware synth, I mostly end up editing new sounds and then sampling them, so I can use them as audio files later on, that saves a lot of room and if you want total recall, when you are working on several projects at the same time, then you sadly can't trust MIDI."

What's the biggest career mistake you've made?

"I signed a bad deal at the age of fifteen, because I was just very eager to put my music out there. Lucky for me I was able to get out of the deal after a few years, but it did make me aware of the fact that there are a lot of shady people in this business. That hasn't changed so much, but what has changed is the music industry itself. The term 'bad record deal' has become more relative, I guess you should be happy

that you have a record deal at all and that somebody actually believes in you and wants to invest in you. You should consider your music as a promotional tool for your performances and you shouldn't sit on your music like a duck on eggs.

"Once people get to know your name, thanks to several leaked tracks on the internet and remixes (or covers) that you did for free, interest will start to grow and in the end quality will always find its way towards a bigger audience."

What's coming up for you? Remixes, releases, studio work?

"My album *Exit Studio Sweatshop* will be out in September or October. The title is a reference to many lonely hours spent in my studio, trying to perfect things to the bone. This year I have been in the studio so much, doing remixes for Gorillaz, Mika, The Chemical Brothers and so many others as well as studio work for artists like Example and scores for several films and commercials. Besides that I have an E.P. coming up with Diplo, which has already been licensed to the new Need for Speed videogame from EA Electronics."

Are you looking for mainstream 'chart' success?

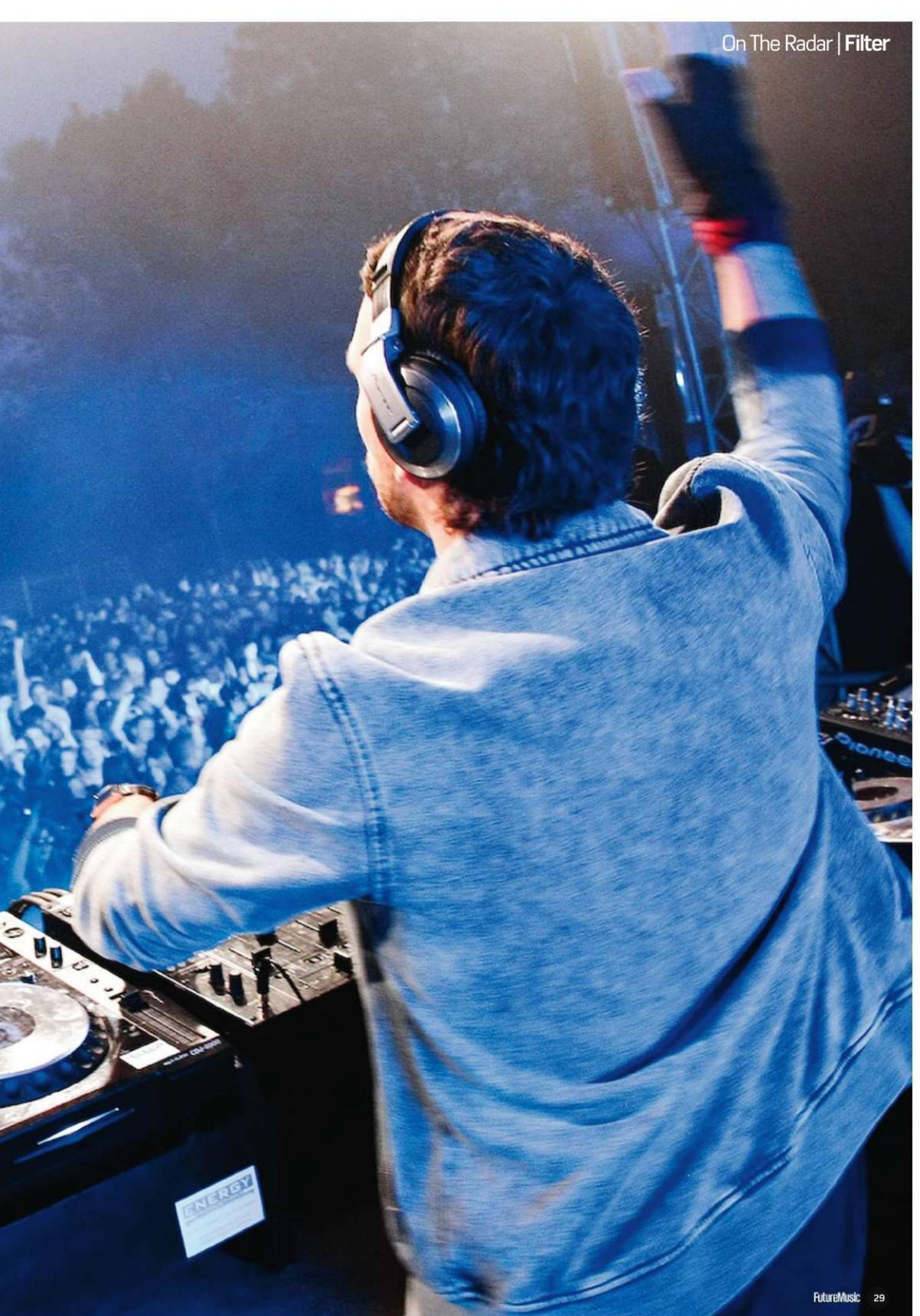
"I have never nailed myself to a specific sound or genre and I just do whatever I feel is right at that time, musically speaking. I guess that is what confuses a lot of people. On one hand I will produce a hard as nails club anthem with Example called *Hooligans* and on the other end of the spectrum I will produce an electronic ballad for a new artist or do a Nu-Disco remix for the new Cassius single.

"Of course, I want to reach a large audience with my music, but I'll never put out anything I'm not proud of. However it has happened in the past that I made a track that turned into something totally different after it was cut up and remixed to fit on the radio, it's a game that you just can't seem to win."

WANT TO KNOW MORE?

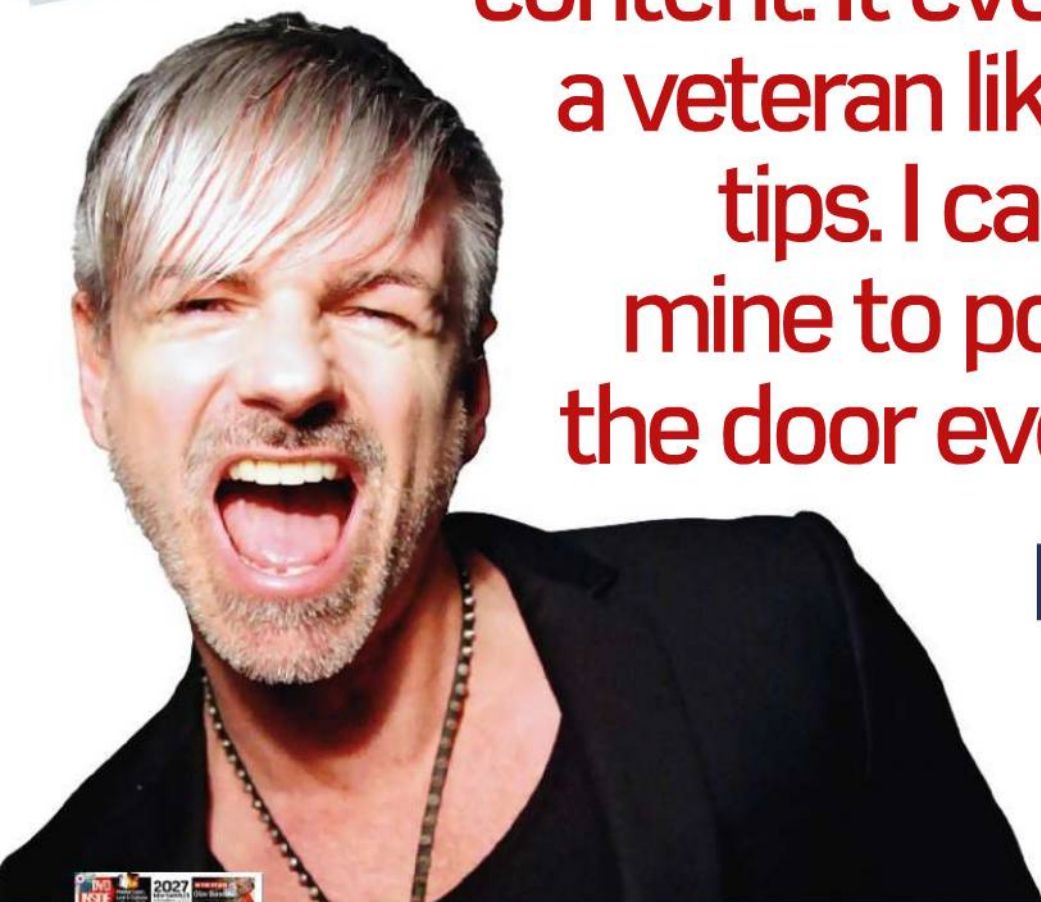
Head to Don Diablo's official website for all the latest news on his upcoming releases and DJ dates dondiablo.com





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 every month

D. Ramirez
Artist and Producer



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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



Mount Kimbie **Crooks & Lovers**

Hotflush Recordings



This is the much anticipated debut album from the hotly-tipped lo-fi lovers of the Dubstep scene.

Having been adopted by the Dubstep scene more due to the label Hotflush than the actual records they make the partnership of Kai and Dom seems to have taken the Dubstep ethos and looked beyond the horizon to find its own sound. While their success came from the combination of the lo-fi mixed with two-step beats, on tracks like *William*, *Maybes* and *Verticle* this album sees their sound develop. Dubstep lovers might be disappointed by this release as its obvious that, while the first EP was an indication of their sound, it was only the beginning – there was more sound searching to do.

Crooks & Lovers is a white noise, crackle, cut-up compression-laden, bouncing beats and crunch-filled record that conjures up the same feelings of nostalgic sonic fuzz that Boards of Canada managed so well. However, the rhythmic driving force behind all of the tracks has a much more contemporary Urban bassline and stepping beats sound that makes it a record that is very aware of the current UK Urban musical world surrounding it.

There are some sonically beautiful moments on this record too, as it builds towards the sound you know. It might not be quite what you expect to come from those seemingly entwined in the Dubstep scene but it definitely has the potential to grow with each listen. Captivating. **Will Seelig**

ADD THESE TO YOUR PLAYLIST:

Mayor, Before I Move Off, Would Know

9/10



Count and Sinden Mega Mega Mega

Domino



In just a couple of years, the uber-cool London production duo of the Count (aka Hervé) and Sinden have firmly established themselves as darlings of sweaty club kids and Wayfarer-sporting Indie hipsters alike. The omission of 2008's monster hit *Beeper* is a bold move for their debut album, but previous singles *Hardcore Girls* and *Mega* do appear. *Mega Mega Mega* is a frantic ride through swung House grooves, short-attention-span production and serious beats and bass, with a nod to Diplo-style Baile Funk along

the way. Guest appearances from Bay Area rapper Trackademicks, Indie darlings Mystery Jets and Grime MC Bashy keep things fresh throughout.

Unfortunately they also contribute to a slightly disjointed feel, with the album occasionally lacking cohesion. However, that's probably missing the point – the energetic, no-nonsense vibe would make perfect sense in a rammed festival tent or at 3am in a club. Judged with this in mind, *Mega Mega Mega* won't disappoint Count and Sinden's many followers.

Greg Scarth

ADD THESE TO YOUR PLAYLIST:

After Dark, Hardcore Girls, Roll Out

8/10

K-X-P

K-X-P

Smalltown Supersound



It's fair to say that Finnish jazz-influenced Electronic Krautrock is a slightly specialist genre, but putting needless pigeonholing aside, this debut album from a collective of Helsinki musicians shows us what we've been missing.

Credited with songwriting, production, vocals and the rather vague 'electronics', the album seems to be the brainchild of Phil Oakey-endorsed former Op:l Bastards member Timo Kaukolampi. But Op:l Bastards' Electronic sound is only one element of the

eclectic material to be found on this record.

Comparisons with the German Krautrock bands of the '70s – most notably Can – are inevitable, but K-X-P's sound also shows clear influence from a variety of other genres. The group's Jazz background comes through most strongly on tracks like *Mehu Moments*, but elsewhere, the emphasis is on Disco grooves (*Labyrinth*) or ballsy Rock (*18 Hours (Of Love)*). It's a compelling debut of intelligent, exciting stuff. Genres be damned, this is simply great music.

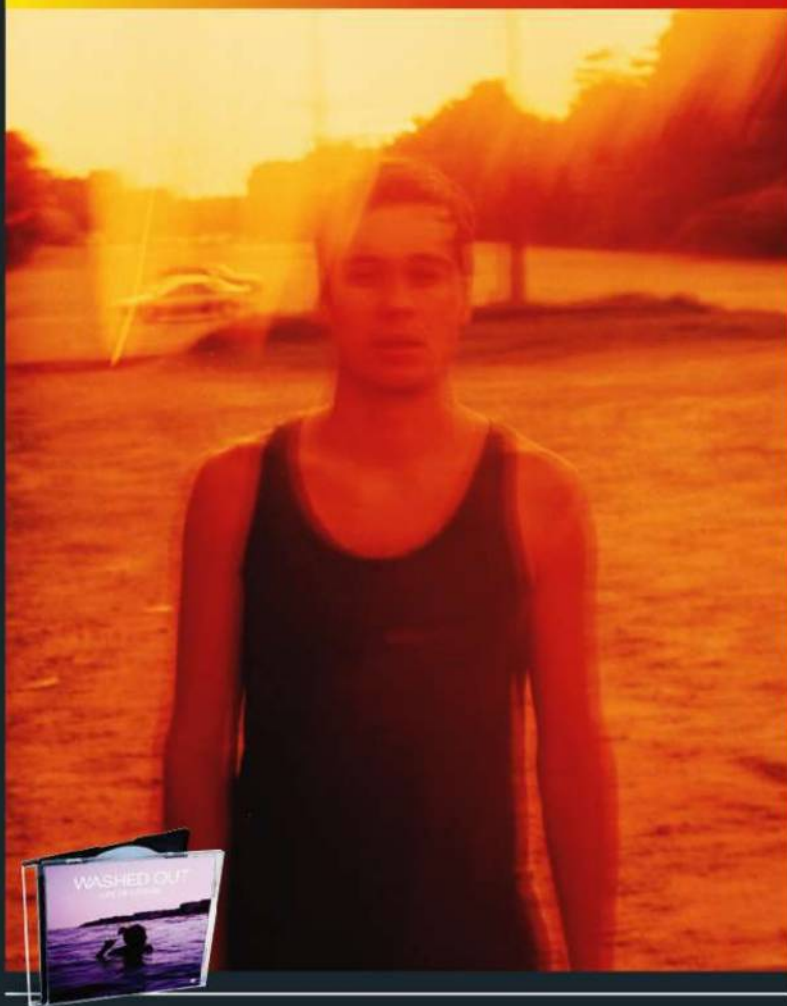
Greg Scarth

ADD THESE TO YOUR PLAYLIST:

Mehu Moments, 18 Hours (Of Love), Labyrinth

9/10

It's On Our iPods



Washed Out Life of Leisure EP

Mexican Summer

Ernest Greene, aka Washed Out, tripped onto the blog world last year when his track *Feel It All Around* was lovingly embraced by the Internet explorers. Following on from zealously received shows at SXSW, it's fair to say that Greene's debut release is one of the most anticipated of the year, as well as yet another example of the power of the blogosphere. All of that would be in vain though, if the album didn't stand up outside of the fairly niche HypeM community and thankfully, Mr Out delivers way beyond the flippancy of the 'Chillwave' genre he was largely credited with innovating. While it clocks in at just under 20 minutes, *Life of Leisure* is an exciting EP, not because of pace or even subject,

but because it's fresh and it works incredibly well. The pitch-warbled, ghostly harmonies and samples draw you in and it's hard not to be hypnotised, especially on the heavenly *Feel It All Around*.

The only thing that concerns me is that Greene has found his niche and will stick to it. While his distinctive approach does work, it won't be long before its traits begin to become commonplace. If Greene can continue to develop his sound, he could be an artist that will be around for a long time to come.

Declan McGlynn

ADD THESE TO YOUR PLAYLIST:

Feel It All Around, Get Up, New Theory

8/10

Matthew Dear Black City

Ghostly International



Trying to pin Matthew Dear down to a single genre is an exercise in futility. From wonky

Electro-Pop to Berlin Dub Techno via Detroit-influenced Tech-House, the Texas-born Michigantite's back catalogue reads like a guide to 21st century Electronic Dance music. But Dear could never be accused of dilettantism, with all of his output displaying authenticity and attention to detail that puts other genre-hoppers to shame.

Black City, released on his own Ghostly International label, is a perfect example of Dear's wonky vocal output. Upbeat and immediately accessible tracks such as *Soil To Seed* and the twisted Disco of *Little People (Black City)* are reminiscent of Bowie and Hot Chip, helping to sustain the interest over the course of the album, while slow-burners such as the hypnotic *More Surgery* reveal the album's darker side. It's somewhat ironic that Dear is probably best known for the "put your hands up for Detroit" vocal hook sampled by Fedde le Grand, but *Black City* should certainly raise his profile among those in the know. **Greg Scarth**

ADD THESE TO YOUR PLAYLIST:

Little People (Black City), Soil To Seed, More Surgery

7/10

El-P Weareallgoingtoburnin hellmegamixxx3

Gold Dust



As one third of underground Rap royalty Company Flow, El-P played a leading

role in '90s Hip Hop's alternative voice. An antidote to the jiggy excesses of MTV's blinged-out heroes, Company Flow's late 1990s output helped to define a sub genre. As a solo producer and rapper, El-P's vocal output has been punctuated by a series of instrumental releases. This, the third mixtape in the *Weareallgoingtoburninhell* mini-series, is the first to go on general sale (previous albums have only been available at live shows).

Like Hip Hop instrumental legend J Dilla and Def Jux compatriot RJD2, El-P's musical talent reaches far beyond tired boom-bap Hip Hop clichés. *Whores: The Movie* is classic El-P, big snares and nervous tension. The evolving structure of *Meanstreak (In 3 Parts)* shows a maturity most Hip Hop producers can only dream of. The greatest compliment is that the album never leaves you wondering when the Rap's going to come in,

fully justifying its release as an instrumental project. El-P may not yet be held in the same high regard as Jay Dee, but he's getting closer with each release. **Greg Scarth**

ADD THESE TO YOUR PLAYLIST:

Whores: The Movie, Meanstreak

(In 3 Parts)

8/10

Front Line Assembly Improvised Electronic Device

Metropolis



Buying a Front Line Assembly album used to be an event, so

ahead of the game was this once pioneering Electro-Industrial band. However, since the departure of producer Rhys Fulber, Bill Leeb's project has struggled to become anything other than a parody of itself.

With *Improvised Electronic Device*, FLA return with a new line-up and refreshed vigour, yet still absent of the cutting edge characteristics the band heralded during their nineties peak. That's not to say *IED* is a bad album – expertly produced and rich with sawing guitars, guttural vocals and powerful, anthemic verses, FLA still remain a cut above, in what is a return to the aggressive sanctity of their 1994 album, *Millennium*.

The title track is a real club banger, and *Afterlife* integrates acoustic guitar to bring about an interesting polarity between the darkness and light of the band's famed, intoxicating Industrial rock. Meanwhile, Ministry front-man Al Jourgensen tunes in to bellow his way through the pounding *Stupidity*

– a pleasant distraction, until you realise FLA have almost entirely lost their identity. One feels that until Fulber comes back on board, FLA will always be a one-armed zombie, wandering through an arid Industrial wasteland with the pungent whiff of past glories burning heavy in the air.

Danny Turner

ADD THESE TO YOUR PLAYLIST:

Afterlife, Laws of Deception, Shifting

Through the Lens

6/10

Professor Green Alive Till I'm Dead

Virgin



Recently known for his surprisingly good take on INXS's *Need You Tonight*, Professor

Green has risen from a relatively unknown nasely-toned, yet award grabbing MC on Mike Skinner's label The Beats to become the best mate of Lily Allen and signed to major label, Virgin. As snide as those initial sentences may be, Green can definitely deliver the rhymes but his delivery doesn't match his image. In fact, the thing that lets the album down is the strange and inconsistent collaborations which feel like a constant battle between Green's quest for credibility and the labels need to turn him in to a teen icon. The album ends up weak as an aggressive, edgy Urban album and forced as a Pop album. Aside from the clearly invested cash on the production of the singles, the rest of the production quality is a bit rough. Green's talent is obvious, but the album is a massive

let down. We can only hope that a few bad reviews will make him angry enough to deliver something heavy hitting or hope he does a Dizze and grabs the Pop charts by the scruff of the neck. **Chris Barker**

ADD THESE TO YOUR PLAYLIST:

I Need You Tonight, Closing The Door

6/10

Pacific! Narcissus

Vulture



Pacific! are the Swedish duo of Bjorn Synneby and Daniel Hogberg and their

tripped out retro-futurist sound has found their second album signed to Alan Braxe's label, Vulture. Their lashings of ethereal melody wrapped up in synthesised bass and drum machines transports you to a genre-defying world of Greek mythology and experimental anti-Pop.

The production is so good here that it positively glimmers with space and air while retaining a robust driving bottom end – even on the really mellow tracks. It's definitely a complicated album to pigeon-hole as some tracks trickle into the Dance or Disco genre, but with an Electroclash darkness surrounding them. Overall, the album is a pleasure to listen to and although it's smothered in retro production tricks, it never gets predictable or tiresome. **Chris Barker**

ADD THESE TO YOUR PLAYLIST:

From Lips Divine, Cupid, Unspoken,

Venus Rising

8/10

Compilations

PICK OF THE MONTH

Various La Roux – Sidetracked

Renaissance



Mixing up 17 of her favourite tracks, Elly Jackson aka La Roux serves up

everything from Fever Ray and Kavinsky to Joyce Sims and Doris Troy. A superb insight in to the influences and musical interests of one of the UK's brightest Pop stars, plus it's a great mix. **Chris Barker**

Various Global Gathering – Festival Anthems

New State Music



A triple-CD of sunshine and cider-filled bangers. CD1 brings the

predicted fresh anthems of 2010 including Fake Blood, Afrojack, Sub Focus and more, while CD2 takes care of classics from Faithless, 808 State, Orbital and other legends. Very nice!

Chris Barker

Renaissance Masters Series Hernan Cattaneo – Parallel

Renaissance



A return to this series sees the South American

slow down the BPMs and create two discs of driving, cosmic Electronica.

It's jam packed with exclusive edits and original productions and is brimming with an equal balance of dark drama and groovy sunshine. Check it out.

Chris Barker

Walter Gibbons – Jungle Music Mixed With Love: Essential & Unreleased Remixes 1976-1986

Strut



Another double-CD of fourteen rare tracks from the underground Disco

scene in New York in the '70s and '80s, where the first remixes were born.

These truly old-school records could prove to be a bit too camp for the fresh breed of nu-Disco fans, but it's also a goldmine for groovy ideas and an eye-opener to the birth of House as we know it today. **Chris Barker**

Retro Respect



Zapp Zapp

Wamer Bros

After the interview with DJ Dan a few issues ago, it was time we tipped our hats to the awesome talent of the talkbox kings, Roger Troutman and Zapp. This incredible album from 1980 is the definitive lesson in Funk and bass, both musically and in terms of production. Listen in awe as team Troutman take you into a Funk-fuelled fit with tracks such as *More Bounce To The Ounce* and other robot-voiced classics.

Chris Barker



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Studio Classics

Whether you're entirely in the box or surrounded by racks of gear, everything in your studio has been influenced by an elite collection of kit. **Marco Migliari** presents the producer's guide to studio tech's most timeless pieces

When I visit a studio for the first time, I just can't help browsing through their equipment, feeling like a kid

in a sweet shop. It's exciting to see the often-random collection of new and old, living side-by-side in the racks, different colours, shapes and sizes. Even more exciting is discovering some unknown bit of kit and understanding what it could do.

Gear is a labour of love, made by like-minded people who will stop at nothing to discover new sounds and enhance existing ones. Although some classic gear is mass-produced, most is hand-made, and you can't help but cherish the real craft behind the knobs and switches.

Classic gear

The truth is, I've seen a lot of gear over the years. Most of it was good, some of it was different, a few items were disappointing, but a selected few were positively outstanding – that's because they ticked three crucial boxes:

Is it easy to use?

Do I like the sound?

Did it prove reliable?

The gear that is featured in this piece not only passes with full marks, but also greatly contributed to the history of recorded music – there are few brands better known than Neumann, Pultec, GML, Neve, Eventide and Urei. Each one imposed a

THE EXPERT

Marco Migliari
producer,
engineer



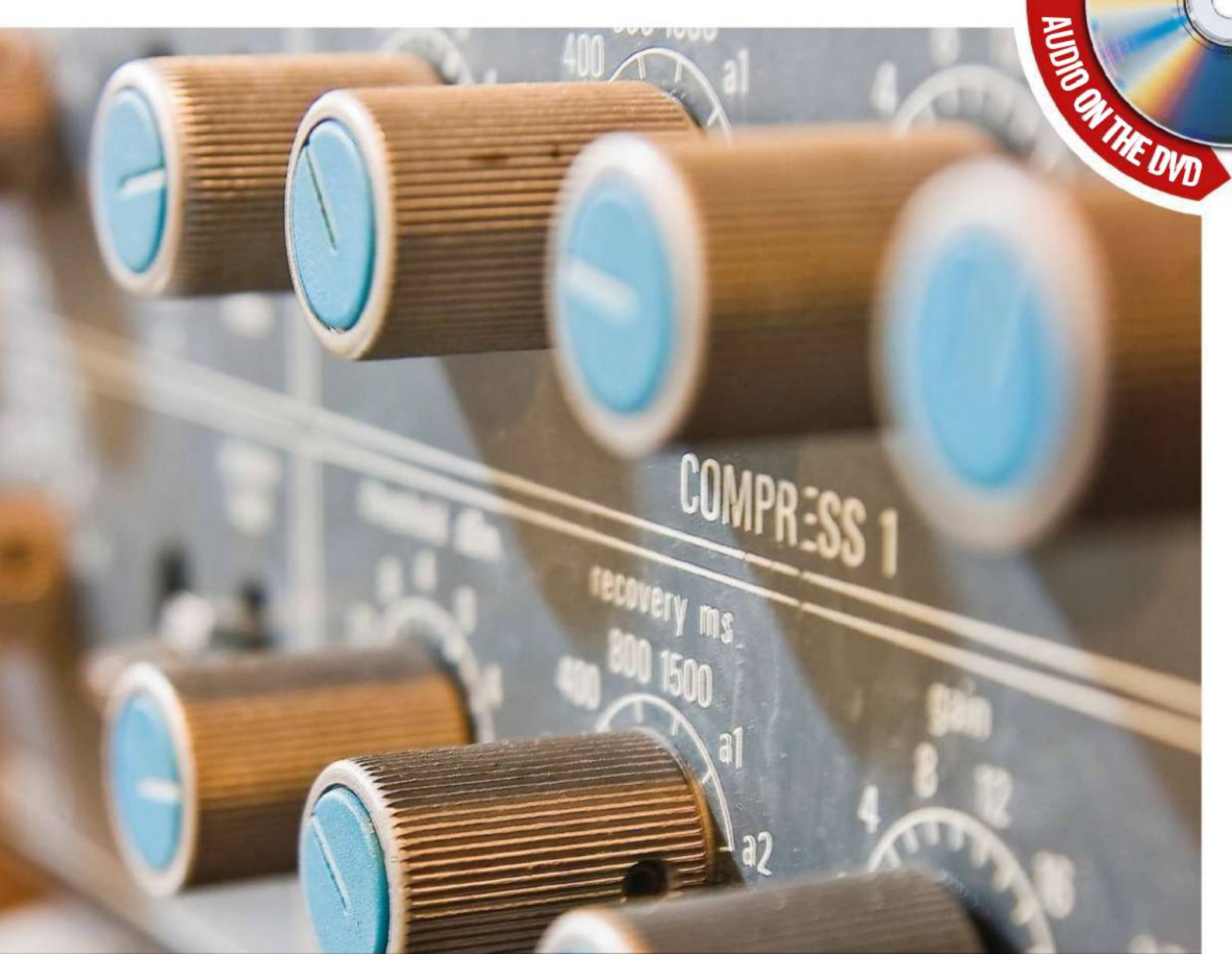
Marco is a freelance engineer and producer and has worked in some of the world's most famous studios on some of music's biggest albums. A confirmed gearhead his knowledge (and love of) classic kit is second to none.

sound and also a new methodology, a different approach to making music.

Hardware history

I can't think of a more eclectic collection of technology – from early '50s passive and tube circuitry, to '70s solid-state with transformers, to '80s early digital and pristine solid-state circuitry.

This feature is a celebration of technology at the service of sound sculpting, but also a guide on how to recreate a classic sound. While you may not own all or any of them, the simplicity of the design, or the genius in which it was implemented means you can apply the fundamentals to all your gear and audio processing. Go have fun! **FM**



Neve 33609 Compressor

A classy limiter that has inherited the attitude of its 1960s predecessors, with added versatility and control



Rupert Neve is another revered name in professional audio. He started off his company in 1961 (which later became Neve Electronics) and in 1968 he designed the original 2254 compressor

module, from which the 33609 is loosely derived. Over the years, a few revisions came about (notably those ending with the letter C, J and the current JD), which only shared the level control system with the original, while most of the surrounding

circuitry was altered (different transformers, revised PSU, etc.).

For this reason, it's argued that older types might sound sweeter than the new ones, although it's a fact that newer models (including the current one) benefit from an improved power supply and more linear transformers. Hear it doing its thing on drums on the DVD.

Compression selection



The original 33609 rev.A was aimed at both the broadcast industry and musicians and producers.

There are two separate sections for limiting and compression, which can be used in tandem (the limiter comes after the compressor). The compressor has a fixed attack time of 3ms and a choice of release times, including a slower (a2) and a faster (a1) program-dependent ones.

On models before the J version, a three-position switch flicked between dual mono, stereo operation or, if you were spoiled for choice in the studio, fed the sidechain to another 33609 for quadrophonic operation via the 9-pin port at the back.

TRADE SECRETS

Limiting



The 33609 limiter is simple but very efficient, and certainly comes in

handy across a stereo mix being broadcasted. The ratio is approximately 100:1, attack time is either 2ms (fast) or 4ms (slow) **lingest!**. Release time is program-dependent, and can swing 50% to follow the program dynamics.

Compression



Despite a highest ratio of just 6:1 **(ringed)** the 33609 still packs a lot of

punch. Most colouration emerges on material with sharp attacks. The compressor's fast fixed attack might not suit for bass and vocals, where sometimes it's good to have a slower attack of 10-15ms to allow the sound to breathe before any gain reduction.

Urei 1176 LN Peak Limiter

This mono FET compressor, while featuring a remarkably uncluttered design, is perhaps one of the most sought-after tracking compressors for its signature sound



The first Urei 1176 was designed in June 1967 by Bill Putnam and remained in production until the mid-70s when the business closed down. There are at least 13 known revisions of the original design, and a number of changes in its appearance. From 1970 the 1176 LN version (for Low Noise, rev.C) addressed a few noise issues on the input circuitry and changed the front panel to black. Other important changes were the removal of the input transformer, and replacing the class-A output stage with a push-pull

stage to provide more drive. The silver model featured here is a later rev.H, the only one with the Urei blue logo.

The 1176AE is a limited series that bears a few operational improvements. Aside from re-introducing the sweet class-A electronics and the custom transformer-isolated input, the main features are a lowest ratio of 2:1 and the notable bonus that ratios can be 'added' together by pushing a combination of buttons.

Finally, the bypass position has been turned into a 'slow' attack position of 15ms.

TRADE SECRETS



Attack and Release

The 1176 is typically used for compressing vocals, bass and drums, but can really handle any type of instrument. A standard starting point is the '10 past 10' input/output setting. The compressor has fixed threshold so adjusting the input is the only way to modulate the amount of compression. Switching the meter to +4 allows to set a sensible output level – the 1176 has tons of headroom, and can get very loud! Attack and release decrease clockwise, so setting the attack to 7 (approx. 20µs) is faster than setting it to 1 (approx. 0.8ms) [ringed]. The attack knob has a switched position that is the bypass. Compression ratios are individually selectable and mutually exclusive.



Secret Limiting

The (not so) secret limiting setting, achieved by pushing all the ratio buttons in at once [ringed] is often used for drum mangling, and achieves a highly compressed, textured, pumping sound, but without any harshness – it's often referred to as the 'British Mode'. This effectively sends the compressor sidechain into overdrive, but attack and release settings are still tracked, allowing the user to focus the action. While the 1176's behaviour in normal operation is very program dependent, the British mode is very extreme as the bias is radically changed and all response curves flattened.



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Quantec QRS Room Simulator

This 1982 Holy Grail of reverbs was the first successful attempt to emulate a room from basic parameters



Quantec is a German company that managed to create a great sounding reverb at the dawn of the digital age, when processors weren't very fast and digital audio sounded grainy and artificial. The QRS could calculate 1,000 reflections per second and opened up the virtual world of virtual rooms.

The Quantec doesn't have aptly-named presets, only numeric memories, nevertheless it makes it easy to adjust settings using just common sense: bigger / smaller space, more / less HF or LF, longer / shorter reverb time. There are four separate outputs, the first two combine the first reflections and the reverb (their blend is manipulated using

the relevant level settings), while outputs 3 and 4 are reverb only. These four outputs can be combined to create a quadrophonic soundfield – something that was really hip in the early 1980s – but will also translate well into surround mode.

There is also an option (with an internal jumper) to have the first reflections on outputs 1 and 2 without any reverb, so that they can be separately blended in the mix. There are three main operating modes: reverb, freeze mode and enhance mode. The QRS sounds at its best once the correct room size has been found – overly reducing or increasing the reverb time is known to encourage some harshness. On the DVD, I've run strings and drums through it – have a listen.

TRADE SECRETS



This is the default mode if none of the Effects buttons are illuminated. Notice how the meters display the same [ringed]. This is because the output of the 1st Reflection channel is set to OFF. A short predelay helps to add a sense of space without spacing out the reverb tail.



Here, both the early reflections and the reverb tail are blended into outputs 1+2, with the reverb tail reduced by 6dB [ringed]. The QRS technology was aimed at a more realistic sound which would emulate an environment rather than add a sense of space.



The QRS has two less usual modes: FRE(eze) and ENH(ance) [ringed]. Freeze mode puts the QRS into an infinite loop to create special effects. Enhance is sort of binaural – only the room size remains active. First reflections can be combined with it for a little sweetening, as on the DVD.





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Pultec EQP-1A EQ

The passive nature of the electronics and the tube gain stage of this 1950's mono EQ make it sound particularly musical



In the late 1940s, Pulse Techniques Inc licensed the passive EQ design from Western Electric and, in 1951, released the EQP-1A. Passive filters (an array of resistors, capacitors and inductors) were discovered

in the 1930s and were used to transmit music over telephone lines. What makes the Pultec particularly desirable, and has also spawned a real hunt for vintage units like the one featured here, is the very musical quality of passive EQs. The



Shape and Sculpt

The Attenuation knob on the Low Frequency section is supposed to share the same frequencies with the Boost knob, but it is little known that combining both Boost and Atten [ringed] achieves a subtle lo-mid scoop instead of cancelling each other out, very useful to give definition to bass drums. The other Attenuation knob, despite being located next to the Boost for the High Frequency section, is actually paired with the Atten Sel and together they effectively make a low-pass filter.



Vocal Sheen

This is a more typical use of the Pultec EQ – a gentle lift below 100Hz and broadly above 16kHz [ringed] is enough to warm up vocals and add a little sheen. Whole mixes can benefit from the same treatment. The 16kHz shelf EQ is particularly silky and adds some air without sounding harsh. The choice of frequencies, given the age of the unit, is excellent and allows both subtle sonic enhancement and more focused intervention on almost any content, without ever losing the musicality.

simplicity of their design means that fewer components, none of which is a gain stage, are in the audio path, and there are no headroom problems.

Audio transformers also add some fatness while the filters are all rather wide.

These factors alone plenty justify the hype, and the build quality is so good that most units have been around 50 or 60 years without any major maintenance problems. Listen to some vocal and double bass processing on the DVD.

Neumann KU100

This amazing-looking stereo microphone is the only one that's taken binaural recording to the extreme and has established itself as an industry standard



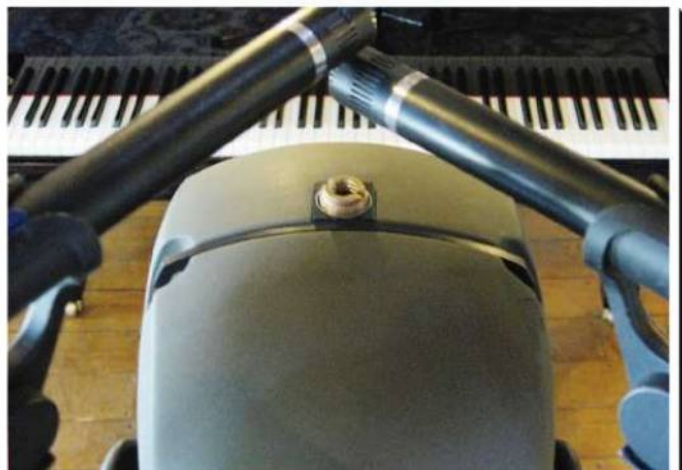
Binaural audio is exclusively aimed at headphone playback, and as such has been known and exploited for well over 100 years. There's no other recording technique that is as simple and as effective in capturing and recreating a true tridimensional soundfield. The Neumann dummy head is without doubt the best binaural microphone ever made. It is shaped (and creepily weighted) like a human head, it features two rubber pinnae and the microphones are placed exactly where the eardrum would be. Despite its size and weight, Neumann made every effort to make the KU100 as portable as possible – the mics can be phantom-powered either from the mic amps or from a (included) power supply or internal battery pack. XLR

connections as well as two unbalanced BNC connections are provided. Threaded inserts and metal hooks allow to securely position the microphone in just about any angle, and they make it easy to fly it high above the sound source without any further accessories.

With regards to positioning, it just couldn't get any easier – use your own head to find the best placement and put the mic in its place. A pair of headphones with a feed off the mic can help to find the sweet spot in confined or otherwise difficult to reach places.

The mic has a built-in roll-off filter that helps to reduce mechanical rumbling and can control, to an extent, wind noise. Funny but true, a woolly hat can be equally effective in more extreme outdoor situations.

TRADE SECRETS



Stereo Imaging

Listen to the recordings of a piano with a stereo pair of B&K 4011 mics and the KU100 dummy head on the DVD. The precise 3D imaging achieved with the head is completely lost with standard stereo recording techniques. The downside of binaural audio is that when it is played back through loudspeakers all the tridimensional information is lost – a stereo image is still conveyed in some form, but its nature is rather unpredictable and only an empirical approach can bring acceptable results.

Of course, pure binaural effects (the rustling paper noise on the DVD is a classic example) are very impressive, and this is something that is being exploited more in recent years, particularly in the gaming industry.

GML 8200 Parametric EQ

Dual five-band EQ, designed by George Massenburg – the man behind the term ‘parametric equalisation’. This colourful box is an engineer’s tool, easy to use and built like a tank



George Massenburg needs no introduction – he’s one of those rare figures that seems to be equally at ease in front and behind the gear. Just about every professional mixing studio doing business in the ‘80s and ‘90s had at least one of these in the control room.

Just from the look, you can tell that it is designed for frequent use and requires very little thinking, so that the mind isn’t distracted from listening. Each of the five bands is colour-coded in an alternate sequence of dark and light tones, which allows

the regular user to quickly reach for the one that’s needed without looking at the numbers.

The first and last band on each channel feature an optional ‘shelf’ switched position when the Q knob is turned fully counterclockwise. All the bands otherwise default to a bell shape with adjustable Q ranging from 0.4 to 4. The GML EQ is a purist EQ – designed for maximum lab performance (high headroom, extended frequency response, low phase rotation, etc) it can be gentle as well as ruthlessly radical. On the DVD, there’s some dry / wet examples.

TRADE SECRETS



High End Reach

Here’s the settings of the treatment of a choir with the GML EQ on the DVD. The two channels have both a 3dB boost around 200Hz [ringed] with the Low band on ‘shelf’ and a 3dB boost at 26kHz with the high band on shelf. These two bands alone add ‘loudness’ but while they dial in some solid bottom end, the amazing 26kHz reach [ringed] of the GML grasps at thin air and opens up the track in a subtle but noticeable way. There is also a 3dB notch around 800Hz on the left channel and 3kHz on the right channel (both with a Q of three) to overcome some localised honk and harshness.

Go ahead.



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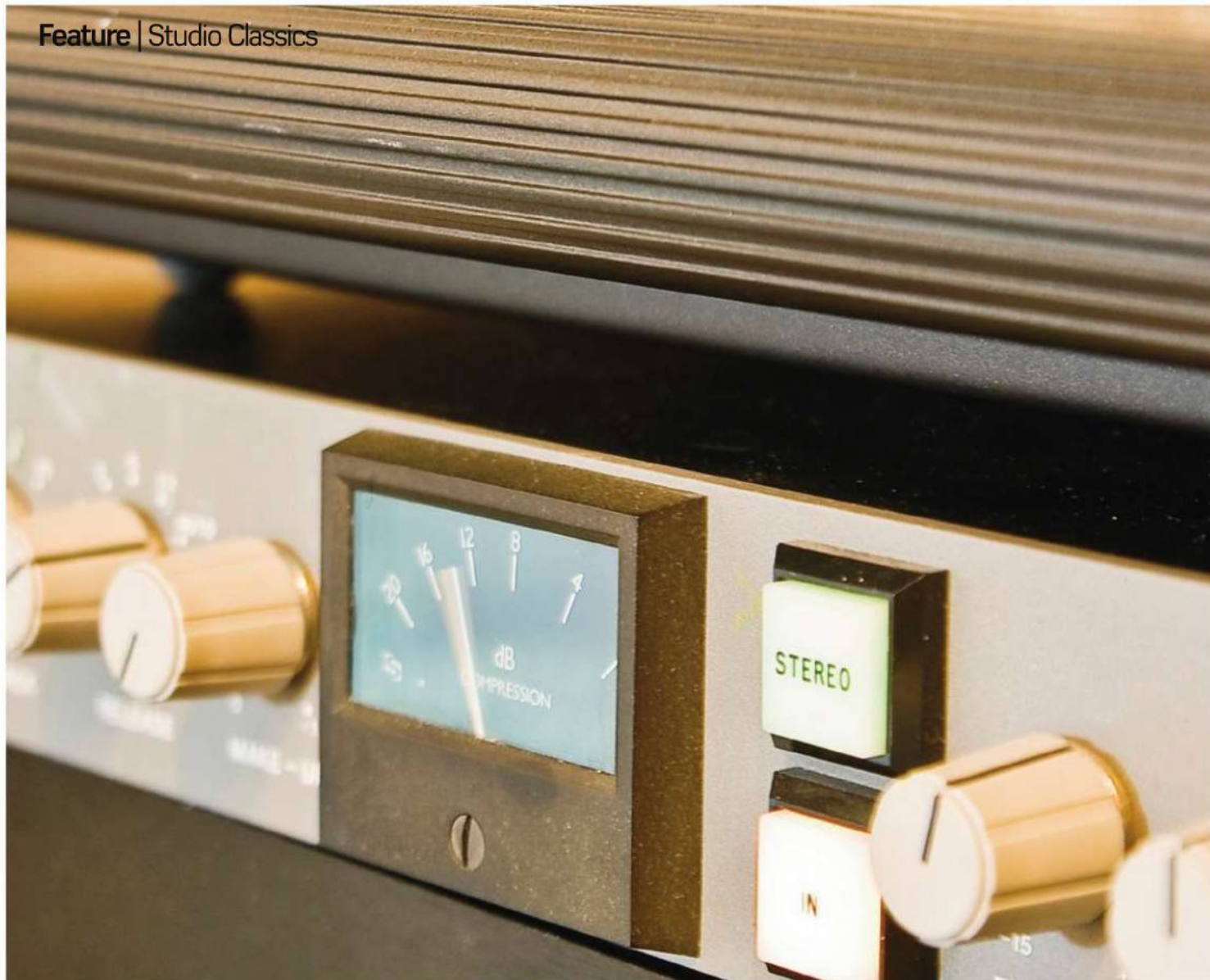
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TRADE SECRETS

Alan Smart C1 Dual / Stereo Compressor

The Smart Compressor is a redesigned version of the famous SSL buss compressor, and the first to appear as a rackmount unit



Alan Smart worked at Solid State Logic during the early years of the company when the brand went global.

There is no doubt that this legacy has influenced the design of his much-acclaimed C1 compressor, to the point that most engineers these days simply call it the SSL compressor.

To put the record straight, the C1 compressor is a completely new product and not actually a clone, and in many ways represents a technical improvement over the original Solid State Logic VCA design, as well as featuring some subtle sonic differences.

When it was first released, the only way to have an SSL buss compressor was to own an actual console. The C1 slotted in quite nicely and pleased all those people that either didn't have a console, couldn't afford one or the lucky producers who fantasised about having more than one buss compressor at their disposal in the studio. Most notably, it offered the much-desired 'dual mono' option for tracking purposes.

Also on the unit, a 'Stereo' button achieves true stereo linking, where the left channel completely controls the whole unit, including stereo make-up gain.



Pump It Up

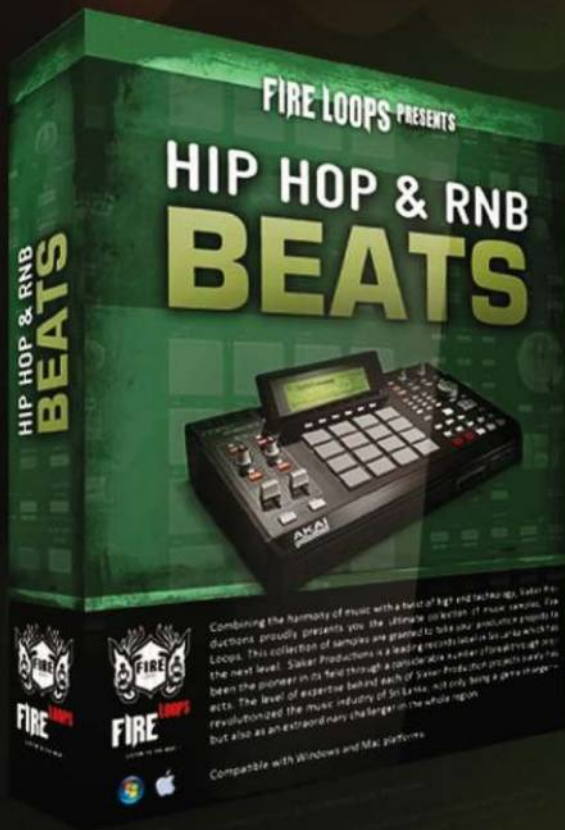
A classic, pumping setting that works so well with percussive material, as you can hear on the DVD. The C1 / SSL compressors both behave more aggressively at the highest compression ratio – even if the attack and release time are unchanged, there is a feeling of increased urgency that makes changes more dramatic. Using a short release time (ringed) helps hide the compression after each transient.

A relatively long attack time retains a more natural feel and also helps to choose the amount of crushing that is required. Deselecting the Stereo link and matching channel settings is a useful trick to reduce the narrowing of the stereo image, which is a typical by-product of over-compression.

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Neumann U47 Tube Mic

60 years on, this uncompromising German microphone, hand-built to the most exacting post-war standards, still stands up to the test of time



The Telefunken U47 is one of those microphones that always inspired awe, partly for its heritage but, for the most part, for the sound.

It's a little known fact that Telefunken never built any U47s – Neumann designed and introduced the U47 in 1947 and the microphone was distributed by Telefunken until the early 1950s when Neumann took over the distribution. The badging of the microphone reflects this transition and, contrary to common belief, there are no sonic or electronic differences except those induced by ageing processes. In 1958 Neumann replaced the original M7 capsule with

the K47 capsule. The M7 had a PVC diaphragm that sadly proved to deteriorate with age – this problem was tackled by replacing it with metallised polyester in the K47.

The U47 was the first condenser microphone with a switchable polar pattern and for this reason became the mic of choice for vocals – cardioid being the obvious choice, which has the added benefit of the well-documented proximity effect. The large body looks slightly unnecessary to modern standards, but the size and shape of the VF14 tube effectively dictates the dimensions of the microphone as no space is wasted inside the shell.

TRADE SECRETS



AKG Comparison

With the gain carefully matched, same polar patterns and identical preamps, the AKG414 is as fair a comparison as it gets. From the sample on DVD, it is clear that there's a quality to the U47 that the AKG simply doesn't have – most engineers call it silk or smooth, which translates in no odd LF or HF resonance or lift, and a pleasant frequency response. The U47 is not a test microphone, so its frequency plot is far from even, but it does have a flat bottom end response and a gentle lift in the vocal range. Perhaps it could be considered dull as it doesn't have an extended frequency response and drops about 6dB at 18kHz, but this is an advantage when used with low instruments like double bass or cello.



Eventide H3000SE

Luscious, rich and innovative digital effects processor that continues to stun and entertain generations of engineers



Eventide started up the digital effect revolution in the early 1970s – it's alleged that they were the first company to use RAM in an audio unit.

Harmonising – i.e. the ability to musically pitch-shift audio in real-time without adjusting the speed – became very popular for vocal doubling with the H949, Eventide's first product with this feature.

The H3000 banked on this solid user base to introduce this extremely complex digital device that sported a very easy to use user interface: four buttons and a spinning wheel. The H3000 is as much a harmoniser as a Ferrari is a car. Being an all-digital machine, it is equally capable of very simple effects (delay, flanger, chorus) and complex ones (pitch shifting, reverb, sampling and synthesis).

These effects can be combined, but from the user's perspective it's easier to

start from an existing preset. The H3000 comes loaded with hundreds of factory presets – different models featured different sets. Listen to a few examples of these on the DVD. These can be accessed by hitting the 'Program' key and spinning the wheel to scroll through the list or dialing the program number on the provided keypad.

There's a 24-page PDF document on Eventide's website that lists every single program and describes what it does – most engineers would keep spinning until they come across something they like the name of (like 'Bizzarmoniser' or 'Crystalline') and then try it out. In the '90s, it became very hip to upgrade the H3000 EPROMs and have all the latest additions.

It's perfectly possible to upgrade the early black-faced H3000 to the latest firmware version of the H3500 just by reprogramming the chips.

TRADE SECRETS



Program Wheel

With the four buttons below, the user can select the one that needs editing and use the wheel to modify its value. Pushing the 'Program' button twice brings up the 'Save' menu where the user can store any changes in an empty memory slot and name it for future reference.



MIDI Editing

The 'Function' menu allows to dig into MIDI functions and the architecture of the software. Producers like Brian Eno put the MIDI capabilities of the H3000 to good use – this would allow you to sweep filters and automate other functions of the specific preset against timecode from a MIDI editor sync'd to the multi-track.

Neve 1073 Channel Module

Modules from Neve consoles have been regarded as studio royalty, but none comes close to the stardom of the Neve 1073

It's not by chance that two Neve products made it to this shortlist of classics. We could talk about their quality, timing on the market, even their ergonomics – the simple fact is that Neve preamps and EQs shaped much of the sound of the '60s and '70s, and that became a benchmark against which most other products had to compete.

The 1073 module was designed by Rupert Neve in 1970 to fit a new A88 console commissioned by Wessex Studios in London. Such was the success of the new design that the 1073 was fitted on most Neve consoles for quite some time and was later modified into the 1081 and 1084 modules, which offer a wider range of frequencies and added options.

Despite these improvements, the 1073 remains a top choice among all Neve modules, both vintage and new, mostly

because it was the first kid on the block and is cheaper than the later modules.

There are two contributing factors to this success: all Neve transformers are custom wound and are designed for optimum performance across a wide range of sources, and the transistor circuitry is discrete class-A. The other important factor is the choice of frequencies for the EQ – a very musical HF shelving EQ above 12kHz, a semi-parametric mid range with six frequencies from 360Hz to 7.2kHz, a four-band shelving LF EQ from 220Hz to 35Hz and a four-frequency high-pass filter. Much to the joy of the engineer, a 30dB gain range on the line input and 60dB on the mic input (which takes the maximum gain of the 1073 to a whopping 80dB, perfect for notoriously deaf vintage ribbon mics) allow the 1073 to interface with just about anything under the sun.

TRADE SECRETS

EQs and Metering

The 1073 was designed as a console module and needs a custom enclosure and a power supply to operate – both problems elegantly solved in this exclusive eight module frame. It's not uncommon to use the 1073 without any EQ while tracking (ringed!). Many engineers prefer a more purist approach (mic positioning and phase alignment) and leave EQing to the mix. Notice how the 1073 doesn't have any metering, not even a single LED. The module has tons of headroom and distortion creeps in very gradually even when it is intentionally overdriven, so there isn't really need for one. To set the level just use the multi-track meters.



ON THE DVD

Each bit of kit has been given the run of the mill with some test audio material (the 'clean' audio files). In microphone testing, either the same mic has been recorded with a different preamp or another mic has been used with the same preamp. In each case, the gain has been carefully matched. Now go and check them out for yourself!

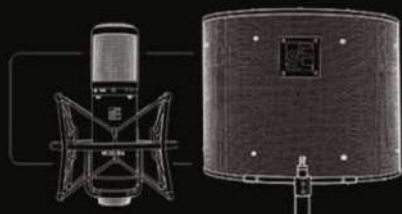


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In The Studio With | Patric La Funk

Patric La Funk

IN THE STUDIO WITH...

VIDEO ON THE DVD

He's been edging his way into the DJ and production big leagues for the past few years and has had releases on the biggest labels in the business. **Chris Barker** meets Germany's next House superstar

Born in Bochum, north-east of Dusseldorf, Patric La Funk, aka Patrick Farago, began his DJ career at the tender age of 15. He ended up as a regular at the famous '18 Karat club before turning his hand to production with a few simple bits of equipment and help from his close friends. Quickly, La Funk moved up in the world and began remixing the biggest names in

Dance music with tracks that regularly appeared in the Beatport top ten and other club charts. Now he's a staple of the Flamingo Records crew and has made a name for himself as one of the DJs to look out for in 2010.

FM recently took a trip to his apartment and studio, where a penchant for Red Bull, vodka and airguns played second fiddle to La Funk's first love: music. His studio was a simple affair, with most productions made 'in the box' – the Virus TI is La Funk's favourite piece of hardware in his arsenal.

After a brief spot of soup in his father's local restaurant, we were ready to find out more about La Funk's production methods.

FM: How did you get started in Dance music?

Patric La Funk: "I think you could say it all started because of my older brother. He used to organise and promote the big Techno parties in the local area back in the '90s. He'd go and see these big DJs and tell me who was cool. I'd see the flyers and be fascinated.

"Then, one day, he came home to our parents' house with a vinyl of this Techno record, and I remember hearing it on an old hi-fi turntable and wanting to become a DJ.

"When I was 16, I got a really cool job DJing in a local fashion boutique. It was great because all the other kids in my class had summer jobs digging gardens or things like that, while I was DJing! Luckily, I got paid to practice DJing on someone else's equipment!"

So, when did you turn to making records?

"It was around the year 2000, when I teamed up with two good friends of mine that were my brother's age. They taught me a lot about producing. Obviously, it was very different

then, as it was when the soft synths and that side of technology hadn't fully developed.

"At the time, ATB was a big influence on me because he was also from our town. I'm not musically trained – it's more of just a feeling when I play. But when I produce, it's a combination of playing parts in and tweaking them and programming and samples."

How did the very non-German name happen?

"I needed a name when I started getting more and more bookings and, at the time, I was really influenced by the Daft Punk/Alan Braxe sound. Me and my friends came up with this La Funk guise. I would change it now if I could, but I've done too many records under it."

"Some people really like the 'Patric La Funk' thing as a pseudonym, but I sometimes worry that the 'Funk' can be misleading to some people and associate me with a certain genre or sound. Now I produce and DJ quite a wide range of music within the Dance genres. I move from deeper, less vocal-orientated stuff to the more straight-up House side."

You said you started with more of a hardware approach: when did you change?

"Almost straight away, really. When Logic 5 was released with the EXS sampler, it changed everything for me. It was that sampler in Logic that got me really into software more and more. Even though I was using hardware before that, I had a lot of help from my friends in the early days and the software made making music much easier."

"It wasn't until later that I started becoming really obsessed with the 'sound' and trying to copy other people's production style. Now I'm much more relaxed with my own sound."

"It can be frustrating, though, sometimes when DJing, because you always have to please the crowd



Patric at work with the Liquid Mix, JP-8000 and Access goodies



the time. They are definitely my go-to synths for pretty much every project."

How did you get involved with Fedde and the Flamingo label?

"Me and Fedde had the same booking agent and we

JP-8000 an E-mu ESI-4000 sampler, some speakers and an old PC. In 2009, I took a break from producing and focussed on DJing to get inspiration and new ideas for new tracks in 2010."

What studio stuff have you bought recently?

"I've bought mostly plug-ins. I got some nice ones for my UAD-2 card like the SPL Transient Designer and Manley Massive Passive EQ."

"It's sort of wrong for me to recommend something because, at the end of the day, you have to check the demo in your studio and see if you like it or not or if a plug-in or synth achieves the particular goal that you're looking for."

What are the first tools you reach for when you're in the studio?

"I usually love to work with the Virus TI because of the 'total integration': it's easy to save and modulate sounds. I also like the simplicity of the reFX Nexus and I love to combine synth samples."

What have been the biggest lessons you've learnt while producing over the years? Any tips from your friends at Flamingo and such? Do you all share your knowledge?

"The biggest lesson is that you never stop learning. I think the most important thing is to keep it

I usually love to work with the Virus TI because of the 'total integration'. It's easy to save and modulate sounds

and there are times when I might want to be a bit more experimental in the mix. It's the same when producing; you have to make sure you keep a solid style to your sound."

Many artists have collections of old gear, but you're using mainly new tech like the Liquid Mix and the Virus TI...

"Yeah I guess I'm just not from that time. I don't really know all of the originals and am very happy with the results I'm getting from the plug-in and modelled versions."

"I really try to mix up what I use, of course, but I will use the Virus synth and the Nexus plug-in all

ended up playing at a lot of the same club parties in Germany. We just really got on and had a lot of fun hanging out at those gigs."

"Then he invited me to Australia for the Flamingo tour, which was a lot of fun, and we started doing a few remixes and it built from there."

What has been your main focus of the last few years – DJing or producing?

"This has actually been changing from year to year. I started as a DJ at the age of 15 and played quite a lot. But, to take the next step forward, I had to start producing – so I started with a basic studio which had equipment such as a Behringer mixer, Roland

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simple, with only a few tracks in your arrangement. I'm still learning about that because I'll always want to add another track and keep adding more elements. Sometimes you can be surprised how few tracks and channels some famous records have."

Do you have to produce much on the road?

"Not that much, because I still need to get used to listening to stuff on headphones. I'm planning on buying the new MacBook 15-inch i7 for the road, but first I'm road-testing my old MacBook 2.0GHz."

Do you think it's easier to make Electronic music?

"When I think about how I started, it's definitely easier to produce music nowadays. But I'm not so sure if that's a good thing, because there's so much music out there. In between a lot of crap releases, you might miss some really nice pieces of music due to the sheer masses. I'm receiving tons of promos every week and I can't listen to them all."

How has your production style changed since you began and where do you think it will go next?

"I think it's quite normal that you develop your sound and your interest in music. Not only is the quality of my productions changing, but the style, too. I came from much more melodic music but now I'm into percussive House or Tech-House. That's what I feel the most at the moment."

"But from my side, I can't describe a direction I want to go for. I'm feeling really comfortable with the sound I'm doing at the moment and will just continue with that."

Where are you DJing the most at the moment?

"All over Europe and, of course, Germany. I played Space in Ibiza in June and will be playing Street Parade in Zurich and Love Parade in Duisburg. In August, I'll be in Croatia for two gigs, so there are a lot of places in Europe I'm playing a lot during summer and into autumn."

What's next for you?

"Well, my new release *Next To You* will be out on Dabrick & Klein's label WePlay and there's several others in the pipeline, such as a collaboration EP with DBN and new remixes of my track *Callisto* on Black Hole. I've been in the studio with Prok & Fitch just a couple of weeks ago in England and have been working with Joergensen for a second collaboration after *Here Hear*. Plus, I'm still doing a lot with my long time studio partner Timo Becker – there will be an EP coming up from us on Toolroom records called *Overdrive*, so there's quite a lot to expect from me this year."

Are you taking demo submissions for your label?

"Yes, of course. Readers can send us a track at myspace.com/timbeemusic. We've signed a few tracks through MySpace; we try to check out all the new stuff we're sent." **FM**

WANT TO KNOW MORE?

Take a trip over to Patric La Funk's official MySpace page for more info on upcoming releases and DJ shows: myspace.com/patriclafunk



Focusrite Liquid Mix

"I liked the idea of a combination of famous EQs and compressors in one external piece of hardware. The price is unbeatable and I really like the quality of the sampled impulse responses of the original hardware EQs and compressors. I know it's not the originals, but for club music it's fine! Also, the CPU of the computer is saved because of the external processing chips."

Access Virus B

"This was one of my first pieces of equipment. I was impressed by the huge amount of sounds and soundbanks and the ability to tune and change so many parameters."

Roland JP-8000

"Together with the Virus B, it's been in my studio from the beginning. A legendary synth, but at the moment only used as my master MIDI keyboard. I still love to use the arpeggios from it, though."



SSL Duende

"I listened to the plug-in of the buss compressor and had to buy this thing."

Event TR8s

"With speakers, it's always a question of personal taste. I heard these speakers in Rudi [Dittmann]'s studio. The reason I bought them was simply because they were cheap and worked well for me."

Yamaha NS-10

"My first speakers – great for vocal mixing. One of them is broken at the moment, though."

Access Virus TI

"Because Christoph Kemper [chief and founder of Access music] is from my hometown, Bochum, he became a good friend over the last couple of years. Timo Becker, my production partner, Rudi Dittmann, who produces a lot with ATB, and I had the opportunity to have a private session with Christoph, who explained a lot about the history of Access and the Virus TI. There was no doubt I had to buy one – the total plug-in integration is dope!"



ON THE DVD: Patric La Funk's Track From Scratch

1



Drums

Patric loads some of his sounds with NI Battery to create percussive rhythm tracks using the Roland JP-8000.

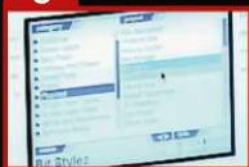
2



Clap Track

Combining different clap samples and subtle use of Logic's Tape Delay plug-in allows Patric to achieve his perfect clap sound.

3



Hook Hunting

Using the Nexus soft synth, Patric goes on the hunt for a sound to make the signature sound for this track.

4



Bassline

The Virus provides the main sound for the track's bassline, utilising its own internal swing to give the track a real bounce.

5



Master Channel

Patric takes you through his favourite selection of plug-ins including the Liquid Mix that he uses on his track.

CUBASE ESSENTIALS



Mixing a Live Band in Cubase 5

This month, **Bruce Aisher** straps on his Flying V and adopts his best low-slung rocker stance for a guitar-led mixing project. We'll be utilising some modern digital techniques and some dusted off for the 21st century...

Recently, I've found myself in the relatively unusual situation (for me) of mixing an album consisting of just drums, guitars and vocals (i.e. something Rock-oriented). This did prompt me to put some thought into how I was going to treat these 'real-life' sound sources. Given that much of my time is spent in the world of Electronica – with the occasional vocal – it's sometimes easy to forget that the pursuit of an authentic

Rock sound cannot easily be recreated within the purely digital realm.

However, we're now lucky enough to have tools available to us that can help even the most basically-recorded band produce tracks with enough apparent sonic authority to sound convincing in a commercial context. This project did also serve to remind me that there are many skills from the world of solo DAW music making that can be transferred to a band context with

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.

great results. Of course, it only takes a bit of analysis into record production over the last 40 years to realise that many great tracks often utilised techniques that were unusual, cutting-edge or even completely unanticipated to arrive at what we now see as a 'classic'.

It's also worth remembering that equipment choices were much more limited in all but the top few studios, and we take it for granted that we can now use multiple compressors, reverbs and delays – and all in almost infinite flavours.

For example, it was only with the introduction of affordable digital reverb in the mid-1980s that one could even contemplate tailoring the apparent 'room sound' in a modest home studio context. In fact, even in the professional arena there are many great recordings that relied solely on basic delay techniques for all of their artificial 'ambient' treatments.

Techy techniques

So, with this band-based mix project, what techniques did I put to use in Cubase? On



Cubase 5's Cloner plug-in creates a series of subtly varied pitch delays to add width to a vocal



A selection of guitar processing plugs using the Cubase built-ins

the drum front, I found that some of the kick drum hits that were played at the same time as the snare tended to be somewhat overpowering, so applying a compressor on the kick, triggered only by the snare level, pushed it down in the mix at the right times.

The snare was recorded from both above and below. The bottom of the snare was fed into the StereoDelay with a mix level of about 30% and a short delay time (in the tens of milliseconds), but varied slightly for each channel.

The top of the snare was mangled using a heavy dose of distortion, followed by the Cloner to provide thickness. Bleed-through from the other drums was minimised by using the C5 Gate with a fast Attack and Release prior to all of the other effects. The stereo overheads were treated with the Envelope Shaper to add extra attack to the hi-hats and to rein in the room ambience using the Release control.

This plug-in is great on any kind of dynamic material and well worth giving a spin. All of the individual drum elements were then fed to a Group track for some overall EQ and compression treatment.

Other parts

The bass parts were provided as both DI'd and cab recorded versions. These were bolstered with a new track using the Cubase Octaver. All three were then mixed together and routed to a Bass Group. The guitar provided the most fertile source for experimentation. Take a look at the *Guitar Hero* and *Guitars Up To 11* boxes on the following pages for more.

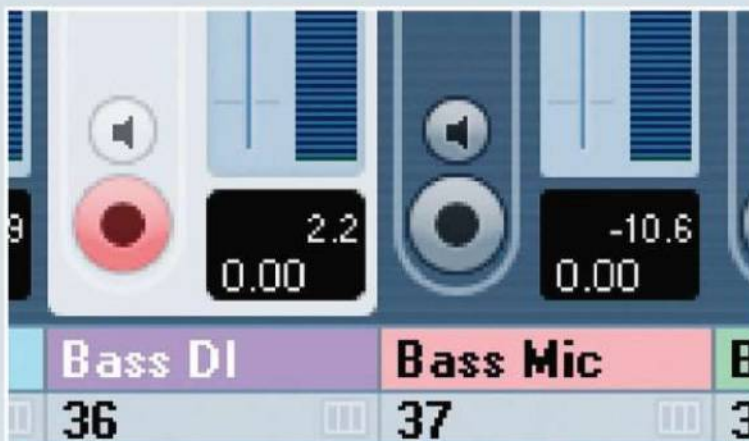
The final part of the picture was, of course, the vocals. These employed a more conventional range of techniques and are discussed in the *Vox Pops* box. **FM**

CUBASE ESSENTIALS NEXT ISSUE

We'll rip open and examine Steinberg's latest update, Cubase 5.5 – don't miss it. **FM231**
on sale 3rd September

Bass In Your Face

Let's take a look at the recorded live bass processing in a bit more detail...



1 Starting with the two bass tracks (DI + cab mic), it's worth seeing if one alone gives you the sound you're after. If so, all is well and good. Otherwise, try mixing them together in varying quantities, then do the same with phase reversed on one channel.



2 If the sound is too 'polite', consider a dose of distortion. Perhaps start by applying AmpSimulator as an Insert effect on the DI channel. Another trick is to create a duplicate channel set for extreme distortion, but at a very low level.



3 If the low-end is lacking, Octaver could come to the rescue. This is best applied using the cleanest bass source track you have, and before any other plug-ins. Turn the Octave 1 knob up until you get some low-end boost.

Vox Pops

While nothing can replace a great vocal recording using the right mic and pre, there are some useful tools to add to the armoury



1 For quick mixing, I find that the use of two or three Group Channels when mixing vocals is the way to go. I leave one setup for the main vocals (including double tracks) and the others for backing vocals and extra treatments. Start with individual channel faders at the default 0dB position and use the Groups faders for major levelling.



2 The main vocal Group usually consists of the DeEsser (but be careful not to overdo things here), followed by the usual complement of compression and EQ. One trick that can work well is to use the Vintage Compressor for flavour, but then feed it into the Limiter for heavier dynamic control.



3 In terms of ambience, using the StereoDelay plug-in to create a slap delay effect is a good place to begin. Starting with an eighth note on each channel (although slightly different settings for each work best), set Feedback to zero and Mix to 15% or less. Lo/Hi filter settings should give a muffled repeat.



4 C5's Cloner plug-in can be pressed into service for double-tracking style effects. It combines a number of parallel delay lines, each with an associated pitch-shifter, to thicken vocal (or other) sources quite successfully. In fact, this is broadly similar to some of the simpler effects produced by the original '70s Eventide Harmonizer.



5 The second vocal Group channel for BVs and additional vocals can be treated much the same as the main vocal Group, but I tend to push the processing further in almost every case and top this off with some EQ to thin out the sound and allow it to sit behind the main vocal more easily.



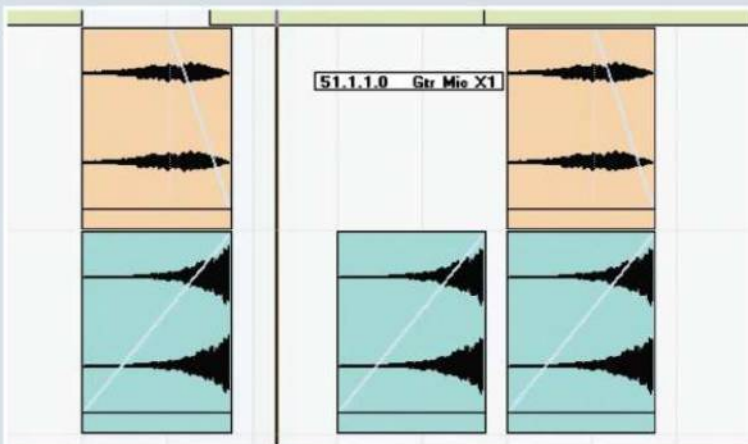
6 If the vocals still don't quite work, some dirt can liven things up. Use a third Group channel for extreme Distortion (from the plug-in of the same name). Use the EQ section to remove all but the middle frequencies (using High and Low Pass configuration in bands one and four), and mix this in at a low level.

Guitars Up To Eleven

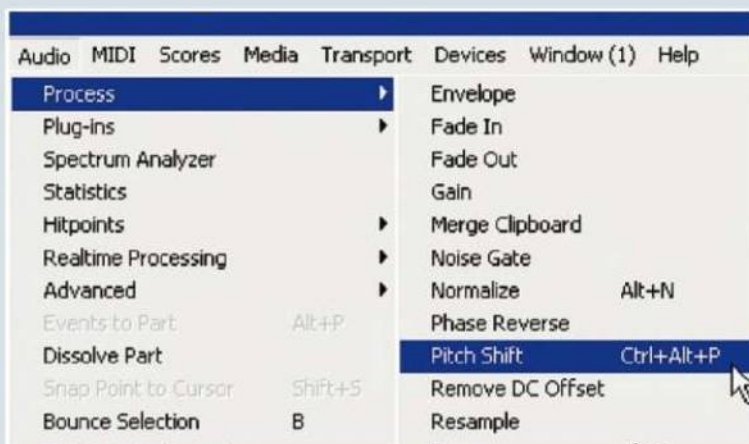
Getting the right guitar tone can make or break a track – here are three tricks I've used recently



1 If you have to deal with recorded guitar tones that have one particularly resonant frequency jumping out unnecessarily, try using frequency selective compression with the C5 Multiband Compressor. Use one band tailored to compress the problem area and leave the others unprocessed.



2 If you're struggling to add interest in production terms, try grabbing a handful of sustained guitar hits, moving them to a new track, reversing them and adding some feedback delay. This can be used to create interesting sound-beds and dynamic sweeps.



3 A sneaky trick for adding some 'jangle' to cleaner guitar lines is to duplicate the track in question and shift the tuning of the new track up by an octave using Pitch Shift in the Audio/Process submenu. Roll off plenty of low-end and keep it mixed low.



ON THE DVD

Check out some audio examples of the audio treatments used this month. All processing has been achieved using Cubase plug-ins.

5.5 Has Arrived!

Just as *FM* was going to press, Steinberg released the much-anticipated version 5.5 (free) update. While not overly radical in terms of functionality, there have been many tweaks – particularly to the interface. We'll save the detail for next month but, needless to say, the forums are already buzzing with the usual mixture of celebration, disappointment and even anger. I've already noticed an apparent performance enhancement on a few projects, but I hasten to add that some of the interface tweaks have frustrated me. I'll report back in full next month.

Guitar Hero

Sometimes, the only way to build a convincing guitar backing track is to explore the full range of layering options available to you. It helps if you have access to a clean DI'd recording, but sometimes you have to take what you're given. Remember that, when combining processed guitar tracks from the same source performance, you need to be aware that phase plays a massive role in the overall tone. Always check how the mix sounds in mono to see which gives the best sound.

There are no real rules here, but starting with duplicate tracks, each with various shades of Distortion or AmpSimulator, panned across the stereo spectrum, is good place to begin. Some EQing of each track may be required to maximise its individual tone, although running all of the layers to a guitar Group allows you to experiment with them *en masse*. Try using Chorus, Flanger, Cloner and Rotary on individual layers and see what effect they have.

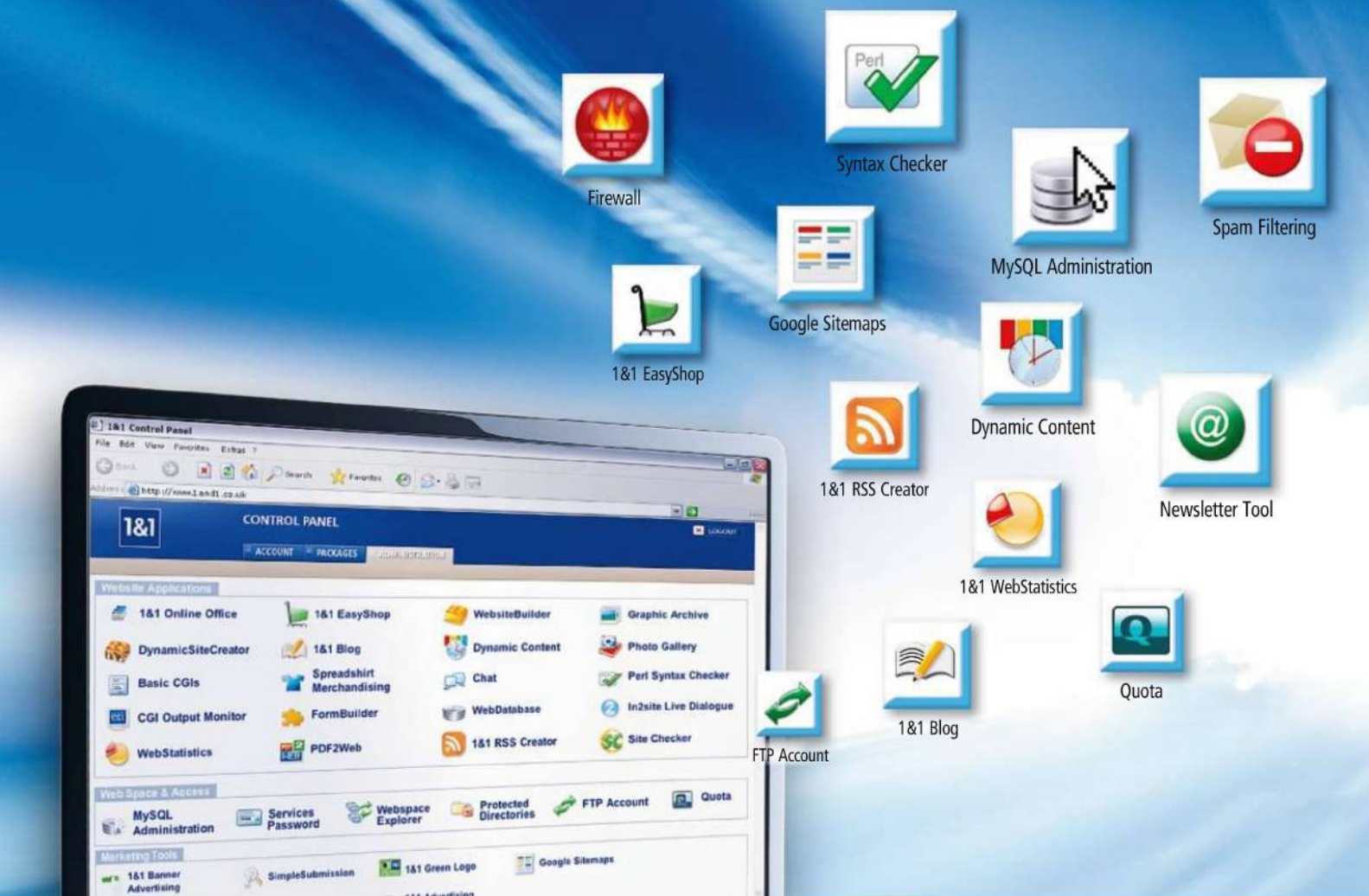
For ambient treatment, dry tones have their place, but adding some 'room character' can add a subtle tail to heavier guitar parts, increasing the apparent impact.

Multi-track

Multiple guitar tracks with different processing gives thickness and presence.



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The Science Behind Plug-ins

Plug-ins have become so essential that you probably use them every day. But do you really know how they work? **Greg Scarth** explains

This month in *Knowledge Base* we're going to take an opportunity to look at a relatively basic but frequently misunderstood subject.

Plug-ins are such a standard part of any modern computer-based production setup that most of us probably give them very little thought. These handy add-ons can make our lives a lot easier, but that's not to say they don't sometimes cause their own problems.

At this point, some of you might think there's not much to say about plug-ins, but it's clear from the letters we receive and the questions we see posted up on the MusicRadar.com forums that a lot of people still don't understand all the ins and outs.

What's the difference between a VST, a DXi, an RTAS and a LADSPA? What's a native plug-in? Where do DSP cards fit in? We'll answer these questions and a whole lot more...

What is a plug-in?

Even if you're a complete newcomer to computer music, you'll probably already have come across plug-ins in other software.

Various applications, from web browsers to graphic design packages to word processors, use plug-ins (which may be referred to in some cases as add-ons or extensions) for customisation and to expand their capabilities. For those of us interested in music production, plug-ins are practically essential when it comes to mixing and matching the features we want to use.

Most DAWs come with a perfectly useable selection of basic instruments and effects, but plug-ins allow us to add features to suit our needs. With thousands of plug-ins available, your expansion options are huge. If you buy a new sampler, soft synth or effects processor then chances are it'll come as a plug-in. Almost all plug-ins fall into two categories: instruments or effects but in some cases instrument plug-ins may also be loaded as effects in order to use their processing sections on other sound sources.

What do plug-ins offer?

The main advantage of the plug-in format is obvious: we can expand the capabilities of our software setup quickly and easily.

Plug-in files are typically small in comparison to full programs (although this isn't always the case, especially where large sample libraries are also involved) and slot in neatly to your existing software setup meaning that everything can be controlled, sequenced and accessed through your DAW. The fact that each plug-in can use its own GUI inside the host means that interfaces are perfectly tailored to each instrument and effect. The various standardised plug-in formats (more of which later) mean that most hosts are capable of running the same plug-ins and, in theory, all well-coded plug-ins should run equally as well in any compatible host. It's easy to see why plug-ins have achieved such success when you consider the alternative approaches.

It would be possible in theory to run all your software as separate standalone applications. Software audio and MIDI routing protocols could then connect them together, acting as a virtual patchbay between modules. Needless to say, hosting everything in one app is a great deal easier to implement and to operate.

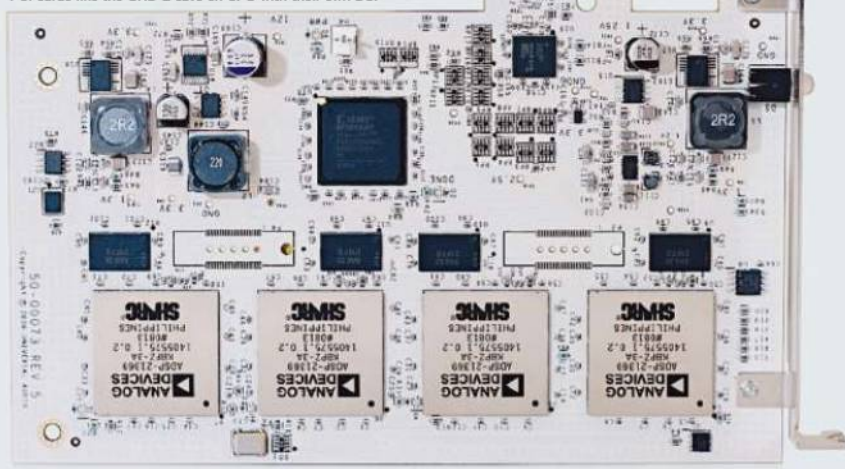
Acronym overload

Thankfully, the downsides of plug-ins are minimal. The fact that you need a host to run them can barely be considered a disadvantage – it's pretty much the whole point! Many plug-ins such as instruments and soft synths also come as standalone applications if you do want to run them without a host, but the convenience of running everything inside your DAW is almost always preferable. One thing that could be considered a minor disadvantage of plug-ins is that the number of formats available can be a little confusing at times. Let's take a run through the major ones...

VST (Virtual Studio Technology) plug-ins were the first major standards in the consumer digital audio world. Introduced as effects in Steinberg's Cubase back in 1996, they were closely followed by VSTi instrument plug-ins. Given their dominance of the early audio plug-in market it's no surprise that 'VST' is sometimes erroneously used as a generic term for a plug-in of any format. Although VSTs are available for both Mac and PC it should be noted that the plug-in files are system-specific. Windows VST plug-ins (with a .DLL suffix) are not interchangeable with Mac VST plugs (.VST suffix).

DirectX (DX) plug-ins and DXi instruments followed closely behind VSTs and were adopted by Cakewalk but never quite achieved the same level of widespread success as VSTs. DX and DXi plug-ins are Windows-only. The early Mac plug-in market was dominated by the VST format until the introduction of Apple's own Audio Unit (AU)

PCI cards like the UAD-2 save on CPU with their own DSP



format. The AU format allows developers to access the Mac operating system's built-in Core Audio functionality. The other competing technology for the Mac is MAS (MOTU Audio System), which is compatible with MOTU's Digital Performer DAW.

Linux equivalents include LADSPA (Linux Audio Developers Simple Plug-in API), DSSI (Disposable Soft Synth Interface) and the LV2 (LADSPA version 2) format.

Natives

Digidesign's Pro Tools works in a slightly different way to most other DAWs, with two distinct categories of plug-in which operate in different ways. Pro Tools RTAS (Real Time Audio Suite) plug-ins use the host computer's processing power. RTAS plug-ins are also often referred to as 'native' plug-ins, and native in this sense means they run on the host computer's processor. VSTs, AUs, DX plug-ins and all the formats we discussed in the previous section are also native.

TDM (Time Division Multiplexing) plug-ins, which pre-date native plug-ins, carry out their processing on dedicated DSP (digital signal processing) chips built into Pro Tools hardware. Separate DSP chips were originally required due to the fact that computer chips couldn't handle such complex processing, but the TDM format has survived largely due to the fact that effects processing puts practically no extra strain on the computer's resources.

With thousands of plug-ins available, your expansion options are huge

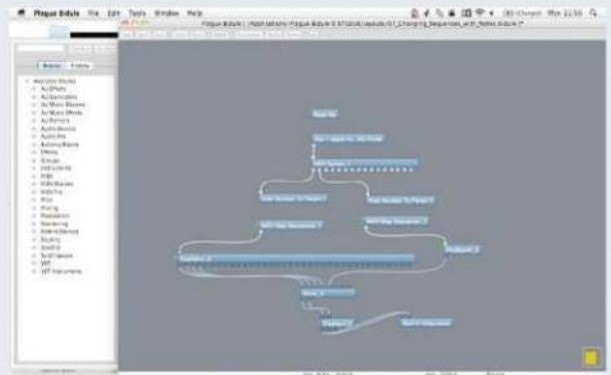
In practice, the difference between most of the native formats is surprisingly small. Some plug-ins may be more stable in one format than another (most often this is simply due to poor programming), but the majority will look, act and importantly sound practically identical regardless of the format. Although it's becoming increasingly common for DAWs and hosts to support multiple plug-in formats, many insist on a single format meaning that most of us have a limited choice which plug-in format we use.

Logic users, for example, have no choice but to use Audio Units. Unfortunately, these restrictions do mean that not all plug-ins can run on all systems. If you're on a Mac and a plug-in only comes in Windows formats, you're pretty much out of luck. However, in

Gangsta Wrap

We've all experienced the frustration of not being able to buy a plug-in in the right format. Most of us are committed to our chosen DAW, and if a particular effect or soft synth isn't available in the right plug-in format you might think you're out of luck. Thankfully, there are a couple of neat solutions that might be able to help you. Firstly, it's possible to 'wrap' some plug-ins into the correct format.

FXpansion's excellent VST to RTAS and VST to AU adapter applications allow you to re-package VSTs for use in Pro Tools or Audio Unit-only DAWs such as Logic. Note that you can wrap Windows VSTs to Windows RTAS and Mac VSTs to Mac RTAS but cross-platform wrapping is not possible. Check it out at fxpansion.com. Even if wrapping isn't possible, there are still solutions available. The most flexible approach



Bidule is a real-time modular environment where plug-ins can be adapted

is to use a modular patching tool such as Plogue's outstanding Bidule (plogue.com). By adding plug-ins and audio/MIDI objects to the construction window it's possible to create multi-format plug-in setups that will

sit neatly alongside your DAW. ReWire compatibility means that tempo sync and audio routing are neatly handled. Innovative applications like Bidule mean that you might have a lot more plug-in options than you realise.

certain cases you may be able to get around the problem. Check out the *Gangsta Wrap* box for some of the solutions.

Potential issues

Generally, plug-ins cause very little trouble. However, there are occasions when even the most powerful computer can run out of power, so it's necessary to consider the processor and memory burden of plug-ins

just as you would for any other software. This is particularly true when running multiple plug-ins simultaneously. Although your computer might exceed the software's minimum requirements, each instance of a plug-in uses more CPU power and RAM. Typically, complex soft synths and effects use the most processing power (reverb effects in particular are notorious for gobbling up processing), whereas RAM is more of an issue for sample-based virtual instruments. Keeping an eye on CPU load and RAM usage is the only solution. Most DAWs include built-in CPU and RAM use meters but any diagnostics software should do the trick if yours doesn't.

We also need to consider the possibility that effect plug-ins might introduce latency. *Knowledge Base* veterans will recall our discussion of latency way back in *FM214*. Latency, introduced by digital processing, results in the sound signal being delayed. When an effect plug-in introduces latency to the signal, failure to resynchronise the signal with the rest of the track will result in timing

inconsistencies. The detrimental effect increases with the number of effects used.

Thankfully, just about all DAWs now include latency delay compensation (sometimes called plug-in delay compensation) to account for this issue.

Hardware hybrids

Although plug-ins primarily operate in the software domain, there are occasions when a crossover between software and hardware occurs. We've already mentioned the way Pro Tools' TDM plug-ins use dedicated DSP chips, and the same principle is adopted by DSP effects hardware such as Universal Audio's UAD accelerator cards. Plug-ins are still loaded up as usual in the host, but all of their processing is carried out by the DSP chips rather than your computer's CPU.

Finally, it's worth considering the fact that you don't actually even need a computer to run your plug-ins. Hardware plug-in hosts such as SM Pro Audio's V-Machine and Muse Research's Receptor allow you to upload plug-ins and run them on a small dedicated unit away from your PC. The downside is that it's still a computer in the box, so stability and plug-in compatibility aren't guaranteed.

Whether you're in the market for a couple of freeware soft synths or thousands of pounds' worth of top-end effects, plug-ins are sure to be some of the most important tools at your disposal. **FM**

KNOWLEDGE BASE NEXT ISSUE

Stay tuned to *Knowledge Base* for more unmissable studio wisdom and industry insight. **FM231 on sale 3rd Sept**



Featuring two founding members of New Order and Joy Division in your band is an obvious door-opener in the musical world. It certainly made us sit up and listen to Bad Lieutenant, a new, independent entity featuring Bernard Sumner and Stephen Morris alongside guitarist Phil Cunningham and guitarist/vocalist Jake Evans.

Having written and recorded *Never Cry Another Tear* in a year, split between Evan's studio in Macclesfield and Sumner's home set-up (with preliminary sonic etchings also having taken place at Blur bassist, Alex James', home studio), Bad Lieutenant are on the promo trail. So – desperately attempting to appear unphased and calm – we spoke with Bernard Sumner about starting over in a new band, building his earliest synths from

“I decided to strip all my gear down to the bare minimum of what I could get along with. Synth-wise, there was a music shop I used to go to in Manchester, which is no longer open, and I'd try out every single synth they had in the shop then I'd say ‘I like this one, this one and this one... if you let me take three of them home then I'll buy one on Monday.’ So I'd give them a really good run through over the weekend then buy one.”

How about mics and guitars? Are you a hoarder or do you have a regular workhorse?

“I've got one mega-microphone for vocals, which is a Telefunken ELA M and it sounds incredible. I've got one or two guitars such as a Gibson 330 from 1966 and also an amazing Vox AC-30 from '66 as well. It's in mint condition and I got it from a guy who's a cabaret artist who had two of them but used one and kept the one I bought up in

Have you still got your collection of analogue synths from the New Order days?

“Well, when I worked with Johnny Marr, he bought an old ARP Omni II but it would never work properly. We did buy a lovely Memorymoog but the trouble is that, two months out of every three, it's in being repaired! I'm not a collector, I'm a working musician and I need tools to help get a job done as quickly and inspirationally as possible.

“The oldest thing I still have is the synth we made *Blue Monday* on, a Moog Source. But I must admit that I do reach for the plug-ins these days.”

Which plug-ins would be reached for first?

[laughs] “I'm not sure I want to give that away... I've got a couple of favourites... the Mellotron emulators, the M-Tron and the SampleTron. I use Cubase and I do really like the synths you get bundled with it. There's Prologue and Monologue: the polyphonic one is absolutely fantastic and the mono one is good too, if a little thin. It's that thing of being able to store your sounds with your track. When you're listening to a song over and over it can hypnotise you a little so it's good to be able to come back to something a couple of days later and the synth is exactly where you left it parked. Then you can decide ‘maybe there's not enough square wave in there’ and add a little bit more and grow towards the sound you want. You can't really do that with hardware.”

I remember you used to always use a Voyetra-8 synth in your New Order TV appearances.

“Still got the Voyetra, but it's been in New York getting fixed for about a year! The filters on the Voyetra are great. They're essentially the same as the filters on a Minimoog, which is why – I'm led to believe – they once got a letter from Bob Moog asking them to stop copying his filters!

“Octave Plateau used to do a little mono-synth called an Octave CAT, which was great and fat as fuck. We got the Voyetra because they were compact and reliable instead of having to have three Prophet-5s. The Voyetra was eight-voice too rather than just five with the Prophets. The downside was that, when you were programming them, it was on a page system so all the front panel, on page two, would mean something completely different but it didn't say on the knobs! So oscillator pitch would become the filter so you had to refer to the book that came with it.”

It can be a bit of a vibe-killer when the old manual has to come out...

“Exactly. The analogues weren't as fast as they were on the Prophets but the fatness of the Voyetra made up for it. We used to layer sounds up with the ARP Quadra and Omni and make them super-fat, then you'd go to use the Prophet and it would sound thin in comparison.

“We did have an interesting synth called the Alpha Centauri, which was basically a card for the Apple II. We were playing over in California, and having read about a guy who'd designed a synth to be used with the Apple I, we went to somewhere in

Bernard Sumner

Gilt-edged grooves herald the return to the fray of the New Order front man. **Hamish Mackintosh** talks classic synths and the dawn of *Blue Monday*...

scratch and one of the most seminal Electronic music records of all time...

FM: With all the gear you've seen you must have a fantastically spec'd home studio by now?

Bernard Sumner: “Ha! One of the things I've learned from my years of being a musician is that the gear gets in the way of the song-writing and the music. I used to have a home-studio at my last house, which was a basement cellar with a big desk and MIDI patch bays all over the place and what I found was that, if I got an idea in the night and I went down to the studio, I couldn't get a sound out of it! I'd need an engineer and so I'd arrange something for the next day but, by then, I'd lost the idea and lost the moment. So we did this album in a very simplistic fashion instead.

his loft. It's still got the receipt from 1966 in the back of it! It has no printed circuit boards in it at all – it's all hand-picked components. So, rather than have a load of different gear, I like to have one item of each that's really good and use that.”

Does the same logic apply to your synths?

“Maybe not with synths, as I tend to have about three synths at any time and then I get my favourite sounds out of that. In the old days, in Joy Division, we had an ARP Omni and a little synth called a Transcendant 2000, which I built from an electronics kit. That taught us to get the best out of the gear we had, and that's the mentality I've found myself coming back around to... and I don't need an engineer at hand all the time, just to get an idea down.”

Silicon Valley. It was additive synthesis and it all just looked really exciting so when we saw the keyboard, we bought it [laughs]. We liked the name Alpha Centauri too so we kind of ignored the fact that it didn't sound all that great!

"The display was like Close Encounters... the colours all related to pitch because if you multiply up audio-pitch then it becomes a colour. Sound is a vibration so, if it becomes fast enough, it becomes heat then it becomes light and then eventually it becomes coloured light.

you were a 16th out, the whole bloody track was out. Once it was in, it was in, but it certainly gave us some interesting moments live.

"We had the Prophets and the ARP modified so you could put a pulse trigger into them. That's how *Everything's Gone Green* and *Temptation* were done. You put a pulse-trigger in but you can play the pitch from the keyboard. The keyboard wouldn't apply any gate, that came from the drum machine so you'd just drop into the clock with the pitch. So, in those days it was definitely a case of

in the right place at the right time. Finding the right sort of music interesting and also keeping our ears open. Every time you go out, your ears are like your radar."

Did you learn from the producers you worked with or did you just teach yourself?

"A bit of both really. I produced quite a few groups for Factory Records: 52nd Street, Quando Quango, Section 25 and a few others. I did them all for free because I wanted to learn about production. In a

way, they were getting free production but I was getting free experience and production is all about experience and making mistakes. Putting too much top-end on something, for example, before you start to learn.

We used to use Prophets in fact. *Blue Monday* was done with the Moog Source for bass and a Prophet-5 for the top line

"So we bought it and got it back to our rehearsal room and we're playing away on it through the desk thinking 'this is sounding great'. Then I noticed the meters on the desk were right into the red and all we were hearing was the distortion. So we turned it down and it sounded like a Bontempi organ!"

Have you tried any of DSI's new synth offerings?

"I did rent one of the new Prophets but, again, I found it a little bit thin. We used to use Prophets in fact. *Blue Monday* was done with the Moog Source for bass and a Prophet-5 for the top line. This was all pre-MIDI so with the Source we had a sequencer we'd built from a kit by Powertran, the people that made the Transcendent 2000, which we also stupidly used live! You had a 'song start' and a 'song end' an you dialled the button for digital numbers... in fact the New Order track, 586, was because of that sequencer.

"So, you'd dial the numbers up and have the start point and the end point written down on a piece of paper and have the drum machine running then take your finger off the start button of the sequencer. It clocked on a 16th pulse so, if

just seeing how much you could do with the equipment you had available. I think the fact that we were using that kind of gear live was fresh to people. There were some people using tapes but we almost saw that as cheating."

How early did you discover music software?

"After the home-built sequencer and Prophet sequencers, I used to use a little program called Passport in one of the second generation Macintoshes that had the screen built into it. We found a little drum programming sequencer package and it had different kinds of sticks... [laughs] it had a soft stick, hard stick or harder stick! We used it for programming drums and basslines on *Technique*. It was great for basslines as it was super-tight and really easy to use. Almost like the rhythm-page on a Fairlight, I suppose."

Are you aware that *Blue Monday* switched a lot of people on to Electronic music for the first time?

"I remember playing *Blue Monday* to someone when we first did it and them saying 'What's that? That's not New Order'. There was no master-plan behind it. It was just following our noses and being

"For the Bad Lieutenant album we used a little 16-channel Mackie desk but with a really good Neve pre so everything went through the Neve or a Drawmer Stereo preamp. It's a small studio but when you switch it on everything works and that's really important. There was a Roland Fantom stocked up with cards as, when I'm writing a part, I don't want to listen to sample after sample so the Fantom's great. It always seems that the sound you write a track with means no others sound better later.

"I had the Waldorf XT along with a little Doepfer modular system although the power-supply of that caught fire one night... everything else is in the box really: the Cubase soft synths and the Arturia Minimog VST."

Was there a deliberate decision to under-play the role of technology in *Bad Lieutenant*?

"I just found myself working with two good guitarists and it would've been ridiculous to say to Jake and Phil, 'put your guitars down and here's some synths'. I worked to their strengths. I'd also been making an album with Stuart Price, who I love working with so I thought that, if it was a synth idea or song, then I'd do it with Stuart.

"I wanted to take more of a back seat with the production but I've never been that kind of musician. It felt as if I was tickling the tracks so, eventually, I leaned over the driver's shoulder and said 'give the wheel to me'. Phil was quite happy for that to happen although Jake was a bit reticent because Jake does a lot of production with his own band, but this is the first album we've made so it perhaps it didn't make sense for him to take the steering wheel.

"Jake gets locked into detail a lot, which is a thing you do as a young musician, I did it years ago myself. He's a fantastic musician, a really great guitarist... [laughs] which is annoying really because he can play anything!" **FM**



L-R: Tom Chapman, Jake Evans, Bernard Sumner, Stephen Morris and Phil Cunningham

WANT TO KNOW MORE?

Bad Lieutenant's album *Never Cry Another Tear* is out now on CD and digital download. badlieutenant.net



Bad Lieutenant

Phil Cunningham cut his musical teeth in the band Marion and, latterly, playing guitar with New Order while Jake Evans has been plying his trade with Rambo and Leroy as well as running his Macclesfield recording studio. *FM* talked with both about how Bad Lieutenant's guitarists carve their space among the technology.

What was the evolution of *Never Cry Another Tear*?

Phil Cunningham: "We'd work on a lot of the basic ideas at Jake's studio then take that over to Bernard's and he'd get into mashing it up, processing the fuck out of it, trying loads of plug-ins on it."

Jake Evans: "We're not quite so based in technology as Bernard is but I do really embrace it. I'm just not so knowledgeable when it comes to the production aspect and that side of things. Bernard knows how to build a synth sound from scratch and how to get a particular sound he has in mind, whereas I'm one of these people who has to scour through then adapt presets to suit my needs. I've just got a MacBook and it's like 'what do I need that studio for now?' Technology really has changed the way we think about making albums. Not to mention the cost of making them."

What are you running in your studio?

JE: "Cubase. Everything on Cubase. I've a basic old analogue desk to warm things up a bit with couple of valve compressors. Then with Cubase, I run the likes of Native Instruments' Absynth and B4, as well as some of the bundled soft synths like Spector and Mystic. There's a nice old proper Wurlitzer and a miniKorg [700s] with the vocoder too."

PC: [laughs] "Bernard bought the bigger version of the Korg for about two grand or something and that's in the dusty cupboard now! And Steve [Morris] seems to be buying more and more old synths. You can hardly get in the door of his studio for them! He just re-bought the [Oberheim DMX] drum-machine that they programmed *Blue Monday* on and Bernard was like 'why...?'"

How well does technology currently serve guitarists?

JE: "I think there's loads of really good stuff out there. We're both big fans of the Line 6 [DL4] delays. They're brilliant."

PC: "I got one of the Electro Harmonix Holy Stain pedals and that's really wicked. I've been scoping things out online for when we get to the music stores in America. Jake and I are big fans of stand-alone effects but Bernard prefers things like his Roland GT-5. He swears by it. I know when Johnny Marr was playing with The The, he would change all his effects via MIDI but I always think that life's too short for that kind of thing!"



EHX's Holy Stain is a multi-effects unit with reverb, fuzz, pitch and tremolo

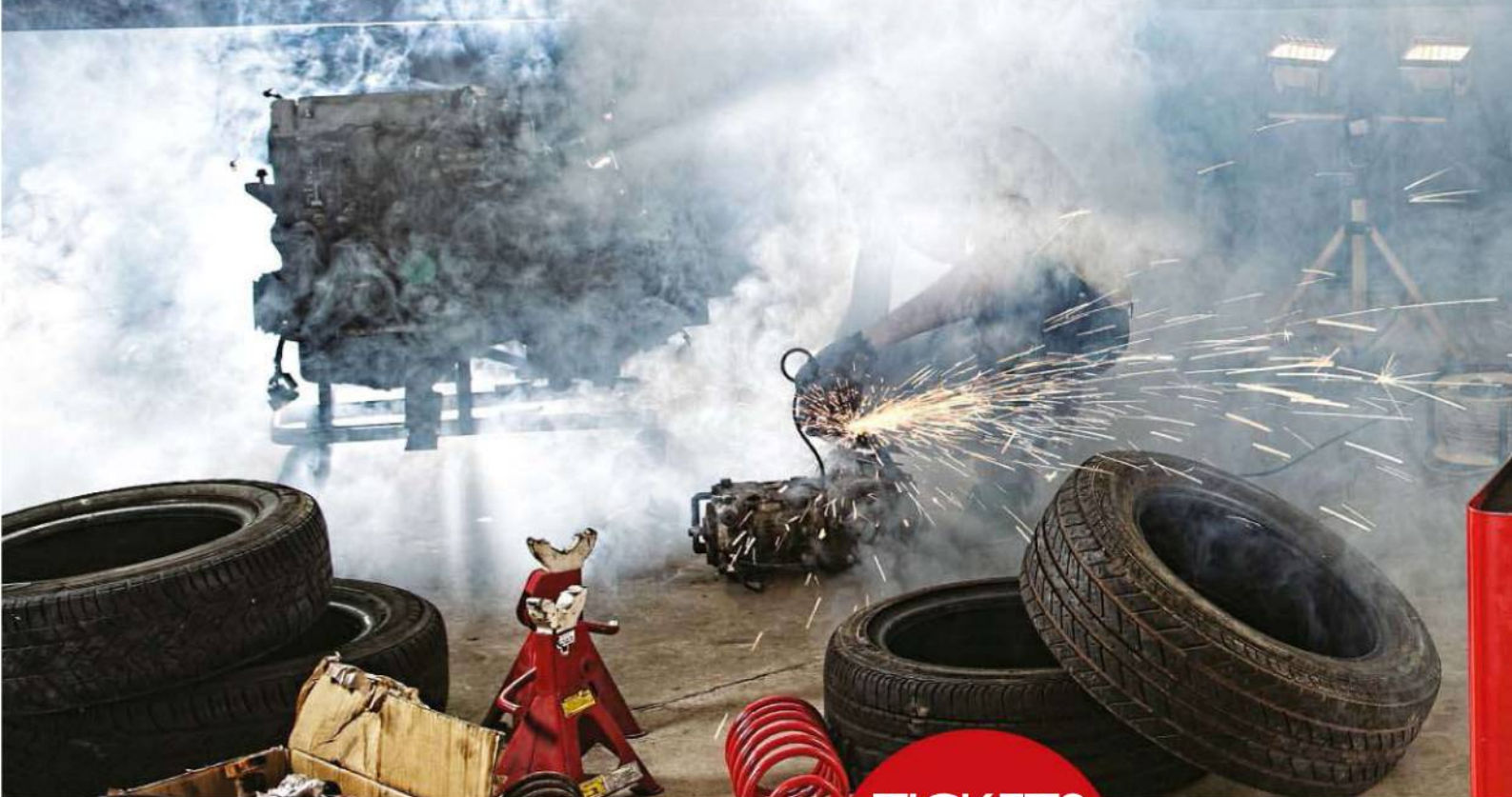


Line 6's DL4 is a hugely popular pedal and a classic in its own right



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LOGIC ESSENTIALS



Vital Key Commands

in Logic 9

Logic is a monstrously complex program – as so much is possible, plenty of time is spent (and lost) reaching for the mouse. In an attempt to wrest back some of this lost time, **Jono Buchanan** explains 10 killer key commands

Normalise region parameters

1 Logic's Playback bar is great for allowing you to get a real-time performance under control. As well as an extensive set of Quantise options, you're faced with choices to set up playback loops, switch transpositions, turn up or down velocity responses, change the length of each note of a phrase via the Gate Time option and even set up a form of 'MIDI compression' by limiting the Dynamics of the velocities you've performed.

Most of the time, you'll find leaving these settings 'active' for each region of your track is fine but if you want to make a more 'sequenced' sound, it can be frustrating to

be looking at a set of values in the Piano Roll display which aren't reflected in playback. Suppose you've played in a sequence and suddenly want to accent the first note of each beat of the bar, there's no easy way to do this once you've got your Playback options set.

By normalising the region parameters, these options become fixed (with the exception of Quantise), so you can see what you're hearing and make adjustments from there. The key command? Control-N.



ON THE DVD

> Tie a region's parameters down before carrying out editing work.

THE EXPERT

Jono Buchanan
composer,
producer



Jono 'King Of The Key Commands' Buchanan

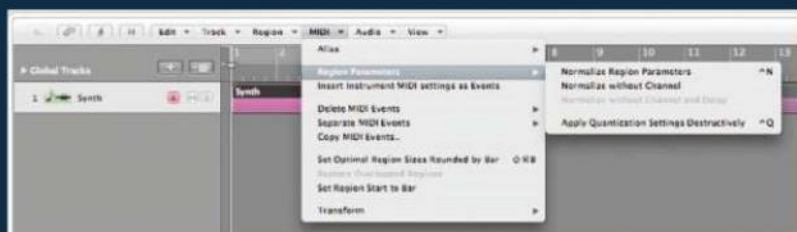
uses Logic each and every day on myriad songwriting and production projects. He uses the spare hours he saves with shortcuts to campaign for world peace, greater human rights and fatter basslines.

It's about time

2 Many's the time the right structure for a track only presents itself as your piece really starts to develop and the majority of the sound choices have come together. Whether this means adding an extra bar before your track drops, or if it means adding an extra chorus or middle-eight, sometimes you can't know in advance how best your track will flow.

Similarly, it's sometimes easy to create a five-minute epic without meaning to, with the need to shed some bars becoming apparent after repeated listens. It's certainly possible to highlight lots of regions, having carefully chopped them first and either move them to the right to make some space, or to erase them before moving the following regions back to the left but there are easier ways right under your key command fingers.

In the Edit menu, you'll find a Cut/Insert Time item which allows you to use markers to indicate where you want to cut regions or dial in extra time and these are easily selected with shortcuts. Simply draw a loop to set the area within which you want to



Tempo Setters

Change your project's tempo by setting your loop lengths over a full bar



Set Tempo by Region

3 I've lost count of the times I've been delighted to find that Logic's asked me if I want to import tempo information with an audio file I'm dropping in from the Audio Bin. This can be invaluable if you're dragging a mix file into a new

arrangement to add extra parts or record backing vocals, for example.

However, with older files without those tags, or for audio files you're recording in real time from CD, you're frequently left with an audio file which is set differently from the tempo of your current arrangement, leaving you with the job of using it to set the BPM

for a new project. You can, of course, use Logic's BPM plug-in to run your track but it's often quicker to use a key command. Simply cut around a block of the track which runs from one down beat to another, then drag out a quick loop to match the number of bars you've chopped. Then highlight the region and press

'Command-T'. Logic will pop up a box asking if you want to set a Global tempo at this speed, or create a tempo change just for the length of this region.



ON THE DVD

> Snap the tempo of your project to a chosen audio file. It takes moments.

work, then select 'Control-Command-X' to cut everything within that area, 'Control-Command-Z' to add time between those points or 'Control-Command-R' to repeat the section within the locators.



ON THE DVD

> Change the structure of your piece without the hassle of mouse use.

Draw automation boxes

4 Automating volumes and effects sends, among other parameters, often makes the difference between tracks which sound OK and those which sound considerably better. In particular, it's



almost impossible to get a vocal part to 'sit' comfortably in a mix by relying on compression alone to provide dynamic levelling and it's inevitable you'll need to enhance your compression settings with some carefully chosen volume rides. Often, individual notes are the problem – suddenly

you've got one note which is much too quiet or loud, so you simply need a 'box-shaped' automation ride over that note to boost or lower its volume.

If you like a hard life, zoom out to a large horizontal resolution and draw four 'dots' – one to maintain the original volume leading to the 'problem note', one just before it starts, one just after it ends and then a final one to maintain the volume settings which come after it. Alternatively, watch the video to make automation of this kind a snap.



ON THE DVD

> Simplify common automation tasks with key commands.



Common Keys

There are several single key commands for popular windows



Opening Common Windows

5 Logic 9's appearance and workflow was optimised partly for laptop users by creating the Arrange Page as the main workspace, with tabs to open the other common windows most of us use daily to 'eat into' the arrange space, encouraging you to dive into these windows when you need them but to close them when you've finished. This saves the

older Logic problem of having several windows open at once but it's amazing how many of us haven't learnt the key commands to pop these windows open and closed, thereby slowing down the workflow process. So, I'm going to set you a little homework assignment. By next month, I'd like you to practice and remember the following five window commands, please. To open the Piano Roll for event editing, press 'P'. To open the

Mixer, press 'X'. To open the Audio Bin, it's 'B'. For the Loop Browser, it's 'O'. Lastly, press 'I' to toggle the Inspector open and closed. I know, homework's boring but if you memorise these, you'll find yourself reaching for the mouse a good deal less, I promise.



> You use the mouse to open the Media Browser and the Piano Roll editor? Homework time for you.

Invert selection

6 Sometimes, a part you write for a track is just too full. That piano idea you wrote to get the whole thing started sounded great but now that the arrangement you've composed is fleshed out, that same part sounds busy and simply too full of notes. Or, you might decide that the pad sound you put in to spell out the harmony simply needs to become a single line to leave room for other elements in the mix. If the line you like is in the middle of the notes you've composed, it can be fiddly to use the Piano Roll display to select all of the notes above those you want to retain and then to select those below without making a mistake and having to start again.

This is where a simple but extremely useful key command can come to the fore, that of inverting your selection. Instead of selecting all of the notes you want to delete,

select the single line you want to retain by clicking on successive notes while holding down Shift. Once your line is highlighted, use 'Shift-I' to automatically flip the selection from the notes you've selected to



all of those you haven't. Press Delete and they'll disappear. Simple as you like.



> Select the notes you want and then Invert the selection to simplify parts quickly.

Select all following

7 Here's a useful command for all you Dance producers who like working in looped sections, slowly allowing an arrangement to 'grow' out of a great 16-bar long passage to which you've added your killer ingredients. I know that when I work this way, my arrangement fills up with ideas 'later on' in the track which I've either discarded altogether or am still in two minds about and these extra regions tend to still be there at the end, cluttering up my arrangement and generally getting in the way. It's also sometimes true that a part I thought might loop and play throughout a section only needs to play once, leaving a trail of copied regions behind it sitting in the middle of my arrange window which I need to go through and individually delete.

For these times, there are two very useful key commands to learn based on the same theme, both of which are 'Select All

Following'. By clicking on a region, both it and subsequent regions are selected via a single key command making it a snap to delete them and, as you'll see on the DVD, you can do this either for all tracks, or limit this process to a single track if you prefer.



ON THE DVD

> Get rid of regions you no longer need en masse with two simple clicks.

Making tracks

8 As well you know, three different track 'types' are available in Logic – those for Audio, Software Instruments and External MIDI. The '+' button at the top of the track list allows you access to the drop-down menu to create new tracks in any of these categories but there are quicker, key command-driven track creation options which save you having to repeatedly return to this button each time you want a new track.

To bring up this dialogue without pressing '+', it's 'Alt-Command-N'. 'Command-D' will provide you with a new track with Duplicate Settings to the one you had highlighted, while, for those of you using plug-ins which support instruments on multiple MIDI channels, the invaluable 'New With Next MIDI Channel' option is available via 'Shift-Apple-M'.

If you insist upon being glued to your mouse, another way to create new tracks is to highlight an existing track and simply double-click in the 'empty' area below the tracks you've already set up and you'll get a new track of the same type as the one you selected. See all of this on the DVD.



ON THE DVD

> If you're tired of always reaching for the '+' button at the top of the track list, watch this video for some shortcuts.

Learning New Assignments

9 Of course, so far we've just been looking at the default key commands which ship with Logic 9 but it's fair to say that there are a raft of other commands you might want to carry out which don't have assignments set up by default. You can easily add your own and to demonstrate, we'll add a command to set loop points around a selected region – a shortcut favourite of mine.

To set up your own commands you'll need to open the key commands dialogue, which is done via, you guessed it, a key command. 'Alt-K' will bring up the necessary box and to assign a target command, you'll simply need to type a key word into the search pane in the top right-hand corner. Type 'Set Locators' here and you'll find 'Set Locators by Regions/

Events/Markuee' at the top of the results. Select this then, on the right, click the 'Learn By Key Label' button. Then, type the key command you'd like to assign to this command (mine is Control-Alt-L) and you'll see this assignment pop up next to the command. Now, in Logic, click any region or select a few and try out the key command.

Automatically, loop points appear around the region(s) and a quick press of 'C' for

cycle will loop around this section. More mouse time saved.



ON THE DVD

> You don't have to just stick to Logic's key commands. Teach the system.

NEXT ISSUE

Join Jono next month as he lifts the lid on yet more Logic tricks and treats. *FM231* on sale 3rd Sept

Import/Export Key Commands

10

If you've not yet upgraded to Logic 9 or if you have and

you're missing your bespoke key commands from previous versions, you'll be delighted to hear that you can import or export key command sets very easily. Press Alt-K to bring up the key command window and

you'll find separate Import and Export buttons in the bottom left-hand corner. Then simply point your browser at the key command set you want to import or set a target for export. It's not even beyond the realms of possibility that you'll want a couple of key command sets – either because you're working between a full desktop keyboard and a laptop one, or because you want a set for the

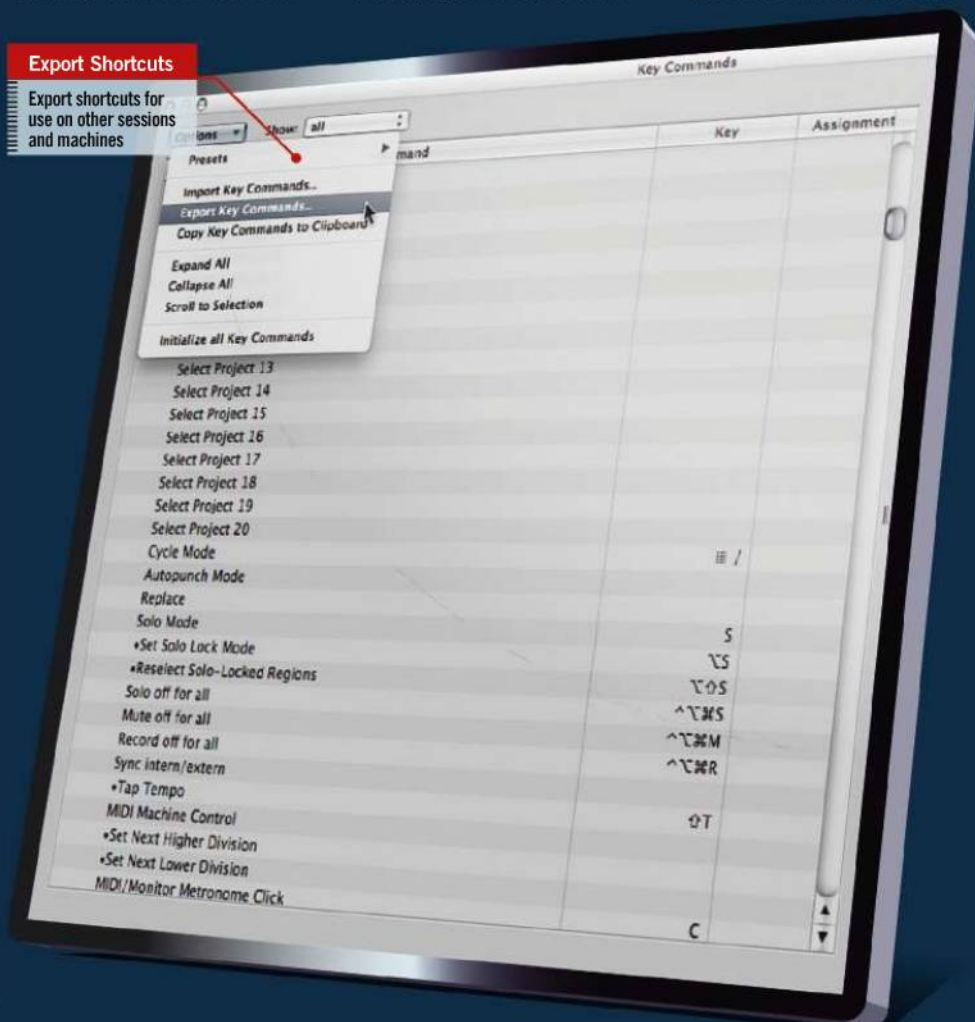
studio and a simplified set for live use. In these cases, keep a key command folder somewhere easily available on your hard drive and then you can simply load up the set you want to use at any given time.

Watch the video to see how simple this is to set up. *FM*



ON THE DVD

> Import Key Commands or export yours for use on other systems.



The Science Of Distortion

From Rock 'n' Roll guitars to Justice-style riffs, distortion peaks its harmonic head into almost all genres. **Greg Scarth** goes to eleven

Sixty years on from the invention of Rock 'n' Roll, distortion still hasn't lost its appeal. What was originally considered an

unpleasant and undesirable side effect of overloading audio equipment has become a key element of countless genres of modern music. Although it might conjure up images of metal guitarists shredding away, distortion shouldn't just be thought of as a brutal effect for smashing the hell out of a sound. Subtle applications of distortion can be used to great effect on any instrument.

In this month's *Knowledge Base* we'll take a look at the history of distortion and then look at some of the different types of distortion effect. From analogue to digital, valve to solid state, we'll show how they affect the sound and offer some examples of how you can use distortion effects in your music. We'll also take a look at bitcrushing and sample rate reduction, two digital techniques which might not strictly be considered distortion but can be used for similar purposes.

Distorted history

The history of distortion truly begins in the 1950s. Before the proto-Rock rhythm and blues recordings of the decade, distortion

was considered unwanted noise that occurred as a result of pushing equipment too hard. Rock 'n' Roll pioneers changed everything with their deliberate application of distortion as a special effect. By the late 1960s, distortion was firmly established as part of the musical lexicon. The invention of dedicated overdrive pedals, fuzzboxes and distortion units made it easier to achieve sizzling distorted tones without relying solely on amp distortion. Guitarists including Jimi Hendrix and Eric Clapton helped to ensure that the fuzzbox became an essential weapon in the guitarist's armoury, while amplifiers were prized as much for their dirty distorted crunch as for their clean tones.

Valve distortion

Distortion can be introduced by a number of elements of your signal chain, including speakers, transformers and various smaller electronic components. However, the sound we now usually know as overdrive or mild distortion primarily originates from overloading valve amplifiers. As valve amplifiers are pushed closer to their limits, they start to behave in a less linear fashion, and as a result the signal is compressed.

As the signal continues to exceed the amplifier's maximum level, it starts to be

clipped, meaning that the peaks are compressed and flattened. The waveform is re-shaped, tending towards a squarer wave. The characteristics of different waveforms have a major effect on their sound. The squared off peaks of the distorted signal mean that its sound becomes more like a square wave, rich in pleasant sounding odd harmonics (see *FM222* and *FM223* for our explanation of harmonics). Anyone who's talked to a guitarist about tone will know there are hundreds if not thousands of ways of describing the different varieties of distorted signal, from creamy to harsh and everything in between.

Harmonics

Rather than thinking about distortion in terms of wave-shaping, we can also consider the effect it has on the harmonic content of a signal. Remembering back to our early discussions of subtractive synthesis (*FM213*), you should recall that different wave shapes (square, sine, sawtooth and so on) contain different patterns of harmonics. A square wave, for example, contains the fundamental frequency and all odd-numbered integer harmonics. Therefore, as we clip the waveform we start to introduce more and more odd-numbered harmonics as the wave moves closer and closer to a square shape. Not only is this a good way of understanding how distortion affects a signal, it also allows us to think about why certain types of distortion are considered more pleasing than others.

Looking at harmonics also raises an interesting point that is often overlooked. By distorting a signal, we're adding a lot of content to its frequency range. Take for example a sine wave sub bass line. Without any distortion, the sine wave contains only the fundamental frequency of the note being played. If we distort the signal, this is no longer the case. Distorting the signal adds harmonics, and increasing the level of distortion also increases the amplitude of these harmonic frequencies. The consequences of this are significant. Firstly, the perceived volume of the sub bass will

There are many different types of distortion, but it's not just for guitar players



change as we hear the harmonics and our brain fills in the gaps about the fundamental frequencies. This is particularly apparent on smaller speaker systems – a 40Hz sine wave may be almost inaudible on a small speaker or cheap pair of headphones, but the harmonics induced by distortion will make the sound stand out.

Secondly, as producers, we need to consider the overall balance of frequencies as we mix. Distorting a part will have knock-on effects on our mix thanks to frequency clashes wherever the harmonics are introduced. If you find yourself having to correct a mix by cutting frequencies out of a distorted part, you may be better off winding back the distortion a touch to avoid going round in circles.

Solid-state

As with most other electronic music equipment, valve distortion was soon followed by solid-state equivalents. A quick note: 'solid-state' refers to electronic circuits which contain components built from solid materials. Whereas valves contain vacuums and occasionally gases, components such as transistors and semiconductors are built entirely from solid materials. These days, if a piece of equipment doesn't contain any valves it's a pretty safe bet that you can call it solid-state. In the 1960s, new transistor and diode technology made it possible to build small pedal-based distortion effects.

The principle is similar: force an overly hot signal into a circuit in order to push it beyond its working limits and induce

The break-up of a solid-state circuit is more aggressive than tube distortion

clipping of the waveform. However, since solid-state components behave differently to their valve counterparts, the resulting sound is subtly different. Typically, the break-up of a solid-state circuit is more sudden and more aggressive than tube distortion, characterised by higher levels of odd-order harmonics. Although the difference between valve and solid-state is easily identified, things get a little more complex when you try to define different types of solid-state distortion effect, such as fuzzboxes and overdrives. Overdrive is often used to describe valve distortion (or solid-state distortion units which attempt to mimic the sound of valves), whereas fuzzboxes are

Keep It Subtle

Distortion isn't restricted to amplifiers and effects units. You might not necessarily realise you're adding a distortion effect in some cases, but a great number of preamps, compressors, plug-ins and even apparently neutral items such as

microphones, mixing desks and tape machines impart some degree of distortion onto your signal. It may not always be intentional, but at times this can be a major contributor to the overall sound of the equipment. Many analogue devotees argue that the

inherent low-level distortion of analogue equipment helps to tie the sound together by applying the same subtle harmonic distortion to your tracks. To some extent, the effect can be replicated in the digital domain by applying very small amounts of overdrive effects to individual tracks or stereo masters.

In addition to creating obviously low-res digital sounds, subtle bitcrushing and distortion is also a great way of adding a bit of '80s grit to synth sounds and samples. The low resolution digital to analogue converters (DACs) and digital processing of 1980s synths and samplers gave many of them a unique tonal quality which is often hard to recreate with cleaner equipment. Downsampling high-resolution sounds can help to bring some of that dirty, imprecise character to your tracks. These subtle applications of distortion might not be as obvious as some of the more aggressive approaches, but they can be equally as effective.



usually high gain units which square off a signal dramatically.

Digital distortion

For many people, distortion can get confusing when we consider digital signals. Digital emulations of analogue distortion effects are now commonly available in

hardware or software form. Given that they tend to imitate the sound of valve and solid-state distortion units, similar sounds are usually achieved. However, there's a separate phenomenon also known as digital distortion which is infinitely less desirable.

The clipping which occurs when a signal above 0dBFS is fed into a digital input is a sudden, harsh squaring off of the waveform as the amplitude tries and fails to exceed its maximum value. This hard clipping is typically characterised by a very abrasive and harsh sound, since the clipping is instantaneous rather than slow and progressive like soft clipping in analogue equipment. Once digital clipping has made it onto a recording it's practically impossible to remove, so it's crucial that these 'overs' are avoided by maintaining good practice and leaving plenty of headroom on digital inputs when recording. Digital distortion can also occur occasionally in other processing

so it's important to learn how it sounds and keep an ear out for it just in case something does go awry.

Bitcrushing

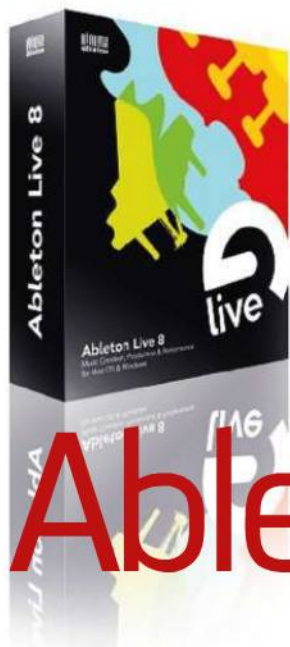
Although it's sometimes not considered a form of distortion in the same sense as a cranked valve amp or analogue fuzzbox, bitcrushing and downsampling a digital signal creates a distorted effect which is also worth considering here. Bitcrushing refers to the process of reducing the resolution of a signal, while downsampling involves reducing the sampling rate. Depending on how far you take them, both processes help to create a low fidelity signal riddled with aliasing and digital imprecision. Many bitcrushing effects also allow you to control the input gain of the signal.

Bitcrushing and sample reduction really seem to be coming into fashion right now as a way of achieving a slightly different distorted sound without turning to the usual valve warmers and distortion effects. Whether you keep it subtle for a bit of authentic '80s fuzziness or crush the hell out of a sound, bitcrushing and downsampling should be considered alongside overdrives and tube effects as a different flavour of distortion. **FM**

KNOWLEDGE BASE NEXT ISSUE

Next time around, we take a detailed look into the science behind sequencers. **FM231 on sale 3rd September**

ABLETON LIVE ESSENTIALS



Mastering the Mixer in Ableton Live 8

Ableton Live's Mixer is straightforward enough, but there are questions: why does it look different in each view? How can I see a more detailed display? How can I control it with my MIDI hardware?

Martin Delaney likes to think he knows it all...

Live's Mixer section is pretty simple – especially as signal routing happens in the separate In/Out View, which we talked about back in early 2009, I think...hmm, maybe that needs a revisit? The most obvious feature is the Track Volume Slider, just drag it up and down to control input or output volumes for that track, or click it, then arrow-down for a super-smooth fade. Like all Live knobs and sliders, hit the delete/backspace key to

quickly reset this to its default value. Use the Pan knob to move your tracks left or right in the stereo field, I personally don't go nuts for this, especially if I'm already using stereo effects within the tracks (all Live tracks are stereo).

Use the Track Activator button to kill the track temporarily, and the Solo/Cue switch will simply solo that track as you'd expect, or route the output to a separate cue mix, depending on your routing set up.



The fully-expanded Live Session View Mixer. If you want to see this while you're in Arrangement View, just hit Tab

THE EXPERT

Martin Delaney
performer,
educator,
producer



Martin, aka mindlobster, has produced Live training material for MacProVideo and PC Publishing, and has personally taught Live to musicians, DJs, kids, and prisoners. He also designed the Kenton Killamix Mini MIDI controller and is one of the UK's first certified Ableton Live trainers.

Finally, the Arm Record button record-enables that track to record from an audio or MIDI input.

Mix and match

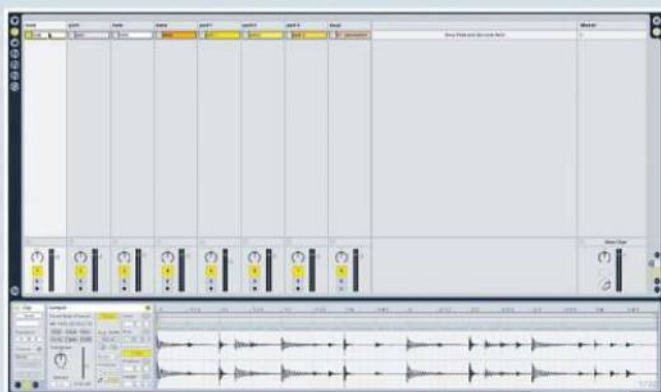
The Live mixer totally changes when you move from Session View to Arrangement View. The Session Mixer's more like your traditional hardware mixer layout, while the Arrangement Mixer's basically reduced to a series of little boxes, which is logical if you think about using the Arrangement View for mixer automation, I want to be able to choose the 'Session' Mixer in Arrangement too. You can also show/hide the Mixer altogether by tapping Alt-cmd-M, and resize by dragging upwards to view tick marks, a numeric volume box, and peak level indicators (click to reset them at any time). Drag the track wider and you'll see a dB scale, also. **FM**

LIVE ESSENTIALS NEXT ISSUE

Make sure you pick up *Future Music* next month for the ultimate guide to Live's Key Commands. **FM231** on sale 3rd September

Creating Fader Groups

In Live 8 you can round up as many faders as you like, and put them under the control of just one chubby finger



1 Track grouping is what it's called when you want to be able to control the volume levels of several tracks with just one fader, effectively creating submixes for particular instruments (drums, for example), and reducing the number of hands required to do a real-time mix. Load the example Live set from the *FM DVD*.



2 The example set has eight audio tracks in it, and tracks one-three contain beats and percussion loops. We can group these temporarily, or in a more permanent way. Let's do the temporary method first. All you have to do is shift-click on the track name for each of those first three tracks.



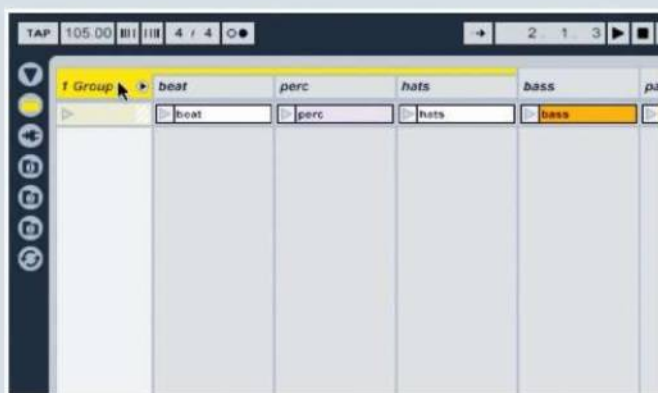
3 The first three tracks should be highlighted now. Click and drag on a volume fader in any of those tracks, and the faders in the other tracks should follow right along. Now you can conveniently control the overall level of your drum kit without transforming into a human octopus.



4 It's the same with the pan knobs. As long as the tracks are still highlighted, you can click and drag the pan knobs to change the balance of your grouped tracks. When you drag the controls to the maximum or minimum of their range, they keep their relative positions – they don't just flatten out.



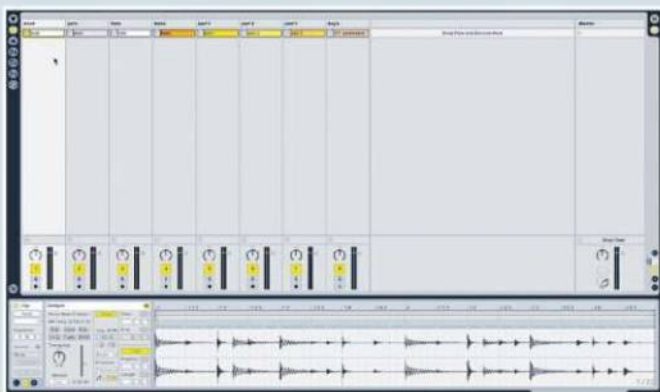
5 Although it doesn't look as funky, the same thing applies to the Arrangement View mixer. Click to select the tracks, then drag up or down in one of the little Track Volume boxes, and you'll see the numeric displays, and automation lanes if they're visible, change for all of the selection tracks.



6 I mentioned that you could make this grouping permanent – hit cmd-G to put them together in a new, permanent, group track. Group tracks can hold audio or MIDI tracks, or any combination of both. Use the triangle in the track header to unfold them, and cmd-G to ungroup them at any time!

Recording Your Mixer Moves

If you've activated global record, then all of your mixer moves will be recorded as you jam, along with your clip and effects actions



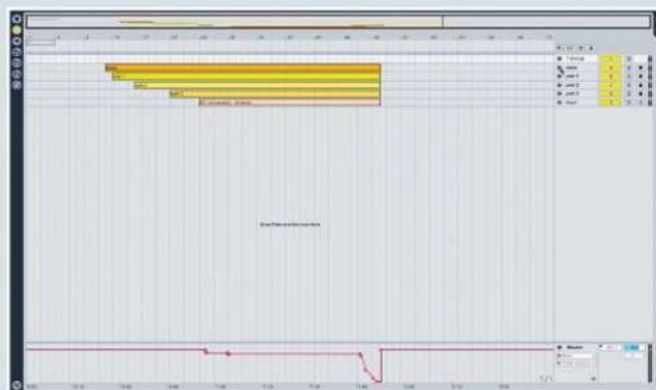
1 When you go into record mode, by clicking the circular record button at the top of the screen, it's not just clip launching and effects changes that are recording. Everything you do with the Mixer goes down, whether you're recording in Session or Arrangement View. Open the example Live set on the *FM* DVD.



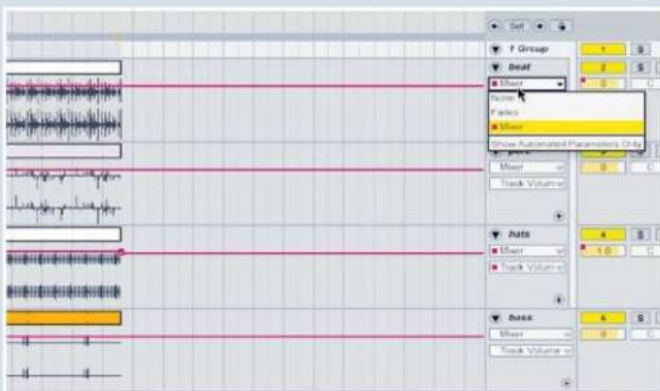
2 Click the global record button at the top of the screen, then begin launching the clips in the various tracks. Use the faders to balance the track volumes, and the pan knobs to get some stereo experimentation. Try muting with the track activation switches, and try the temporary fader grouping we talked about earlier.



3 When you've had enough of those repetitive loops, grab the master track fader and slowly drag it all the way down, to create a nice fade out. Once the audio's disappeared completely, hit the spacebar to stop Live, then hit cmd-S to save your project (the first thing you should do after any recording).



4 Hit Tab to see Live's Arrangement View timeline. You should see all of your recorded actions laid out from left to right, and you might already be able to see the red automation envelopes for each track. If not, unfold all of the tracks by holding Alt, then clicking one of the small disclosure triangles.



5 Click on the small chooser box under the name of each track and choose Mixer. From the box under that, choose Track Volume. You'll have to do this manually for each track. Then you can view all of your fader magic. Don't forget that fade you did in the Master Track too.



6 Everything should be recorded just as you 'played' it in, even on the grouped tracks. Use the small '+' buttons on each track to view more automation – you can view your pans and fades at the same time. Don't forget, all of these envelopes are editable, in case you need to do any tidying up!

Hardware Configuration

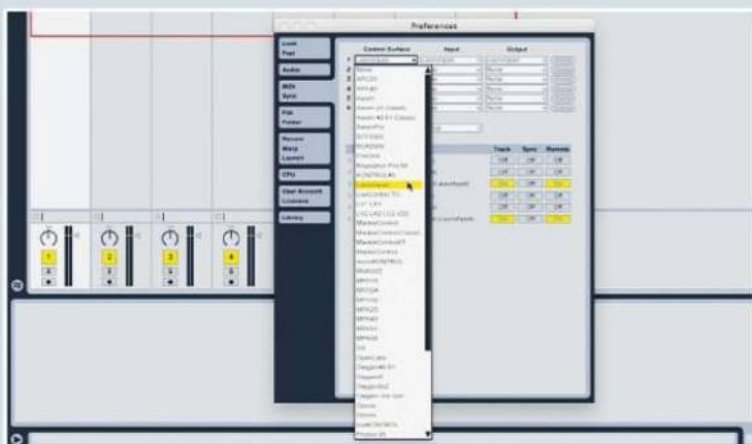
Assigning Live faders to hardware controllers is as easy as pie



1 This'll work with any MIDI controller that's got enough knobs or faders. Connect it to your computer (and switch it on if necessary). Launch Live, and go into Preferences/MIDI Sync. Choose your controller as a MIDI Remote Input/Output. Enable Pickup mode. Close Preferences.



2 Enter MIDI Map Mode (cmd-M). Click track one's fader, then move a fader on your controller – numbers will appear on the fader letting you know what CC it's been assigned to. Exit MIDI Map Mode (cmd-M). Move your faders and their on-screen partners will move too.



3 If you're using one of those fancy Ableton-branded controllers, like the Akai APC40 / 20, or Novation Launchpad, then forget what you just read. Plug it into your computer, launch Live, open Preferences/MIDI Sync, and select it there, for mapping-free control of Live.



An Ableton Live set containing eight tracks, with some loops and return effects. Live 8 is required – you can download the demo from ableton.com, and run it alongside your current version of Live without any problems.

Clipping Clips

When you're playing an audio clip, or a MIDI part through a software instrument, the mixer channel for that track shows the peak and average (RMS) output levels. Drag up the thin horizontal line above the Session View mixer for a more precise view. If the track is armed to monitor or record, it'll show the level of the incoming signal instead (when there is one).

Don't let your inputs or outputs get too hot! In any track, including the Master, you should avoid signals that go into the red area at the top of the meter. Somewhere in your signal chain, you'll be introducing distortion, and digital distortion is not cool. Reduce the volume levels of the clip, instrument or live input to manage this. There are plenty of distortion plug-ins you can use if you want to create an edgy sound, without obliterating your mix. If you're having trouble with a track not being loud enough, bring everything else down, or use compression/EQ/limiting/etc, to help it sit better in the mix, instead of boosting the 'quiet' track.

Bringing the mixer up to +6dB and distorting everything isn't the answer, and will make it almost impossible to master your finished mix properly.

Live aid

In the distant past, pompous audio snobs used to bash Live for the quality of its sound, compared to the more established DAWs like Logic and Cubase, while those of us using Live at that point were too busy having fun to even care. Live's audio engine has been rewritten since then, and the warping has been improved, to the point where Live can sound just as good as any other DAW. So don't undo that by blowing up your track levels! Final tip – you can save yourself a lot of picky mixer moves by using the clip Gain control to 'premix' your samples.

Level Watch

Extend Live's mixer view to keep a better eye on clipping



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Latest Release

TRIBAL PERCUSSION 5PIN MEDIA

The MIDI-mad rhythm addicts at 5Pin have been soaking up the African festivities involving a football and some controversial unmusical plastic horns. Mercifully none feature in Tribal Percussion by 5Pin Media – only crunching tribal rhythms from blistering sessions involving Djembe, Conga, Bongo, Cajon, Mandal, Pot drum and various other drums combined with exotic shakers and world percussion to provide the topping.

The Midi and Audio Loops ooze with natural unquantised grooves as captured in our live percussion sessions, recorded in 24bit quality.



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Wally Lopez



BHK
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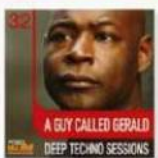
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Reviews

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



Highlights this issue...



Vermona Kick Lancet

88 Juicy analogue kicks from Vermona in a teeny tiny desktop box.



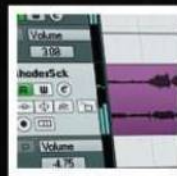
Yamaha CP1

90 Yamaha's classic Electric Piano gets a digital overhaul for the modern musician. Is it worth the price tag?



Novation Dicer

94 Novation's tiny DJ companions aim to loop and cue with ease.



Steinberg Nuendo 5

100 Steinberg's all-encompassing pro-end DAW and video editor turns five.



Telefunken AR-51

106 The legendary mic maestros do it again, this time at an affordable price.

Pioneer DJM-2000 | £2,000

Chris Barker puts on his DJ uniform and takes control of the mixing mothership designed to complement the incredible CDJ-2000 decks...

WHAT IS IT?

Pioneers's flagship DJ mixer with built-in LAN, USB soundcard, effects, MIDI out and more

CONTACT

Who: Pioneer UK
Tel: +44 (0)970 600 1539
Web: pioneerdj.com

HIGHLIGHTS

- 1 Amazing 5.8-inch multi-mode touchscreen
- 2 Live sampling with CDJ-2000
- 3 Huge choice of effects and combinations

Taking this mighty mixer out of the box is quite incredible. It's a heavy, wide and very robust feeling unit with a

5.8-inch dual-touch touchscreen interface and central effects section dominating the majority of the space. It's designed to sit flush alongside the CDJ-2000s, and Pioneer has mirrored the same slanted-front design. When you're in front of four CDJ-2000s and this mixer, it not only looks awesome,

but the amount of flexibility in how you choose to DJ is immense with this particular setup. Although the mixer can work splendidly with any other CDJs, its integration with the 2000 series is incredible. Around the back there are six LAN ports, with four ports to connect CDJ-2000s using the LINK technology and two for connecting two separate laptops running Rekordbox. This means that laptops can be connected via a single LAN cable and,

when using the CDJ-2000s, can act as a means of searching and browsing your music, while all the actual DJing is done on the Pioneer hardware by dragging songs directly onto the Live icons of the CDJs or even directly on to the mixer. When songs are dragged onto the DJM-2000 mixer icon, they are previewed – you can use the Link Cue function to preview tracks without having to load them to a deck.

This makes browsing your laptop-stored music even faster. Of course, as mentioned before, this is only one way to DJ using this mixer. Inside the DJM-2000 there's also a 24-bit, 96kHz, eight-channel soundcard, so it's easy to hook up a laptop and use the DJM-2000 as a multi-output soundcard and mixer without any extra external boxes or audio interfaces required.

EQs and FX

The EQ is again based on the subtle Pioneer sound, with the option of switching the EQ from either a +6dB to -26dB range to an isolator setting, which will completely kill the high, mid or low frequencies when turned fully to the left. The central Effects section is based on the EFX-1000 outboard effects units from Pioneer and includes





a few extras such as Reverb, Slip Roll, Gate and Multi-Tap Delay. There's also a three-band frequency isolator-style EQ, which allows you to fine-tune the effects to the frequencies you want and even add feedback loops and added resonance by pushing the three-frequency bands to the max. The Slip Roll is a particular highlight of these effects, enabling DJs to cut a section of the track and loop it at fractions, just like a standard roll effect. But, with Slip Roll, you can re-trigger the fractions from new points while the track continues underneath. This makes for a much more natural beat-chop effect when in the mix. Each of these central effects can be applied to individual channels, A or B sides of the crossfader or the master channel.

This isn't where the effects end, though, as Pioneer have also included six INST FX, which can be applied to each channel and controlled using the Filter Control rotaries located above each volume fader. The usual effects suspects are here including HPF, LPF, Crush, Zip and Jet, but the coolest effect is the inclusion of a noise oscillator, which can be swept onto any channel using the same channel-specific Filter rotary. This makes

Can Touch This

With touch technology in their SVM-100 AV mixer, it's no surprise that Pioneer have embraced the popular world of the touchscreen in their DJ line. The DJM-2000's whopping 5.8-inch colour touchscreen is an amazing feature for a mixer to have, nonetheless. Designed as the solution to a multitude of duties, it includes a Frequency Mixer, MIDI controller and Sidechain Remix mode. The screen is duo-touch, which means only two actions can be performed at the same time, but on a screen this size it never becomes an issue. The first obvious test was to wet our fingers

and test the touchscreen for issues in a recreated drunk/sweaty/clumsy club environment. We're pleased to say that it passed with flying colours and seemed just as responsive with to damp daubs as it did to our dry ones. Testing out the innovative Frequency Mixer was also a success. This multiband crossfader is split into seven different frequency bands

and allows you to crossfade them between whichever two channels you like. In use, it allows you to blend frequencies between tracks more subtly than ever before – way surpassing what is possible using channel EQ tricks alone. It will certainly be hugely popular with the Techno, Minimal and Progressive crowds for incredibly smooth mixing.



external devices dependent on the bpm calculator readouts. All controls of the unit are also MIDI-mappable. As yet, the unit has no Traktor TSI template available, but Pioneer expect templates

zones can have separate MIDI channels, so that the touchscreen could be used to trigger clips in Ableton while the rest of the unit is set to take command of Traktor.

SPECS

4-Channel 24-bit USB Soundcard
Large Multi-Touch Colour Screen
Full USB MIDI/HID Control
11 Enhanced Isolator Beat Effects
Six INST FX On Every Channel
Sidechain Remix Effects
7-Band Frequency Mix Crossfader
Send & Return
3-Band Isolator EQ
'ProDJ Link' LAN Hub
Built-In
4 'ProDJ Link' CDJ Connections
2 'ProDJ Link' Rekordbox Laptop connections
'ProDJ Link' Live Sampler, 'ProDJ Link' Live 'On Air' Status

Inputs

6x CD/LINE Input (RCA), 2x Phono RCA Input, 6x ProDJ Link (LAN), 1x Mic Input (XLR/Jack Combo)

Outputs

1 x Master Output (XLR), 1x Master Output (RCA), 1x Booth Output (1/4-inch jack), 1x Rec Out (RCA), 1x Digital Out (S/PDIF), 1 x Send (1/4-inch Jack), 1x USB-B

Dimensions

430 x 409 x 108mm

Weight

8.5kg

Using start/stop and MIDI on/off, you can choose when to send MIDI from the mixer and when not to

Set the sample

The colour touchscreen is the obvious main attraction on this mixer [see the *Can Touch This* and

creating your own build-ups and drops very simple, and added fun can be had by applying the main effects over the top of the noise such as adding a Phaser or Transform effect. This feature alone will make this mixer a firm favourite with club DJs. The inclusion of MIDI with this mixer is very thorough, with a dedicated MIDI Out port that can send MIDI clock to

to be forthcoming. Using Ableton, Traktor or any other MIDI software alongside the normal functions of two CDJs and a mixer is also easy. Using start/stop and MIDI on/off control buttons, you can choose when to send MIDI information from the mixer and when not to. The unit is also separated into two MIDI zones: the touchscreen and the rest of the unit. Both these

'Ere Come Da Remix boxes] but hiding in a small button to the top left of the screen is a Live Sampler mode. For on-the-fly creative performance this is an unbelievable tool, although you do need to have a LAN-connected CDJ-2000 for it to work. Hitting the button brings up a GUI on the interface where you can record up to eight seconds of either the microphone input

or the master channel output. Once sampled, hit the Link button on the CDJ-2000 deck and you can select the DJM-2000 and playback, scratch and manipulate the sample you've

the way, the circular ring of light around the jog wheels of the CDJ-2000s will actually glow red when they are 'on air' (the mixer faders turned up), helping to stop accidents

as you decide on the best way the mixer works for you, it's much easier to focus on the details and colouration of your mix rather than getting bogged down in features and effects, which is

very easy to do.

Pioneer have stuck with familiar controls and stylings, which lowers the immediate learning curve, and added features such as

ALTERNATIVES



Denon DN-X1700

£1,800

Also packed with a top-notch soundcard, USB, and MIDI mapping, this four-channel mixer adds two separate effectors with 12 selectable effects each. Lacks the touchscreen of the Pioneer, but comes in at a slightly lower price.

denondj.com



Rane Sixty Eight

£2,200

Two USB ports and a host of controls allow two DJs to work together on laptops, or simply makes doing changeovers much simpler. The high price will put many off, but its unique feature-set will be useful to many DJ duos.

rane.com

You can't ignore the massive price tag here, but this is one of the most cutting-edge mixers on the market

recorded. The possibilities for working alongside MCs and with instrument players are obvious when using this feature. Being able to loop, effect, and scratch sounds you've only just sampled is sure to be a crowd-pleaser and another creative weapon for the DJ. Plus, because the DJM-2000 has the ability to 'talk' to the CDJ-2000s in

from happening when four CDJ rigs are in use.

Pioneering mixer

Pioneer have really gone all the way with this mixer, serving up a solution for every possible scenario and making the regular two-CDJ-and-a-mixer setup more creative than ever before. As soon

Remix Mode, Frequency Mix and touchscreen MIDI templates are simple to get to grips with. You can't ignore the massive price tag here, but this is one of the most cutting-edge mixers on the market and could form the basis of everything from a creative DJ act to a full-flight Electronic music show. When combined with four CDJ-2000s, it's easily the most creative, stable and well-thought-out DJ rig available. **FM**

'Ere Come Da Remix

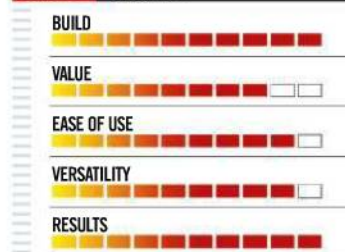
Another feature on the touchscreen is the equally original Remix Mode, which serves up an X/Y pad that can control one of four different oscillators, a Roll Style sampling mode, Pitch effect and Gate effect.

The oscillators are all noise-based drum sounds with hi-hat sound on oscillators one, two and three, and a more

808-style snare on oscillator four. Using this mode, you quickly realise that its success is dependent on the track triggering the oscillators.

The oscillators are envelope-triggered rather than triggered by the master bpm, and you can mute high, mid and low frequencies to tighten the amount of transients triggering the oscillator.

While there's a fair amount of tweakability, it can sound a tad clumsy if you're not careful, but the bonus is that any tempo changes or movement in the trigger track instantly feeds back to the oscillator. Feeding these noises to a separate channel and adding a mixture of the INST FX and main effects is where the fun really begins.

FutureMusic **VERDICT**

The most comprehensive mixer available, but best when used in the full setup. Time to re-mortgage.





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- Music Tech



Yamaha

CP1 | £4,501

Dan 'JD73' Goldman gets playing with the newest Yamaha CP Stage Pianos flagship – the CP1



WHAT IS IT?

Yamaha's new flagship stage piano, using spectral component modelling (modelling plus sampling) to produce its piano sounds and amp modelling

CONTACT

Who: Yamaha
Tel: +44 (0)844 811 1116
Web: uk.yamaha.com

HIGHLIGHTS

- 1 No detectable velocity switching and easy to use
- 2 Authentic and electric piano sounds
- 3 Good effects, plus powerful preamp models and master EQ

Yamaha have, it's fair to say, always been at the forefront of stage piano technology. The first pianos to wear the

CP badge were the now-classic CP70/80 electric grands, adopted by many big-name artists over the years.

As with the recently-launched Roland V Piano, the Yamaha CP1 uses modelling technology (combined with sampling) to capture the nuances of a real piano. However, while VA synths get close to the magic of real analogue, modelling technology is still in its infancy compared to purely sample-based pianos.

At nearly five feet in length, well over a foot deep and weighing in at a notch under 60lbs, this is not something suitable for gigging with unless you have plenty of helpers and an estate car or hatchback with its rear seats down. On tour with roadies or in studio residence? No problem, of course – though when you also consider that it

needs a flight case, the prospect of moving it becomes even scarier.

Looks-wise, the CP1 is utilitarian yet classy. It has a textured metal case with black/brown wooden end panels, a brushed aluminium panel housing the switches and a faux-leatherette top

suitable for standing a laptop or small second keyboard on. There's a good-sized vacuum fluorescent display with six push-rotaries for direct access to the most important parameters. Sound selection is via the Preset/User/External buttons in combination with 16 Patch-Selection switches. All switches have LEDs that flash depending on if they are in Edit mode, or to signify if a particular selector switch is on or off.

The keys, the secret

The 88-note keybed is an all-new design. It's very playable, nicely weighted and not too heavy, though perhaps a little more sluggish responding to faster runs than I would have liked. But, in general, it's very good indeed.

The signal path is logically laid out in blocks on the front panel. First up is the Piano button block, where any of the 17 piano/electric piano modes can

Sound Shaping

With regard to customising the CP1's sounds, there's plenty of control for all piano types, ranging from hammer hardness, hammer strike position to note decay.

Using these functions really helps you to connect to the CP1 – much as if you were tweaking the pianos themselves – making it feel much more like a real instrument than some

entirely sample-based pianos. The preamp and Power Amp models are also some of the best I've heard and greatly enhance the raw sounds plus they can be interchanged with different pianos, while the five-band EQ is very powerful, too. The modulation effects add a bit of extra mojo to the sounds, giving welcome movement and life, but the reverbs, though

decent enough, aren't particularly amazing.

Though there's very little to criticise in terms of tweakability or playability, it would still have been great to have more adjustment for the Rhodes sounds and the ability to choose different strings for the acoustics. It's a real shame there's no pedal on/off resonance, especially given that it's a flagship instrument.





be selected. There are several acoustic pianos, plus Rhodes and Wurlitzer piano emulations and DX7 emulations. These can then be fed through modelled preamp stages based on preamps and speakers found in Rhodes and Wurlitzer pianos.

Following this is a Modulation block, where sounds can be processed through chorus, phaser, wah, flange and

customisation of every sound. Nothing to complain about here!

Mixed bag

The CP1 is two-part multitimbral and up to two sounds (such as Rhodes and Piano) can be layered with little menu diving – ease of use is something that shines through on the CP1. Any major function can also be user-assigned to

isolation, but they can lack a certain sparkle and movement. These criticisms aside, my favourite sounds include the CF grand and the CP80 – as well as the 75 Rhodes model with stereo panning turned on.

Overall, the CP1 is a mixed bag. On one hand, on a playing and tweaking level, you feel a real connection with it. On the other, I can't help feeling that

although it does sound good, it lacks a certain magic that you'd naturally expect from a piano at this price point. The overall sound and the technology

used are certainly impressive, but I was hoping for more 'wow' factor. **FM**

In terms of sound, the CP1 is pretty impressive, and it's hard to detect any velocity sample switching

symphonic effects. These effects are musical and warm, really helping to bring the sounds to life. The Power Amp section is again modelled on Rhodes and Wurlitzer designs, but also includes a vintage compressor for extra punch and level control. It's powerful and authentic-sounding, adding real guts and finesse to the dry sounds. Next is the Reverb block, containing eight reverbs which include stage, room and hall emulations though, surprisingly, there's no delay.

Finally, there's a very powerful Master EQ section with selectable peak and shelf and adjustable 'Q' parameters for each band, enabling detailed

any of the dials and set to appear on the screen in the main performance mode, enabling you to have all your favourite parameters to hand at all times.

In terms of sound, the CP1 is pretty impressive; it's hard to detect any velocity sample switching, so the response is smooth throughout the playing range and frequency spectrum. However, it's not without fault and some of the sounds can be a little lifeless and boxy. The S6 model sounds a little too nasal for my liking, though EQing does help. You also end up relying on the effects and EQs rather than using the dry sounds on their own. Not to say that the piano/electric pianos aren't good in

FutureMusic VERDICT

BUILD	■■■■■■■■■■■
VALUE	■■■■■■■■■■■
EASE OF USE	■■■■■■■■■■■
VERSATILITY	■■■■■■■■■■■
RESULTS	■■■■■■■■■■■

The technology combination impresses but, considering the price, it could have more features.

SPECS

Voice Section: Two-part multitimbral
Maximum Polyphony: 128 note
Tone Generator: SCM (Spectral Component Modelling)
Performances
Preset: 16 x 3 banks, use 16 x 3 banks
External: 16 x 3 banks (USB Flash Memory)
Piano Block: 17 types
Modulation Effect Block: 10 types
Power: Amplifier / Compressor Block-8 types
Reverb: Eight types
Master Equaliser: 5-band

Control Interface
Keyboard: 88 keys
Display: 55 character x 2 lines, vacuum fluorescent display (VFD)
Controllers: Pitch bend wheel, Master volume
Connectivity: Line Out, L/Mono, R (Unbalanced), L, R (Balanced), headphone jack, Foot Switch, Sustain, Sostenuto, Soft, Assignable, Foot Controller x2
MIDI: In, Out, Thru, USB
Dimensions: 1,385 x 420 x 173mm
Weight: 27.2 kg

ALTERNATIVES



Roland V Piano Evolution
£5,312

Roland's flagship stage piano and the CP1's closest competitor. More expensive, but with even more sound-shaping options onboard. Also uses modelling.

roland.co.uk



Nord Piano
£1,600

The newest Nord on the block uses samples at its core and is cheaper and much lighter, plus more gig-able than either the CP1 or V-Piano.

clavia.se



Korg SV-1 88
£1,599

Korg's latest sample-based stage piano with pianos, Rhodes, clavs, organs and strings/synth sounds onboard.

korg.co.uk



Adam A3X Monitors | £398

The A3X is the latest addition to Adam's range of studio monitors, promising big performance for a very small outlay. **Dan 'JD73' Goldman** tunes in

WHAT IS IT?

Adam's most compact nearfield monitor to date, with updated X-ART tweeter, designed with smaller studios, second reference and post-production in mind

CONTACT

Who: Adam Audio UK
Tel: +44 (0)199 252 5670
Web: adam-audio.com

HIGHLIGHTS

- 1 Very compact and well built
- 2 Larger-than-life sound with excellent stereo imaging
- 3 Plenty of power and bass extension

SPECS

Speakers:
Tweeter Type: X-ART
Mid-Woofer: 4-inch Carbon Fiber
Amplifiers:
2x Type A/B (one for tweeter, one for woofer)
Amp Power (RMS / Music):
25W / 40W
Controls:
Input Sensitivity: ∞ to +14dB
Tweeter gain: ±4dB
General:
Input connectors:
Analogue XLR (balanced)
RCA (unbalanced)
Frequency response:
60Hz – 50kHz
THD: 90dB/1m > 100Hz ≤ 0.8 %
Max. peak: ≥106dB
Crossover frequency:
2.8kHz
Input impedance: 10kΩ
Magnetically shielded: No
Dimensions:
252 x 150 x 185mm
Weight:
4.6kg

Adam speakers have garnered a great reputation among studio bods over the past few years and, never ones to rest on their laurels, the company are continually seeking to improve their designs wherever possible. The A3X is no exception.

Straight out of the box, the compact design is a thing of utilitarian beauty. Built from MDF with a high-quality tapered plastic covering, these speakers look great and feel like they are cut from the same cloth as their more expensive Adam brothers.

Still, the most striking thing about Adam speaker designs is the X-ART (eXtended Accelerating Ribbon Technology) tweeter. Working much like the bellows of an accordion, the gold folded-ribbon tweeter is lauded for its fast transient response and wide dispersion, something that's most definitely corroborated by the A3X's

excellent top-end performance and transient detailing. The new 'X' version of the tweeter has a higher frequency response than the old ART tweeter (now up to 50kHz) and also produces higher SPL levels, too.

Grand design

The A3X's active design utilises two 25-Watt RMS class A/B amplifiers (one for the mid driver and one for the tweeter) and there's plenty of power — the A3X is surprisingly loud for its size, but the overall character remains consistent when pushed. Even at low volumes, it's easy to hear right into the music and transient details are accurately conveyed.

Overall, the character is warm, clear and punchy, and there's a good amount of mid-range detail. In particular, the upper-mids and highs come across well, making it a joy to use for work on vocals, guitars and

keyboards (that generally occupy this frequency area). The tweeter is bright and airy (there is a Tweeter Level dial round the back for increasing and decreasing the top-end if required) yet produces a well-rounded sound.

The mid/low-range carbon fibre cone does a great job of pushing air yet doesn't sound flappy (something that can be a problem with front-ported designs such as this). Low-end detail is a strong point of the A3X and, for a speaker that rolls off at 60Hz, the bass extension is deep and controlled. It feels like it goes a lot lower than it says on paper, but do be wary of it if you're making club music that needs clear low-end detail.

Control/connection-wise, the power switches are front-mounted for convenience, plus the volume controls (+/-14dB) can be linked so that either speaker's Volume control can turn down both speakers' volumes together — very handy for speeding up the production process. Input-wise, there are both phono (unbalanced) and XLR (balanced inputs).

Hard to fault

In action, there is little to fault with these speakers. They are musical, convey transients well, have plenty of top-end and low-end punch and the mids/lows are quite upfront, allowing you to really hear into reverb tails and basses alike. The A3X becomes even more appealing at the almost insanely low price of £398 for a pair!

At this price, the A3X is a real bargain, but do bear in mind it's not magnetically shielded, so you may experience interference problems. It is suitable for many mix applications including surround (though for serious low-end mixing you would need a sub) and are a great set of second reference monitors. All in all, Adam have produced a fantastic speaker that I can really see flying off the shelves. **FM**

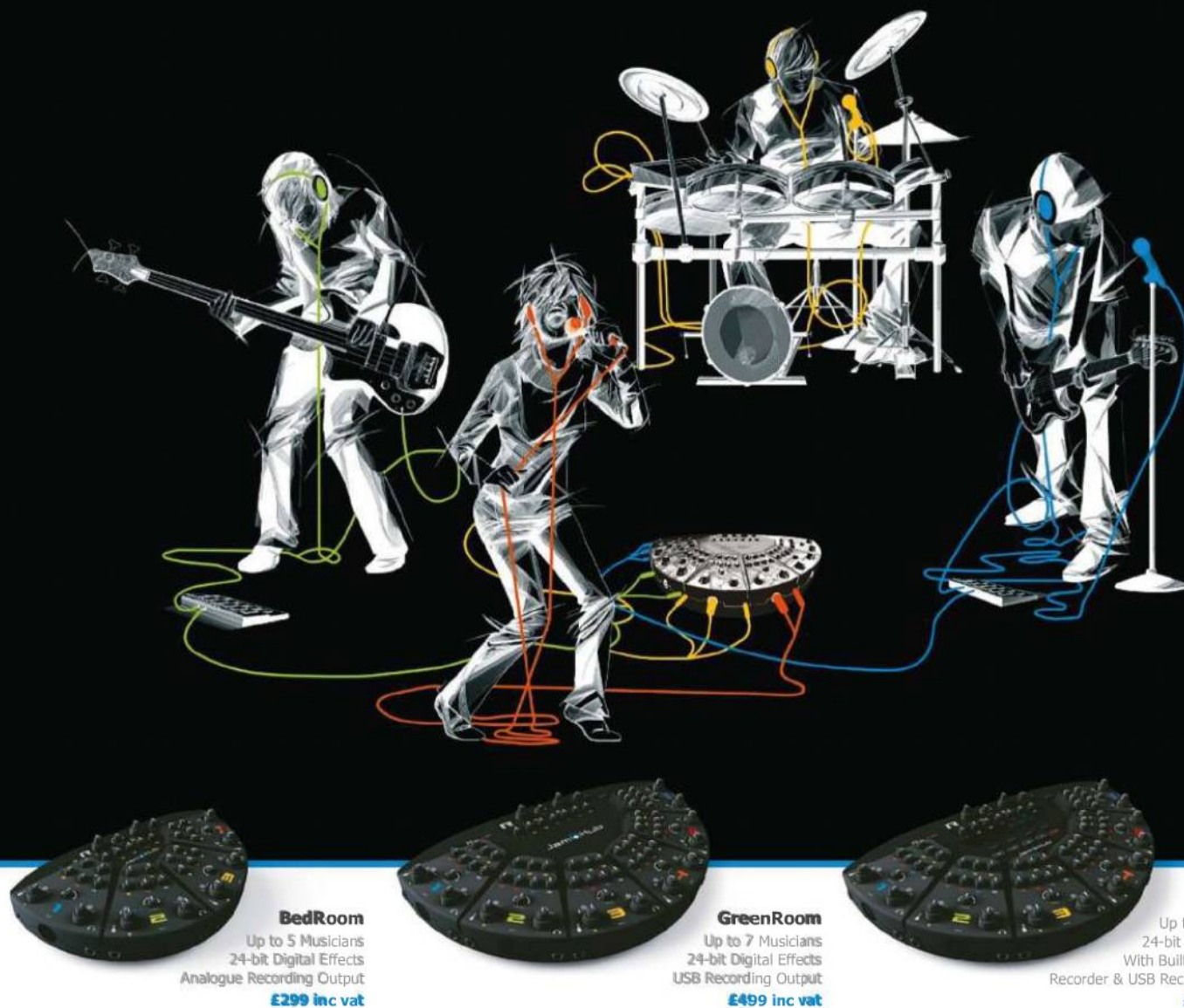


FutureMusic VERDICT	
BUILD	■■■■■■■■■■
VALUE	■■■■■■■■■■
EASE OF USE	■■■■■■■■■■
VERSATILITY	■■■■■■■■■■
RESULTS	■■■■■■■■■■

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Novation Dicer | £79

What's rubbery, sits on the corner of a deck and promises to change your DJing game? **Marc '01'** investigates the Dicer phenomenon

WHAT IS IT?

DJ MIDI controller primarily for SSL and other DJ software

CONTACT

Who: Novation
Tel: +44 1494 462246
Web: uk.novationmusic.com

HIGHLIGHTS

- 1 Sits in the right place
- 2 Highly responsive
- 3 Intelligent lighting

Now that most manufacturers have done the generic MIDI controller to death, we're seeing the next wave of controllers, designed for specific jobs or even specific software functions. In my humble opinion, this is definitely a good thing, as I'd rather have something doing one job well than something else doing a lot of things, but only doing them okay.

Novation's Dicer is one of the next wave, and this compact controller is targeted at DJs — specifically Serato Scratch Live users who want to get some extra hands-on performance from the Looping features.

Just like decks, Dicers come in pairs, and it can be securely mounted on the corner of a Technics 1200. On the underside is a circular mounting block (this can be detached by unscrewing it) that enables it to slot into the 45 RPM adaptor recess of the deck, so it won't wobble when prodded or knocked. Funnily enough, this is one of its major selling points — if you've ever tried to find space for a MIDI controller in a DJ booth, you know just how difficult it can be, so having a controller that sits in exactly the right place is a liberation. If you need to attach them to CDJs, or prefer to

position them on a different part of a deck, simply detach the mounting circle and use the DJ putty provided to stick them in place.

Two heads

So, we're off to a good start — but thankfully there's more. Dicer is USB-powered and uses the smaller USB Micro 1.1 standard connectors. The pair of units are identical, so either can be connected to the computer. To save using two USB ports to connect the pair, you can daisychain the units together using the provided mini jack cable. To clarify, although this is an audio lead, it's only used for MIDI.

Setup time is short and sweet. Just mount the Dicers to the decks, plug them in and you should be good to go. They are class-compliant, so there is no driver installation and, since, they

are pre-mapped to Serato's Looping and Cueing functions, it's game on as soon as you see them light up.

The layout features five big round rubber buttons and three smaller ones. The big ones are numbered like dice and are the main ones used for performance; the smaller ones are used to select the various modes. All of the buttons take advantage of intelligent backlighting and use three colours to distinguish themselves from one other.

Join the cue

The first thing to do is to select one of the modes to play with. Let's start with Hot Cue mode — this makes the unit light up red and enables you to store up to five cue points using the big buttons. To store a cue point, simply tap the button, at which point it will light up to indicate it's saved it. You can delete a cue point by holding down the little Cue Mode button and pressing the active Cue button, at which point the light should dim and it will be ready for re-arming.

The second mode is blacklit in green and controls the Loop Roll feature. This is great for adding cool fills and stutters without interrupting the flow. This time, pressing and holding any of the buttons momentarily loops the track. The five buttons correspond to different increments,



They are mega-responsive to touch, and the triggering is lightning-fast. Another nice feature is that when holding

amber yellow. It differs from Loop Roll in two significant ways. Firstly, the five loop lengths are longer, ranging from one beat, two beats, through to four, eight and 16 beats. Secondly, the Loop function is activated by toggling the button on or off.

After a few hours of playtime, it's easy to get addicted to using the Dicers, simply because they make it so easy to explore the different possibilities which can be performed with the buttons.

down one Loop Roll button, you can tap another to create polyrhythms without the Dicer getting confused and glitching.

In the lead-up to its release, Novation were heavily hyping Dicer as a 'game changer'; now that it's uncovered, some may wonder what the difference is between using this and any other generic MIDI controller to operate Loop functions. In my opinion, it's the combination of ergonomics and intelligent lighting that justifies the hype. If you're sick of taping controllers to the side of your decks, only to knock them off halfway through a show, this is for you. My only reservation is that it's a bit expensive compared to other controllers; there's nothing similar right now, but that could easily change. If you've been reluctant to dive into SSL's Looping/Cueing features because they don't feel right, this may well change your mind. **FM**

but this won't be a problem with software such as Traktor, which allows you to specify the action within the software. Hopefully Novation will be releasing setup files for popular DJ tools in the future that take advantage of the lighting system in the same way as it does with Serato.

72g

More functionality, but won't fit onto the side of a turntable. Built from robust metal, this controller is designed for Itch with Loop, Roll and Cue points for both decks in one unit. Also features Track Select and Fast Search buttons and File, Browse, History and Prepare keys.

Dual-deck control for Traktor-centric DJs. Lots of knobs and intelligent lighting to keep you informed, but difficult to find room to strap onto a Technics 1200.



Like the Dicer, it's small, lightweight and covered in pads to tap. The eight pads are velocity-sensitive and there are four banks, so you can program up to 32 different functions.

akaipro.com

A clever little solution for DJs that puts the control buttons in just the right place.

Vermona Mono Lancet | €449

Marc '01' clears some desk space and plugs in the latest little analogue synth box from Vermona



WHAT IS IT?

Tabletop analogue monophonic synth

CONTACT

Who: Vermona
Tel: +49 (0)374 222 530
Web: vermona.com

HIGHLIGHTS

- 1 Pure analogue sound
- 2 Retro styling
- 3 Mysterious expansion port

This is one of two new tabletop synth boxes out this month from analogue purists

Vermona. Mono Lancet is a

two-oscillator mono synth with basic architecture, adding one filter, one ADSR envelope and one LFO to the equation. The unit sits on the desktop and is about the size of a typical paperback book. It has a bit of a retro look to it, with its cream star-shaped knobs and two-tone brown metal chassis. It tilts forward slightly, making the three rows of knobs easy to read and all the more tweakable.

The unit is primarily triggered via MIDI and supplies both MIDI In and Thru ports on the rear. Also round the back is the audio out on a quarter-inch jack and a mysterious 25-pin D-Sub socket labelled 'extension'. Over on the left is where you plug in the 12V power

supply, and next to that is a promising little button labelled 'Overkill'. When I first spotted the Overkill switch, I was eagerly anticipating some kind of nice overdrive stage or peak limiter to further warm the signal.

Alas, reading the manual reveals that it's nothing so exciting; in fact, it's actually just the equivalent of a power on/off or standby switch, though Vermona are keen to point out in the manual that it is 'no power switch'. Something must have got lost in translation, but always remember to unplug synths when they're not in use.

Lancet layout

The top row of controls is used for VCO 1 and 2 and its various modulation options. Each oscillator has a three-position switch to choose from Pulse and Saw waves, plus one extra

option – either a triangle for Osc 1 or noise for Osc 2. Both have three-position octave switches with Osc 2 sitting one octave higher. It also offers independent de-tuning by up to seven semi-tones in either direction.

The pitch of both oscillators is modulated together, and sources include the LFO and the envelope – which provides positive and negative modulation. The Glide knob adjusts the speed, and when the knob's at zero, glide is off. There is a second Glide Legato mode available (this only slides the overlapped notes) and this can be switched on or off via MIDI CC 89. This is achieved by sending the designated MIDI CC number below 64 for off and above 64 for on. In fact, Vermona have previously used this method of transmitting MIDI CC messages to switch various functions on and off when there is no switch on the front panel.

Hello oscillator

Mono Lancet's mix control blends the two oscillators – it's worth pointing out that the volume stays even around the centre position then gently slopes off in each direction, leaving one or the other at max loudness. Since the oscillators are always being fed into the filter at a constant volume, there's no way to overdrive the filter on the way in.

Another limitation from not having a dedicated oscillator volume control is that, even when the filter resonance is set to self-oscillate, you can always hear the background tone.





The next row of knobs is for the VCF and the VCA. The three-position switch selects between the EG, a gate or always on. You can also use the Trig button or the mysterious SEQ button. Not a lot is explained in the manual how to use what you would imagine is a sequencer – other than that, if you press it, it plays a seemingly random repeated sequence. So apparently, this isn't so much a programmable feature as a little utility to check for sound when there's no keyboard handy.

The final bits of the puzzle, namely the LFO with S&H and ADSR, are located at the bottom, along with master tuning. The LFO features Square, Triangle and S&H shapes, and speeds range from the super-low 0.05Hz up to 250Hz for some cool buzzing, FM-style tones.

My Vermona

Tuning stability is one of the banes of analogue synth use. As far as consistency goes, the Lancet wasn't too bad; it remained fairly stable and didn't

MIDI and More

With a limited amount of knobs on the box to play with, it's not always obvious how this will affect its potential for sound design.

The Mono Lancet has a number of extra features that are only accessible via MIDI. This includes several option modes such as legato glides and velocity to amp or velocity and after-touch to filter cut-off. You might notice that there are no controls

for PWM directly on the machine which, in my opinion, is certainly a serious omission, but you can actually adjust the pulse width via MIDI.

You can turn this feature on and off using MIDI CC 85, then spinning or programming the Mod Wheel gets you modulating.

This is the only assignment available for the Mod Wheel, so you might as well leave it on

– it's too useful to just be overlooked.

I am divided in opinion as to whether or not it's a good thing that some of these options are MIDI-only, as I like the ability to in filter curve automation, but I'm sure that analogue purists (and this is definitely the market in which Vermona excel) will not be so happy that they need to plug in a computer just to change the glide mode or PWM.

look on the bright side, space and cost aside, you can store a number of different setups as MIDI files, and in this way everything can also be automated via a sequencer.

Bleep-wise, this synth is as capable as any other tabletop analogue box, of which there are plenty. Don't expect

converter and also audio inputs, but they haven't announced whether they will sell a pre-configured cable or if you will have to make your own. This may change in the upcoming months, when Vermona unveil their master plan for the Mono Lancet, but until then it kind of sits in the ether in terms of value.

If these features do come to pass, then its value suddenly shoots up. For the moment, though, it doesn't do enough to stand out in the crowded

desktop synth market. **FM**

You can count on a nice creamy tone, buzzing acid lines, squeaks and gurgling sound effects

fluctuate out of tune too much from ambient temperature. On the other hand, the octave scaling on the test unit was a bit out as I jumped from octave to octave. This is true of the three-position switch, which gets flatter by 12 cents per octave and also when played using a keyboard. Maybe that's what some analogue enthusiasts love but, personally, I'd prefer it to be more accurate and that this was checked and calibrated at the factory.

Some users will no doubt moan about the lack of switches for engaging the options – which would obviously be the most convenient solution. But to

anything particularly new, but you can count on a nice creamy tone, buzzing acid lines, squeaks and plenty of gurgling sound effects.

Cable ties

The lack of information regarding the 25-pin D-Sub expansion port makes it difficult to ascertain how much it will add to the synth's feature-set and ultimate value for money, and if it will integrate nicely with a modular setup. Vermona have hinted that this will add CV/Gate style modular inputs and outputs for controlling things such as PWM and the filter, a MIDI-to-CV

SPECS

VC01

Waveform: Square, Sawtooth, Triangle
Octave: 8', 16', 32'

VC02

Waveform: Square, Sawtooth, White Noise
Octave: 4', 8', 16'

VCF

24dB/octave low-pass filter,
Keytrack: Off, 50%, 100%

LFO

Waveform: Square, Triangle, Sample & Hold
Frequency range: 0.05Hz – 250Hz

MIDI Interface

note on/off

Pitch Bender on/off (CC 84): affects VCO pitch

Modulation Wheel on/off (CC 85): affects pulse width of the VCOs

Aftertouch on/off (CC 86): affects cutoff frequency

Velocity on/off (CC 87): affects VCA

Glide-Switch on/off (CC 89): glide only works when playing legato

Legato on/off (CC 90): envelope will not be retrigged when playing legato

Dimensions

210 x 145 x 55mm

Weight:

750g

ALTERNATIVES



Doepfer Dark Energy

£395

This classy analogue synth is at home on the desktop. You can also connect it up via MIDI or USB.

doepfer.de



Technosaurus Microcon

£495

A touch smaller than Mono Lancet, but offers close competition on sound.

technosaurus.ch



MFB Nanozwerg

£200

It's compact, portable and analogue. It's got similar specs but goes one better with a multi-mode filter.

mfbertlin.de

FutureMusic VERDICT

BUILD



VALUE



EASE OF USE



VERSATILITY



RESULTS



A credible mono synth that's great-sounding and easy to use, but faces competition from similar boxes.

Apogee One Audio Interface | £161

Looking for a high-quality but modestly-appointed audio interface? **Jono Buchanan** discovers whether Apogee's latest is the One you've been waiting for...

WHAT IS IT?

A simple-to-use, high-quality single channel interface from Apogee catering to Mac-based users with simple input requirements

CONTACT

Who: Sonic Distribution
Tel: +44 (0)845 5002500
Web: apogeedigital.com

HIGHLIGHTS

- 1 Easy as pie to use
- 2 High quality I/O
- 3 As portable as a mobile phone

SPECS

System Requirements

Mac: OS X 10.5.7, Intel or PowerPC G5 processor, 1GB RAM, spare USB port

Dimensions:

57 x 120 x 25mm

Weight:

0.45kg

Apogee's collaborations with Apple are yielding some tasty fruit. Fresh from last month's rendezvous with the GiO interface, this month I find myself in the company of One, Apogee's latest (and simplest) audio interface to date. Featuring a single channel of high-quality audio I/O and with a similarly minimalist design feel, this could be the interface for audio-ists who need to balance only basic recording requirements with high-fidelity results.

Portability

One is a USB bus-powered black box which measures only a little longer and wider than an iPhone. It features a prominent silver dial on its upper surface which doubles as an Input Gain dial for signals being recorded and a volume dial for playback signals.

Due to the compact nature of the design, matching that of its older sibling the Duet, traditional audio input ports are replaced by a breakout cable – which has a bespoke connector – at the interface end and an XLR mic connector and quarter-inch jack input for instrument connections at the other. Only one of these can be used at any time.

Status lights at the top of the interface show which input is active, whether 48V of phantom power are being used or, indeed, whether the external microphone options are being superseded by One's own internal microphone. This input is mounted towards the bottom of the interface's upper surface and represents the simplest way to get sound from the interface to the computer, requiring you to simply plug in the USB cable and set a gain level. The provision of this internal mic will widen the



potential appeal of One to interviewers and podcasters, among others, who'll be pleased to discover an interface which provides high-quality recording without the need to connect up external microphones.

Up and running

To configure audio connections, One's installer bundles the Maestro software (ostensibly a control panel) which toggles between external and internal inputs, lets you switch phantom power on/off and keeps you in control of all things I/O. The CD installer requires Mac OS X 10.5.7, so if you're running Snow Leopard you'll need to download a driver from Apogee's site.

My only gripe with One is that the breakout connector to the mic/line inputs is too short. While the USB cable is of adequate length, there's a serious risk that this interface will come shooting off your desk if you've plugged in a guitar and are rocking out or if you've connected a hand-held microphone for voice-over recordings, for instance. The portability of the unit is such that you wouldn't want to find a way to pin it down but, equally, you do need to be a touch careful.

Otherwise, the unit is simple to use and provides great results. The headphone port doubles as the main audio output, so you'll need to grab a 3.5mm jack to phono adaptor cable (which isn't provided in the box) if you want to plug it into speakers.

One for you?

So, to whom will this appeal? Well, to the thousands of laptop users who mostly need playback but would love the option to jam a guitar, keyboard or vocal part over a work in progress and, as mentioned, to podcasters and interviewers, too. As with GiO and Duet, One's ace up its sleeve is the quality of its audio signals, which are absolutely capable of pro results. **FM**

FutureMusic **VERDICT**

BUILD

VALUE

EASE OF USE

VERSATILITY

RESULTS

For those with modest input requirements, this is a high quality, simple-to-use package.

XONE:DX



Designed by Allen & Heath in collaboration with Serato, the Xone:DX is a MIDI controller and USB soundcard with total integration for ITCH software.

Boasting a huge number of MIDI control messages, inputs for external decks and two dual layer deck simulators, the Xone:DX is the most powerful ITCH controller on the planet.

The brand new version of Serato ITCH, supplied with the DX, provides unique 4-deck control, and features a comprehensive set of digital DJ FX, as well as looping, time stretching and a massive number of DJ tools.

- 4 channel layout with FX
- Two dual layer deck simulators
- Bi-colour LED layer assignment
- 20-channel USB 2.0 soundcard
- 24bit/96kHz audio system
- 168 individual MIDI messages available
- RIAA/phono inputs for external decks
- Mix outputs on RCA and balanced XLR
- Separate booth output
- Built-in hardware MIDI interface
- Professional modular construction
- High quality faders
- Compact slim design
- Fully compatible with other leading DJ software



Professional MIDI USB Controller
integrated with 4-deck Serato ITCH



Integrated Design Seamless Control

ALLEN & HEATH
www.allen-heath.com
www.xone.co.uk

WHAT IS IT?

CONTACT

HIGHLIGHTS

- ## UPGRADES

100 FutureMusic

setup choice dialogues to the bare essentials. For those working with repeated tasks, such as dialogue dubbing (ADR) or Foley recording, these presets can speed up and hone processes, which in a deadline based industry, is a worthy enhancement.

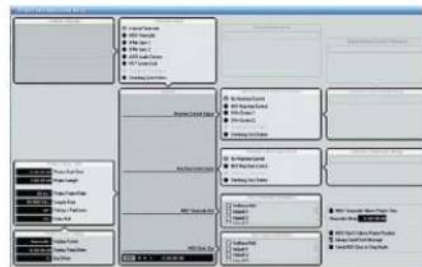
Another workflow winner included in version five is Clip Package import/export, a function aimed at Foley/SFX artists, though it has many more uses. Essentially it is a simple way to 'bag up' arrangements of audio events/clips spread across multiple tracks and export them as a single file. Thus sounds made from multiple layers can be quickly accessed, previewed and dropped into a new project.

MediaBay

The most significant workflow development in this update is that of the MediaBay database system, which has been significantly improved visually and functionally. MediaBay allows the user to scan, access and index hard drives for all related media, from audio and video files to plug-in settings and

Nuendo Video & Sync

For a DAW Nuendo 5 possesses a full set of video playback and synchronisation functions. The embedded video player and associated project window video track can handle a wide variety of digital formats (MOV, QT, MPEG-1/-2/-4, VOB, AVI, DV and WMV) with the project automatically adopting the frame rate of the video. Speed changes due to film and video transfers can be compensated for to allow for all the possible pull-up and pull-down rates due to format interchanges. The video playback can output to a window in Nuendo, but it also recognises multi-head and dedicated video cards



The Project Synchronization setup window with more options than you can shake a BetaMax at

and can even use FireWire to output DV video streams to camcorders/converters. External synchronisation and timecoding is also comprehensively catered for within the Project Synchronisation Setup page. This allows for timecode synchronisation via MIDI Timecode, two separate 9-pin Sync I/O (RS422), ASIO device,

the VST SystemLink (i.e. on a Nuendo multi workstation network), or Steinberg's own SyncStation and Timebase units. The main project window grid allows for any number of ruler tracks that can display position by timecode, 16mm and 35mm film and the video fps, as well as the usual time or bars/beats.

MediaBay allows the user to scan, access and index all related media, from audio files to plug-in settings

and import/export of CSV formatted markers. The latter function makes good use of Nuendo's multiple marker tracks with data field options

track presets, with the resulting catalogue library being available to any Nuendo workstation accessing the scanned drive. Comprehensive metadata-based searching, editing and filtering can seem daunting, especially with multiple hard drives, but I have found the MediaBay a powerful and intuitive tool which has already started to revolutionise my work practice. The metadata fields available for editing and

searching can be tailored to a wide range of tasks, especially those in AV post-production. The previewing even has an 'Align Beats to Project' function so audio can be heard at the destination tempo, which really helps with rhythm track creation.

Other post production oriented additions include EDL (Edit Decision List – the timecode/reel data for film edits) import in the CMX3600 format

for ADR, Foley, dialogue spotting and SFX as well as standard audio editing.

Steinberg have also added a live recording spin to their marketing of Nuendo by including a large Remaining Recording Time display, global track record arming/disarming and, most importantly, a Lock Record function to prevent accidental interruption of the recording. Nuendo also supports the Wave64 file format which has no file size limit, unlike WAV, BWF and AIFF (2GB max).

Plug in, warp out

There are a few additions to the native VST3 plug-ins, though two are updates from the VST2 format (Surround Matrix Encoder & Decoder). Adding to the substantial surround capabilities of this program is the Surround Panner V5 which expands the track based panner into a comprehensive placement tool, which with automation can add some powerful effects and movement to the surround mix.

The PitchDriver and PitchCorrect (pitch shifter and pitch correction



The new look MediaBay with waveform display previewer and file attributes

SPECS

System Requirements:

PC: Windows XP SP2, Vista (32-bit & 64-bit), Windows 7 (32-bit & 64-bit), 2GHz CPU (Dual Core recommended), 1GB RAM, display resolution 1280 x 800 pixels or higher, ASIO or DirectX audio hardware, QuickTime 7.1, Video Card supporting OpenGL 1.2 (2.0 recommended), DVD ROM drive for installation, USB slot for eLicenser

Mac: OS X 10.5.8 or higher, Intel Core CPU (Duo recommended), 1GB RAM, CoreAudio audio hardware, display resolution 1280 x 800 pixels or higher, QuickTime 7.1, Video Card supporting OpenGL 1.2 (2.0 recommended), DVD ROM drive for installation, USB slot for eLicenser

ALTERNATIVES



Digidesign Pro Tools 8 HD1 Core System

from £4000

The equivalent PT system does involve buying into the (Mac only) PCIe Accel hardware, and you'll need to buy a Pro Tools HD audio interface too, but then this is arguably the biggest player in the AV world.

digidesign.com


Logic Studio

£408

This popular and highly-regarded DAW is a fraction of the price and ships with Soundtrack 3 Pro for AV work, though in a less integrated/in depth manner. Simpler but less expensive.

apple.com


Cubase 5

£510

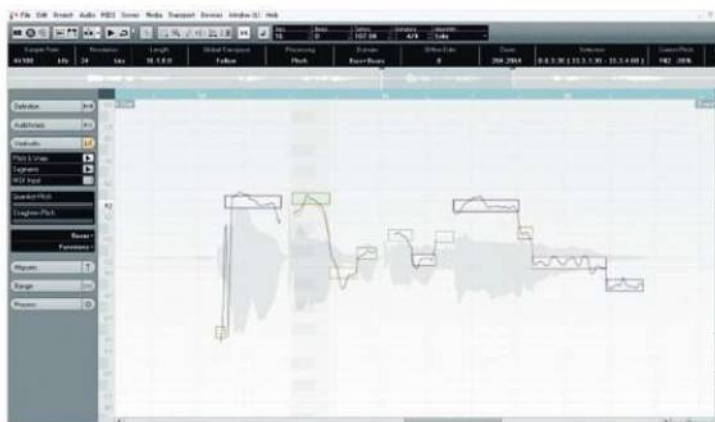
For those who just want the audio/composition functions then Cubase shares many of the innovations in Nuendo for a more manageable price tag, with a cheaper 'Studio' version coming in at £340.

steinberg.net

respectively) add simple but effective elements that have been conspicuously absent from Nuendo in plug-in form. For real pitch adjustment, the new VariAudio function in the Sample Editor provides full pitch analysis and manipulation via an interface not dissimilar to Melodyne et al. This is no half-baked nod to this now ubiquitous process, but rather a powerful and highly editable tool. Alongside the Hitpoint editing (for beat slicing) and AudioWarp tempo matching tool, VariAudio turns the Sample Editor into a powerhouse of audio manipulation that I had previously underestimated and underused. Not so from now on...

REVerence

The new REVerence convolution reverb plug-in instantly impressed me. This is a well laid out plug-in with a quality set of impulse presets and all the right parameters to tailor the effect, plus a set of 36 'program' slots that can be crossfaded between, which is useful in both post and music production. REVerence can also import any



The new VariAudio function in the Sample Editor window

expanded to the point where almost any setup is possible, particularly with the enhanced Control Room Mixer and new Direct Routing (see the *Audio Routing* box below). With the onus on large multi-channel projects, it's good to see the Export Audio Mixdown function expanded to encompass complex multi-channel mixdowns. The output of any combination of channels can be exported simultaneously, and using the

mixes, creating parallel fold-down mixes or exporting a selection of dialogue mixes directly to a new project.

Deep pockets

Nuendo is an inimitably 'deep' program that is aimed at streamlining many complex audio jobs and as such could easily slide into a quagmire of menus and tick boxes. To its credit, I have found this latest version very well

balanced between choice and efficiency, rarely necessitating manual referencing or option searching.

Of course, the question of value

Nuendo 5 really does have the best overall feature set, which explains its reputation in post production

WAV/AIFF impulses from mono to 5.0 surround, so the potential impulse library is limitless.

As Nuendo has evolved the possibilities for audio routing have

range selections from the Marker track list the audio can come from any number of points within the project. This is a powerful time saving means for creating stem mixes alongside final

must be posed, as an upgrade will cost £212 or more (version dependent). This is not cheap but for the regular Nuendo user this is a quality upgrade which justifies the outlay. With regards to an AV oriented audio production platform, Nuendo 5 really does have the best overall feature set, which explains its growing reputation in post production. I highly recommend Nuendo 5 to anyone already working in this arena, as well as surround mixing, sound design and soundtrack composition. **FM**

Audio Routing

Nuendo 5 has a track count limited only by the host computer while the channels can take any format from mono to 10.2 surround. Since Nuendo 4, the routing of these channels has become extremely flexible so that audio tracks can draw their record input from Group busses or FX busses, Group and FX busses can be routed directly into each other or via Sends, and even Output busses can be routed back to Group busses. Nuendo 5 has introduced an extra



One of the mixer windows with the new waveform meter display

function that allows the monitor source to be drawn from any Output or Group Bus, thus allowing monitoring of separate stems without soloing. Nuendo 5 also includes another layer of routing called Direct Routing,

which allows any channel seven additional output destinations. On a large post production system this means that separate destinations for its stems (dialogue/ADR, SFX, Foley and music) can be output simultaneously.

FutureMusic VERDICT

STABILITY



VALUE



EASE OF USE



VERSATILITY



RESULTS



A worthwhile update for a seriously well equipped audio production platform at an equally serious price.

WANT TO DO MORE
THAN **ONE** COMMAND AT A TIME?

GET THESE...

APC40

APC20



AKAI APC40 & APC20
THE ABLETON PERFORMANCE CONTROLLERS



DESIGNED AND DEVELOPED BY



FIND OUT MORE WWW.AKAIPRO.COM

Thermionic Culture Little Bustard | £2,262

The Fat Bustard gets itself a more compact mate at last in the form of a 16-channel valve summing mixer. **Robbie Stamp** gets twitching



WHAT IS IT?

16 channel valve summing mixer

CONTACT

Who: Unity Audio
Tel: +44 (0)144 078 5843
Web: thermioniculture.com

HIGHLIGHTS

- 1 Clarity and integrity of signal path
- 2 Superb build quality
- 3 Simple and well-laid-out controls

The rackmounted summing mixer has recently become the premier means of getting your in-the-box mix out of the

box for some wholesome analogue conditioning before it goes back into the box. Thermionic Culture responded to this trend with typical aplomb by issuing the impressive Fat Bustard. To expand that unit's 12 channels (via the Aux 1 & 2 inputs) TC have created the Little Bustard, a 16-channel summing mixer which keeps to the house speciality (valve amplification only) in a 2U casing. Unlike the Fat Bustard, this unit doesn't feature any signal processing (EQ, distortion/attitude, stereo expansion) and offers the user six fixed gain stereo channels, four mono channels with Gain/Pan controls and independent left and right Master Level knobs.

Chicken heads

The I/O is via XLRs at the rear (16 input, two output) and operates entirely unbalanced, thus forgoing any colouration or noise contributed by balancing transformers, op amps or transistors (the Fat Bustard, like many

TC units, is also unbalanced). The gloss black front panel carries the Thermionic design aesthetic, from the big green power light to the chicken head knobs.

At the left are the six stereo channel on/off switches. In the middle are the four mono channels with their individual Gain controls (from ∞ to 0dB/unity), on/off switch, Pan knob and Pan 'In' switch. When set to 'Mono' mode, as opposed to 'Pan In', this latter switch

adds 6dB – more on this below. To the right of the mono channels are the two Master Level knobs, which range from -18dB to +2dB. At the far right of the fascia is the Bustard's face, the eyes of which house the output level indicators. Two small amber LEDs indicate 'signal present' while larger, multi-coloured LEDs use a traffic light system to show how hard the output is being driven.

Thanks to the well-laid-out front panel, the Little Bustard is easy to use and feels reassuringly solid. All of the control pots are indented: 21 positions for the mono channel gain and Pan pots and 31 positions for the two master levels. This is particularly useful for matching levels between channels and the master outputs, as well as for Pan position setting – the 'one click up/one click down' routine makes life a lot easier, compared to nudging a pot back and forth.

The quality on the outside is matched by that of the inside, as having a peek at the Little Bustard's innards reveals the hand-wired beauty that comes as standard with TC gear.

Why Analogue Summing?

The rise of 'in-the-box' mixing has still left a lot of engineers cold, with poor stereo imaging and loss of clarity/depth cited as problem areas. Though it has been argued that a lot of this is subjective, there are real causes for poor summing in the digital realm, such as large track counts generating massive calculations that challenge CPUs/DSP chips (which are also

running plug-ins and hard drives) and even high bit-depth internal processing. These problems can be program-dependent and digital mixing can be extremely accurate when treated right; even so, analogue summing is free from these problems and offers some added benefits. The infinite degree of variation in voltage/current means that analogue mixing can achieve an extremely fine

degree of clarity and articulation. The earliest mixing consoles were basically summing mixers, but these soon became loaded with EQs, routing options and dynamics that brought a myriad of noisy components that mostly degraded the mix. And so it is that we return to the trusty summing mixer to get the best of analogue and skip all those bits we already have in our shiny new DAWs.





Poking out the mix

The six fixed gain stereo channels do just what they claim to, and offer unity gain summing. There is plenty of clean headroom available, so these inputs can take hot signals with little discernible distortion. Pulling back the Master Levels deals with most distortion issues caused by summing a lot of high-level sources, and the Bustard's eyes alert you before your ears do.

The four mono channels create a little more flexibility for either stereo pairs that require Gain/Pan adjustment or mono sources that need fine-tuning in a mix, such as vocals and bass. The indented pots come in very handy here

very low noise. There is also extremely low crosstalk between channels and within stereo channels, which means that stereo imaging remains untainted.

Transparent tool

The Little Bustard is surprisingly, though pleasingly, transparent. When driven hard, it will start to distort; this gives good results with transient sources, such as drums, where the peaks are compressed a little, effectively 'fattening' the whole mix.

That said, this is not a device one would use to 'warm up' signals and it will not miraculously reanimate lifeless digital recordings. This isn't a criticism,

been drum submixing, where the overheads, room mics, toms and reverbs can be sent to the fixed-gain stereo channels with the kick, snare and hi-hats mixed via the mono channels. The results were excellent and an improvement on the DAW version, thanks to a little transient distortion via the +6dB on mono channels and driving the inputs hard.

The unit is also an excellent way to recombine outboard parallel compression setups, sum group busses after analogue processing or before final A/D conversion, and expanding a small desk setup. Obviously, there are many uses for a summing mixer (effects

returns, multiple synth setups, etc), especially one that does the job with such clarity.

The great expander

The Little Bustard

indeed makes a great expander for its 'Fat' counterpart, especially thanks to the excellent signal path. As a standalone unit this is definitely a tool rather than a character maker, though again the transient distortion when driven adds bite to drum, guitar or brass submixes.

There are cheaper alternatives but, as is so often the case, I doubt you'll find as efficient a signal path. Also, it's Thermionic Culture, so it looks cool and will last a lifetime. **FM**

A peek at the Bustard's innards reveals the hand-wired beauty that comes as standard with TC gear

for 'vocal up/vocal down' mixes prior to mastering. The +6dB function from the Pan In switch is great for poking a source out of the top of the mix.

The Little Bustard uses an essentially simple design with a separate summing gain stage (ECC83 valves) and output amplification stage (PC86s), the beauty of which translates into high headroom (low distortion) and

as all too often valves are associated with colouration, and though they are more than capable of distorting a source they are also exceptional amplifiers and when used in a well designed circuit they can out-perform their solid state counterparts.

We all know what a summing mixer does, but what is it really useful for? My favourite use for the Little Bustard has



SPECS

Inputs: 16x XLR (unbalanced)

Outputs: 2x XLR (unbalanced)

Stereo Channels: 6x fixed gain with mute switches

Mono Channels: 4x variable gain with pan controls and mute switches

Valves: 2x ECC83/12AX7 (gain stage), 2x PC86 (output)

Dimensions:

482 x 251 x 89mm

Weight:

5kg

ALTERNATIVES



Thermionic Culture Fat Bustard

£3,699

The 'Daddy' Bustard is indeed fat, with master output EQ (Pultec style), extensive stereo spread controls and a distortion/attitude section similar to the Rooster. Big, expensive and really rather magical.

thermioniculture.com



TL Audio Ebony A4 Summing Mixer

£699

A far cheaper 16-channel alternative with fixed gains, but pan pots for every channel. The master section boasts VUs, tube drive controls and insert points. Balanced with I/O on TRS and D-Sub.

tlaudio.co.uk

Dangerous Music 2-Bus

£2761

High-spec solid state 16-channel 2U unit with a strong reputation for fidelity. One +6dB and 'mono' switch per pair of channels and a stepped output trim (-3dB to +6dB).

dangerousmusic.com

FutureMusic VERDICT

BUILD



VALUE



EASE OF USE



VERSATILITY



RESULTS



A simple, well-designed summing mixer with a focus on clarity. Not cheap, but this kind of quality costs.

The new addition to the R-F-T range draws upon classic heritage. **Robbie Stamp** gets Funken-ed up

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WHY OURS WORK & OTHERS DON'T

- Multiple layer technology (Patent Pending)
- The Reflexion Filter is the original portable acoustic mic shield
- Foam alone doesn't work - beware!
No sound colouration
Used by professionals the world over including;

STEVIE WONDER

TONY PLATT

BOB MARLEY, BUDDY GUY,
AC/DC, THIN LIZZY, GARY MOORE

GIL NORTON

FOO FIGHTERS, PIXIES, GOMEZ,
FEEDER, COUNTING CROWS

JACKNIFE LEE

REM, U2, GREEN DAY,
SNOW PATROL, BLOC PARTY

CHRIS PORTER

GEORGE MICHAEL, SIR CLIFF RICHARD,
PET SHOP BOYS, TINA TURNER

DON WAS

BOB DYLAN, BONNIE RAITT,
THE ROLLING STONES, WILLIE NELSON

DOM MORLEY

AMY WINEHOUSE, MARK RONSON,
NICK CAVE, MORRISSEY

Our Patent Pending multiple layer technology in sE Reflexion Filter products is what makes them unique. Alternate layers of polyester acoustic fibre board, acoustic grade wool and web strengthened aluminium foil, separated by fixed air spaces for acoustic separation, provide a hugely effective sound absorber and diffuser.

Foam products do not work very effectively! Foam acoustic products allow most frequencies to pass straight through with very little absorption, and are only really effective for HF (High Frequency).

They may be cheaper, but they can actually make a mix worse, not better, removing HF which later needs to be added back in, thus creating noise, while leaving the problematical mid and low frequencies completely untreated.

With Multiple layer technology, RF products are portable devices which really work!

The
**Reflexion
Filter**



WHAT IS IT?

CONTACT

HIGHLIGHTS

- ## PRICING

WIVI Professional Edition
\$499



SPECS

Formats: VST, AU, RTAS

FutureMusic VERDICT

STABILITY

VALUE

EASE OF USE

VERSATILITY

RESULTS

Virtual reality comes of age – these are great libraries containing a fantastic range of sounds.



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24 INSTRUMENTS
AND EFFECTS
10,000 SOUNDS
90 GB SAMPLES

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KOMPLETE 7 is the latest version of the ultimate software collection from Native Instruments. Now bigger and better, and featuring 24 KOMPLETE Instruments and Effects, this 90 GB package is bursting with more than 10,000 production-ready sounds for all styles and genres. KOMPLETE 7 includes renowned flagship products like KONTAKT, GUITAR RIG and the redesigned REAKTOR 5.5 plus all-new instruments and effects from Native Instruments and brands like Abbey Road and Scarbee. What's more, you also get a \$60 e-voucher to keep on expanding, making this best-selling bundle more complete than ever.

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www.native-instruments.com/komplete7



NI NATIVE INSTRUMENTS

THE FUTURE OF SOUND

Steinberg CI1 and CI2+ USB Audio Interfaces | from £101

Steinberg have just offered up two new entry-level USB audio interfaces for our perusal. **Bruce Aisher** takes them for spin and wonders if they bring anything new to the table

WHAT IS IT?

Two 2-In/2-Out USB audio interfaces with integral microphone preamps. The CI2+ brings some Cubase control surface functionality to the proceedings

CONTACT

Who: Steinberg
Tel: +49 (0)404 2236 115
Web: steinberg.net

HIGHLIGHTS

- 1 Controller integration features on CI2+
- 2 Robust construction
- 3 Compatible software bundles included

PRICING

CI1
£101
CI2+
£289

Steinberg introduced the CI2 USB audio interface last year – clearly aimed at those new to music production, as

well as potential users looking for something better than the internal soundcard of their chosen computer, be it a PC or a Mac. The fact that it was bundled with Cubase AI5 (a reduced feature-set version of Cubase 5) clearly indicated that Steinberg saw the need for a complete good-value studio-in-a-box solution. In fact, the hardware side of things is handled by Steinberg's parent company, Yamaha, who clearly have a pretty good track record when it comes to all things audio.

So, less than a year later, we have the CI2+ and the CI1 interfaces. Though broadly similar in pure audio interface terms, these sit on either side of the original CI2 when it comes to their overall feature-set and software offerings. Let's start with a recap of what's on offer, starting with the CI1 and the features common to both. The

interface box is about the size of a decent hardback novel and, while housed in plastic, feels substantial when placed on your desktop.

Ins and outs

Starting with the back panel, we have the USB interface socket (sadly, this is USB 1.1 rather than USB 2.0) and a foot switch input – more on that later. Next to this, we've got a standard stereo headphone socket and individual left and right outputs. All these are presented as quarter-inch

jack sockets, and the outputs are of the balanced (TRS) variety, although they can also be used with standard mono (unbalanced) plugs. Finally, we come to the inputs – which are provided via two combo XLR/jack sockets accommodating both line and mic sources. The left input (or Input 1, when in mono mode) can also be switched to 'Hi-Z' for direct guitar and bass sources.

Moving to the top panel, all of the audio controls are on the left (leaving room for other treats on the CI2+, as we'll find out later). Each input has its own Gain control and Peak indicator, there's a phantom power switch for the Mic section and, as mentioned before, a Hi-Z button for input. A mono switch allows you listen to the two inputs as two independent mono inputs (panned to the centre) rather than a stereo pair. There are two knobs for adjusting the Master output and Phones level, and a third for determining the monitoring Mix balance between the live inputs and DAW playback. That's basically what you get with the CI1 – alongside the included software, of course (see *The Software*). However, the CI2+ builds on this with a nifty controller section.

Double or quits

The CI2 had Steinberg's custom AI knob and Action Pad, which could be



Solid State Logic X-Patch | £822

A SuperAnalogue routing matrix that's at home in the studio or on the stage. **Stuart Bruce** investigates

WHAT IS IT?

A programmable 16-by-16-channel SuperAnalogue routing matrix controlled via computer or MIDI

CONTACT

Who: Sound Technology
Tel: +44 (0)146 248 0000
Web: solid-state-logic.com

HIGHLIGHTS

- 1** Makes complex patches available at the touch of a button
- 2** Helps solve level issues between +4dBu and -10dBu devices
- 3** With built-in MIDI, it's at home on stage and in the studio

SPECS

Front Panel: 2 Combi Jack / XLR sockets for inputs 1&2, 2 XLRs for outputs 1&2

Rear Panel : Four 25-pin D-Sub connectors giving 16 balanced inputs and outputs, MIDI In and MIDI Out, Ethernet socket for connection to computer.

System requirements:

PC: XP, Vista, Win 7.
X-Patch for PC has a suitable Java version included so will work with anything from Windows 95 to Vista version 7

Mac: OS X 10.4 or above. X-Patch remote requires Java Version 5 that is included in OS X from 10.4 onwards.

Dimensions:

482 x 230 x 44.5mm

Weight:

2.6kg

The X-Patch is a very straightforward 16-by-16 analogue routing matrix, with enough little extra features to

satisfy most needs straight out of the box. Outwardly it's deceptively simple. The front panel sports a power switch, inputs for channels 1 and 2 (either jack or XLR) and outputs for channels 1 and 2 on XLR. The rear panel has four 25-way D-Subs handling the 16 channels of audio ins and outs, an Ethernet socket to connect to your computer, two MIDI ports – one in and one out – and a five-pin DIN socket for the external power supply.

Having got it all connected, the next thing to do is to install the supplied software onto your computer and get the two talking, which can be done one of two ways. If you only have one unit and aren't on a network, a straight Ethernet cable between the two will suffice. If you're on a network or want multiple units connected, you will need an Ethernet hub. Either way works, and both are pretty straightforward to set up using the clear instructions in the online manual.

Chain reaction

Next, you need to setup your input and output sources. Opening the Setup menu, you can select channels and simply write in the names of all devices



Pull-down menus make it incredibly easy to select sources feeding each of the 16 inputs

you have connected. For each separate in and out, you can set a nominal level of either +4dBu or -10dBu, meaning that you can mix and match pedals and domestic level devices with professional line level devices. This is very handy if you want to use pedals as part of your input chain, or just have a pedal on an insert point, without having to worry about gain compatibility. There are three buttons in the centre: 'Unlink', meaning that the input and output are unrelated; 'Device', denoting a unit through which the signal would pass (such as EQ, compressor or delay); and 'Insert', denoting an insert point.

The main Edit page allows you to route devices directly to one another either individually or via chains of up to six devices, which you can store and name individually. In the centre of the Edit page, you have 16 inputs with pull-down menus from which to select



the source that feeds them. As you connect devices together, their outputs are greyed-out on the menu to tell you that they are already in use or are part of a chain that's in use.

Patch work

I set up a mix of pedal board, EQs, compressors and DAW ins and outs for my test. At the bottom of the screen is the Chain Editor. You select a chain to edit in the left-hand column, pull in up to six devices, save it and give it a name. You can then save this as a preset (in the right-hand menu) and name it. As you build up a list of chains and presets, you can have complex setups available at the touch of a button. Once you have your presets programmed, you can switch between them using a simple MIDI patch switcher, making it really useful live. This, coupled with the fact that it accepts -10dBu, makes it a very competitive alternative to an expensive custom pedalboard – the flexibility of its patching options, puts it way beyond many I have seen.

SSL have certainly thought this one through. Sonically, like all of their SuperAnalogue devices, it is excellent. The simple design and excellent user interface make it really easy to get to grips with, and the flexibility it offers in setting up complex patches can save huge amounts of creative time. If you don't already have a patchbay, you may find you never need one; if you already have one, you will find yourself using it a hell of a lot less. I can't wait! **FM**

FutureMusic **VERDICT**

Category	Score (1-10)
BUILD	8
VALUE	7
EASE OF USE	7
VERSATILITY	8
RESULTS	8

A great straightforward device that allows complex routing combos to be achieved simply and quickly.

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CONTACT

Who: Time + Space
Web: +44 (0)183 755 200
Web: beatstation.com

HIGHLIGHTS

- 1 A fast and easy way to set up a groove
- 2 Great sample library
- 3 Up to five layers of samples per sound



FutureMusic

Value Award

Beatstation by Toontrack | €89

Toontrack's entry level plug promises a quick route to great grooves. **Stuart Bruce** gets up to speed...

SPECS

PC: Windows XP SP3 or newer, 2GB hard drive Pentium 4 or Athlon processor with 512MB RAM, VST, RTAS and standalone

Mac: OS 10.4.11 or higher, 2GB hard drive G5 or Intel processor with 512MB RAM, AU, RTAS and standalone

File formats supported: AIFF, MP3, WAV, REX and MIDI files

Will also work with two other Toontracks formats SDX or EZX plus the new BTX format

Sometimes when you are in a hurry to get an idea started some virtual instruments can look a little daunting. Not so

with Beatstation. In a remarkably simple user interface, it manages to pack in drum pads linked to a flexible layered sample player, a REX file player, a MIDI groove library, a bassline sample player and a lead or chordal sample player. Beatstation has five main areas on its control surface, the largest of which displays the drum pads and two keyboards, one for bass and one for lead. To the left is a file browser where you can select various file types from whole instruments with drums, two synth patches and their related FX to individual samples, REX files or MIDI grooves. Below this sit a REX file player/editor and a MIDI file player.

Below the pads are the sample play controls, two FX controllers and a

master level control each with an FX selector pull down menu and an effect parameter control.

MIDI beat

Toontrack have devised a new format called BTX for the Beatstation. Each BTX set consists of samples, instruments built from these samples, MIDI grooves to play the instruments and a set of REX files.

The MIDI department is very straightforward. Each instrument patch has a bass sound which plays the two octaves below note number 36, the drum pads which go from note 36 to note 59 and the lead instrument which goes from note 60 upwards. You can have up to 24 pads and when you right click on them you get the pad properties menu, which allows you to stack up to five samples per pad. Each sample can have its own pitch, ADSR, pan position,

volume, reverse and offset setting. You can drag samples in from the browser and each pad also has a global level control, global FX preset and level controls for the two FX sends.

One-stop shop

The REX player/editor allows even greater flexibility for your sonic manipulations as you can take any slice from one of the many REX files and use them as samples in your pads. If you like one of the pre-programmed MIDI grooves, you can drag it straight from the browser, use it as it is, or edit it.

I can see myself using Beatstation in plenty of situations where I need to work quickly, knowing that once the basics are done I can get in there and manipulate the sound further to a standard I would expect of virtual instruments costing considerably more. A bargain! **FM**

FutureMusic VERDICT

STABILITY



VALUE



EASE OF USE



VERSATILITY



RESULTS



An excellent creative groove making tool at a bargain price. Try the demo and see for yourself.



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Mini Reviews

The latest musical bits and pieces racked and rated



Native Instruments Audio 2 DJ | £79

nativeinstruments.com

The Audio 2 DJ weighs in at just over 80 grams and just under 80 bucks, making it easily NI's most affordable option for digital DJing, and the world's smallest interface. It's hard not to be taken aback by the tiny size of the A2DJ. Unsurprisingly, there's not a lot to the specs – two quarter-inch outs, two volume controls and a USB port make up the hardware but Native are adamant that the sound quality doesn't suffer, and I'd have to agree – it's crystal clear and delivers a huge punch across the board. Impressive. The channel A and B output LEDs light up green when a signal is present, but they don't turn red when the signal is peaking. Without any real level reference on the hardware there's no way to know if the signal is peaking from the interface itself.

A quick glance at the chart comparing the 2 DJ with Native's more expensive interfaces really does say a lot in the 2's favour. If you don't need timecode and are happy either DJing in-the-box or have a mixer to cue with, it's almost a no brainer to go for the Audio 2 DJ. A separate headphone out would seal the deal, but for what it is, it's hard to fault.

Declan McGlynn

8/10

Beyerdynamic DT990 PRO Headphones | £183

beyerdynamic.com

The name Beyerdynamic has been synonymous with studio cans for decades, with their DT100s being a staple recording tool since the dawn of time itself.

The 990 PROs feel a lot more expensive than their price tag would suggest, with a very comfortable headband and earpieces that engulf your ears with a very open and vast sound. In terms of response, everything is as it should be with the exception of sub bass being rounded off, very common in headphones this open. At lower levels you might struggle to dissect sounds but at the right volume, there is almost no compression, with the stereo field remaining intact and the crisp highs and thick mids happily coexisting and never fighting for attention. Though the price may seem

high at first, when you consider the competition, these cans stretch way beyond their outlay. A must try for your new studio headphones.

Chris Barker

9/10



The Secrets of House Production | £35

samplemagic.com

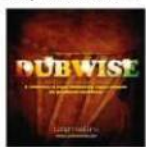
Sample Magic have teamed up with *Future Music's* own Marc '01' Adamo to provide a glossy paperback reference manual to all things House production. Starting with kicks and bass and following all the way through to arrangement and mastering, *The Secrets of House Production* is very useful for beginners with its clear explanations and clean cut design, while its charts and diagrams will come in handy for professionals too.

It would have been useful for the included CD to provide audio examples of each tutorial, but nevertheless, it's modern approach makes it fairly unique as an all round package. I can see it thriving in the DJ-to-producer world, one which continues to grow. *Declan McGlynn*

8/10

**Loopmasters present
Dubwise | £35**

loopmasters.com



Back in December, I gave *Drumdrops in Dub* a nine-out-of-ten – maybe some of you went and bought it. If you did, then you'll

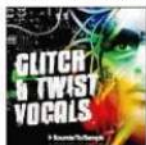
definitely want this batch to complement it tastefully. If you didn't, then it's time to shell out. 1.3GB of 24-bit Dubtastic dynamism covering everything you need to make Dub inspired tunage or to add a touch of Jamaican spice to your track.

Melodica and horns, vocal one shots, riddims – it's all covered here. The guitar loops are skanking and the bass loops have the monitors sweating like an accountant in a traffic jam. Get the samplers out, open the windows and make the best of the present good weather – hear me now one time! **Roger Watson**

9/10

**Sounds/To/Sample Glitch and
Twist Vocals | £15**

soundstosample.com



Sample houses are doing more and more vocal batches these days and Sounds to Sample pitch up with this offering – pretty

cheap, price wise, for 152 24-bit loops / one shots. Split into six folders (Electric, Glitched, Melodic, Nu-choir, Sleaze and Spoken clips) this collection covers a lot of ground, albeit within one field. Vocoders, extreme auto tuning, properly tweaked into next door's greenhouse type tomfoolery as well as re-constructed big gospel styles.

This could contain that little something you've been missing. Visit the website and check out the free samples to get a wee sniff of where they're at.

Greg Scarth

7/10

**Tech House and Deep Minimal by
Loopmasters | £30**

loopmasters.com



809MB of material from Marc Adamo includes 10 construction kits as well as 50 drum loops, 50 synth loops and a host of one shots, synth stabs and 'superdubbed bass loops'.

The overall vibe is inspired by producers such as Joris Voorn, Claude Von Stroke, Trentemøller and the like, with plenty of scope for getting progressive in a House like fashion. Clicks and glitches are well covered, as are the usual soft samplers with nine ready to play patches. All in all, a very usable collection, whether you stick within the genre or take some of the more versatile elements and run with them. **Roger Watson**

8/10

Tonebuilder Hi-Fi 909 | \$23

drivenmachinedrums.com/hifi909



Following on from the excellent *Driven Machine Drums* package, Tonebuilder release this tribute to Roland's classic grey

box. Sample master Nathaniel Shreve rates the TR-909 as his all-time favourite drum machine, and this lovingly-crafted collection of 819 drum hits shows off the legend in all its glory.

Processed through high-end tube equipment and recorded in 24-bit 96kHz resolution, quality is outstanding. Sounds are in WAV or AIFF format with 27 Kontakt and EXS-24 sampler patches plus eight GURU starter kits included to get you started. If you don't have a real 909, this is the next best thing. **Greg Scarth**

10/10

Supalife House | £25

producerloops.com



Producer Eddy Beneteau has worked with Producer Loops to create this excellent House package, which offers everything from drums to bass, leads,

pads and one shots. Taking its name from his Supalife Records, the package follows a classic 125bpm House formula so it should slot into your productions fairly comfortably.

The 442 hits and loops are available in all the major 24-bit file formats, with MIDI files thrown in for good measure. As usual for Producer Loops, production values are outstanding and all the sounds are supplied dry and wet along with 'decay' versions for times when you need a long reverb tail. Excellent and highly versatile sounds for any House producer.

Roger Watson

9/10

Prime Loops Bleep Machine | £10

primeloops.com



New from Prime Loops, *Bleep Machine* is a collection of 115 individual hits and loops, with the

emphasis firmly on special FX and analogue synth sounds in the vein of the BBC Radiophonic Workshop. The one shots are great, but it's a shame there are just 15 loops to choose from. A few more variations and ideas would have added a lot to the package.

Overall though, this is a entirely versatile, excellent quality collection available in just about every format you can imagine. A little on the small side but then so is the price, and I think it's fair to say that *Bleep Machine* could come in handy for producers of just about any style of Electronic music. **Greg Scarth**

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

No Mac audio editors

Graham Podmore asks:

Q I've decided that I need a pro-quality audio editor that I can use for editing and mastering purposes.

My problem is that I'm a Mac user and all the ones I know about – Sound Forge, WaveLab and Adobe Audition – are PC-only.

Given that lots of pro musicians use Macs, I find this quite surprising. So, could you tell me why this is and what (if any) the alternatives are for OS X?

Mark Gyver replies:

A The comparative lack of high-end audio editing software on the Mac has always been a bit of a mystery but, fortunately for you and the many other Apple users, the situation is the process of changing.

Take WaveLab, for example: when this was originally conceived, there was never any plan to bring it to the Mac, but with the soon-to-be-released version 7, Steinberg is finally making it cross-platform. However, it's taken a lot of work, as there are so many things in PC software that can't be

simply moved to the Mac, and this explains why it's taken so long.

So, that's one of your choices back on the agenda, and I'm pleased to be able to tell you that Adobe's Audition is coming to the Mac, too – though not until later on in the year. This leaves just Sound Forge as a Windows-exclusive program but, given that all of Sony Creative's software is PC-only, I wouldn't hold my breath waiting for that one.

That said, there are alternative choices for the Mac that you could buy right now. Bias has its Peak range, Audiofile Engineering offers Wave Editor, there's i3's DSP Quattro and, of course, Apple has Soundtrack Pro (which ships as part of the Logic Pro bundle). These are by no means poor relations to Sound Forge, WaveLab and Audition, so don't discount them.

Album woes

Linus Tilsby asks:

Q I've been thinking about making my first album but, as most people just download individual tracks these days, is there any point?

Wave Machine

With the release of WaveLab 7, Steinberg are finally bringing their high-end audio editing solution to the Mac



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

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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**

I know albums have been the norm for a long time, but maybe I should just make a load of different tracks and stick them out instead! What are your thoughts on this?

Dan Goldman replies:

A I still think it's important to make albums for a number of reasons. Firstly, if you're making tracks with no overall concept in your head in terms of style, you're more likely to just keep writing with no particular direction until you stumble upon something, which may take a while! It's important to have an overall theme, if possible from the outset, as it gives you a benchmark from which to judge your tracks and your quality control. Fair enough, if all of your tracks generally come out with a pretty similar sound and quality level, it would be easy to make an album from them. But if you are, in the main, writing quite diverse material, the chances are it won't go well together. Of course, there needs to be contrast on an album, both stylistically and sound-wise, but if things are too diverse, you'll really make life hard for yourself in terms of getting it picked up by a label if, of course, you choose not to self-release.

A really good way to approach starting an album is to pull out a couple of your best tracks from your vault and use them as the basis for writing the rest of the album's tracks. This will help you to pin down which other tracks in your collection may fit or if you need to write new ones instead. Again, if your album is too diverse, the reviewers won't get it, either and, as much as we all hate to be pigeon-holed, you can do yourself a lot of favours by making something that can be placed within a certain style or genre.

To sum up, as much as the pick-and-mix mentality is pervading music-buying these days, it's still important for artists to keep in mind that although the album format may be old, it has a lot going for it. It helps to give a framework within which to write, in turn helping artists to focus on a clear approach to writing, composition and production, too. It's true that consumers may just pick their favourite tracks from your album, but at least the tracks will all be coming from a similar place in terms of content, style and production values if you try to treat the tracks as one main body of work from the

Recycling Maschine

Jorge Espinoza asks:

Q I am using NI's Maschine 1.5 on my Snow Leopard iMac, but I can't seem to load any of my REX files. Every time I try, I get 'file format unsupported' or some such thing. I thought that Maschine could use REX files!

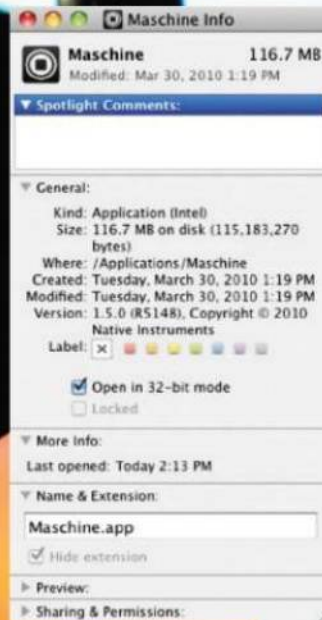
Doug Kraul replies:

A REX files are supported by Maschine, but unfortunately you are encountering a 32-bit/64-bit compatibility issue. Maschine 1.5 runs standalone on OS X 10.6, by default, in 64-bit mode. REX file support relies on a software library

that has not yet been updated to 64-bit. This causes Maschine to fail when it attempts to import REX files. Luckily, the solution is an easy one: force Maschine to run in 32-bit mode.

Use Finder to locate the Maschine application in your Applications folder and select it. Next, choose File > Get Info from the menu bar, or press [CMD-I]. You will then see something like the screen grab on the right.

Click on 'Open in 32-bit mode' to set the checkbox as shown. Now when you use Maschine stand-alone it will run in 32-bit mode and REX will work as advertised.



32-bit/64-bit compatibility issues with Maschine can easily be resolved in a few easy steps.

outset. Also, when you come to master them it will be much easier, too. Good luck!

Disco horns

James Smythe asks:

Q I want to add real horns to my tracks and wondered if you could give me any tips. I have a Neumann TLM 103 and a Rode K2, but the room I have is small and can only fit two players. I'm a particular fan of Disco records from the late '70s, and I'm really after getting a horn sound like the classic Michael Jackson records.

Dan Goldman replies:

A Well, James, it's fair to say you've set the bar pretty high! These Jacko recordings represent some of the best contemporary horn

recordings/arrangements ever. The first thing you need to get right is the players. So much of the sound depends on the players and the instruments that, no matter what mics you use, you won't get the sound unless both the players and instruments are up to the job. Jerry



Hey's Seawind horn section (as featured on those classic Jacko albums) was generally made up of four or five horns. On *Thriller*, for example, there are two trumpets (Jerry Hey and Gary Grant) a tenor sax (Kim Hutchcroft) and a trombone (Bill Reichenbach). Obviously, they all played at once on those records and it's not going to be practical to fit four players in your room, so the best option is to get two players and overdub. The mics you have will be fine for the job – just make sure that they're three to four feet away from the horns, and the same distance apart, as the SPL levels from the horns will be high and so it's very easy to get a shrill and overly distorted/glassy sound if you're not careful.

A bit of careful compression while tracking won't go amiss, either, to keep the levels in check. In terms of

instruments, I would go for a trumpet and trombone playing together, then layer them up together four times to thicken the sound. The subtle differences between each overdubbed layer will add a nice movement and wideness to the sound. You can then get in a sax player to overdub tenor, alto or baritone to thicken out the sound, or even use a programmed sax underneath (I've done this with good results). Again, layer the sax up four times on top of the trombone and trumpet parts for the best results.

The same old noise

Henry Simmons asks:

Q I'm looking for the synthesizer, analogue or digital, that has the fattest, warmest white noise. Are there any that you can recommend?

New Life for Groovebox Patterns

Abby Harley asks:

Q I enjoy making grooves and patterns with my Korg Electribes EMX, but that's about as far as I can take it. Somehow getting a song together never seems to work out. Do you have any suggestions that might improve my odds of finishing a track on it?

Doug Kraul replies:

A Groovebox pattern creation can be inspiring and fun, but song assembly with a groovebox's song mode

isn't everyone's cup of tea. Instead, try making a song by recording each pattern's parts (bass, kick, snare, and so on) as a separate sequencer audio track. Then use the sequencer's editing and arrangement tools to construct the song. If you prefer a more dynamic approach, replace a 'standard' sequencer with one such as Ableton Live that emphasises manipulating audio clips, and use Live to 'perform' an arrangement by recording yourself triggering the audio files.

There is, however, an alternative way to achieve the same result that will work with any MIDI sequencer: employ a sampler to play back the audio files triggered at appropriate times by the MIDI sequencer. Pattern parts are recorded as before, except you load each recording into the sampler and assign it a note or note range. All you need then is a capable sampler and, of course, the MIDI sequencer.

The sampler-based approach opens new creative

avenues to promote variety in your patterns. For example, assign the same recorded part to different notes then use the sampler's built-in synthesis features to alter them differently. Or layer two or more copies of the same part, each with different processing. Even the simplest loop will come to life and seem less repetitive with these sorts of treatments.

Why not just use Ableton Live? A Live clip track shares the same effects, and there is no built-in clip synthesis

processing beyond basic pitch alteration. Different treatments at different times almost always means adding tracks and making the project more complex.

Ableton Live actually excels at the sampler style workflow due to its incredibly flexible and powerful Drum Rack. These give independent synth processing and offer an optional effects chain for each sample, yet hide the underlying complexity. Let's look at an example of how to use it.



1 Set the project tempo to the groovebox's tempo. If possible, synchronise the groovebox to Live to avoid later work trimming sample start and end points. Record each pattern part as a clip, then trim as needed. When finished, add a drum rack as a new track.



2 Drag each recorded clip to a drum rack pad. Duplicate clips that you want to have different processing. For example, the drums on the shown pad use the sampler's filter to apply a LFO modulated bandpass effect. You can also add effects to each pad.



3 Experiment with different combinations of parts by triggering the pads from a MIDI controller. Once you have an arrangement in mind, record enable the drum rack track, hit Record, then "play" your arrangement. Use quantising and note editing afterwards to perfect the result.

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Mixing Made Easy?

Jeremy Jones asks:

Q I might be asking too much, but I was just wondering if there was any software that could help me to create better mixes. What I really want is something that allows me to just select the sound I'm working with from a menu and automatically make it sound good.

I should explain that I don't really see myself as a producer – I write and record my own songs and want to spend the majority of my time doing that,

not technical stuff. I know I should probably just learn the basics of mixing but I'm struggling to motivate myself.

I guess what I'm talking about is some kind of one-stop, magical mixing plug-in that does everything for me. I know that if it existed, I'd probably know about it – but I live in hope!

Mark Gyver replies:

A Software of the sort you describe has been dreamt about/fear'd ever since plug-in effects came into

existence, with seasoned producers wondering how long it would be before something along these lines would be released.

Unfortunately, there's still no 'one size fits all' mixing plug-in that anyone can use to make their music sound good, but I'm inclined to point you in the direction of ToonTrack's EZmix.

Instead of messing around with lots of plug-ins on each of your song's tracks, the idea is that you just put EZmix on each channel, choose an appropriate preset (some

200 are included) and then adjust this to taste using three sliders.

While this isn't quite the automatic mixing solution you crave, it's probably about as close as you'll get at the moment. I won't pretend that EZmix gives pro-quality results – and you do still need to use your ears when tweaking it – but if time is of the essence, and you don't want to get bogged down with technicalities, it's got to be worth a go, especially when you consider that it only costs £45.

But, in the end, none of that matters much when using noise to construct or add character to a sound: the choice of filter, its various settings and the character of the filter have a far greater influence on the final sound. So instead of searching for a particular type of noise source, seek a synthesizer whose filters offer the type and character of the sound you're trying to achieve. Use those filters to shape whatever noise source the synthesizer provides.

The end of OS X?

Thomas Norman asks:

Q I've heard some troubling rumours recently that Apple might be planning to phase out OS X and instead use the iPhone OS (or iOS, as it's now called) for their computers as well as their mobile devices.

Do you think this is likely to happen? Don't get me wrong: I like my iPhone as much as the next man, but the idea of having that kind of closed operating system on my music-making Mac fills me with horror.

Mark Gyver replies:

A In the wake of Apple's iPhone 4 announcement, a variety of pieces appeared on the internet speculating that, because Steve Jobs hadn't really mentioned the Mac during his keynote, Apple wasn't interested in it any more. Furthermore, the re-branding of iPhone OS as the non-device-specific iOS got people wondering whether it'll soon be replacing OS X.

I don't think you've got too much to worry about, though. Although the iOS and the devices that run it are developing at a scary rate, Apple still makes money out of the Mac, and the majority of users – music makers included – simply wouldn't tolerate an operating system that required all apps to come through one store and didn't support all the software and standards that they rely on. Would Apple really want to get rid of GarageBand, Logic and Audio Units? I don't think so.

Don't be surprised, though, if OS X starts to look a little more like iOS in the future. I can certainly envisage a situation in which the default start-up screen consists of a grid of application icons rather than the current desktop, but in the short-to-medium term, I don't think OS X will be phased out.

Doug Kraul replies:

A I think you may be confusing white noise with processed white noise. Fat or warm are hardly adjectives I would apply to white noise. Processed noise, particularly when it's been filtered, does however take on some of the character of the filter or effect applied.

White noise is noise that has a particular frequency spectrum: all

frequencies present in equal amplitude. By itself it can sound unnatural or unappealing. Natural sounds, such as wind or surf crashing on a beach, are filtered white noise. This filtering usually reduces the higher frequencies.

A second type of noise often used in sound synthesis is called pink noise. It differs from white noise in that its upper frequencies diminish in amplitude. Essentially, pink noise is

white noise that has been low-passed filtered. The filter is a very special one, though – one that offers only -3dB per octave reduction. You will not find this filter on most synthesizers, and for good reason: it can only be approximated.

Different analogue synthesizers do employed different methods to create their noise sources, and digital or software synthesizers use varying algorithms to approximate noise.

Q **Clarke Moore asks:** I've got some pretty out-of-tune vocals and was wondering if you could help me understand how to use Logic's pitch correction plug-in a little better? I understand the general principle of its workings but I'm not 100% sure what I'm doing. The main trouble I have is that the lead vocal on the track I'm working on is pretty inconsistent and though the plug-in is tuning most of the notes, it's not getting some of them in tune properly. Please help me!

A **Dan Goldman replies:** Logic's pitch correction plug-in is an extremely handy tool to have around, although its interface can seem a little confusing at first. Here's a six-step walkthrough to help you to get the best results out of it.



1 Insert the plug-in on the channel that contains the lead vocal. Next, work out what key the majority of the lead vocal is in. If you are unsure, select the Chromatic option, which will tune/analyse every note within the 12-note chromatic scale (each note within an octave). Determining the root key of the track will greatly help with accurate pitch tuning of the lead vocal.



2 Now have a listen to the vocal and determine if it's a quite a low vocal, or a higher one. If higher, select the Normal option; if lower, select the Low Octave button. In this case I've selected Normal, as the vocal is fairly high in pitch/frequency content. Play the track, and pull down the Response slider until Logic tunes most of the notes. I've set the response here to 20ms, which works well on this vocal.



3 You may find that the correction is sounding wobbly on some of the notes. This is usually as the tail of a note is harder for the plug-in to pick up. At this point, you can zoom in on that particular note tail in Logic's Arrange and use track automation to pull the Response slider to fastest. This should iron out the majority of the pitch wobble on the tail of any suspect notes.



4 If you find that Logic is tuning certain notes to the wrong pitches, it's easy to remove the notes from the scale so that Logic will instead tune to the nearest available note within the selected key. Here, the lead vocal shouldn't have any D sharps in it, as they don't relate to the root key, so I've eliminated D Sharps by pressing the D sharp note on the plug-in's keyboard. This way, Logic will tune to the nearest available pitch, which is E (which fits the song key).



5 Similarly, if there are notes that have been sung that you don't want to be corrected at all, they can be completely removed from correction by pressing the notes corresponding Bypass button. For example, if all of the Fs are already in tune or they are deliberately sung slightly off and you don't want them corrected, this is when you would use this function. Here, I've bypassed all Fs from being corrected.



6 Now that the majority of the vocal is being corrected to fit the song, you may find that the entire vocal is still a little sharp or flat overall. Thankfully, there is a way to tune the entire output to fit the song perfectly. Simply move the Detune slider up or down to get the vocal bang-on in tune with the rest of the instruments in the song. Here, the vocal was sung flat in general so I've used the Detune slider to sharpen the overall pitch by four cents. **FM**



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From the makers of **FutureMusic**

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

- > Apple MacBook
- > Korg nanoKeys

Software

- > Ableton Live 7

FAVOURITE GEAR

> "I had a Korg Electribe EMX-1 once but sold it for ridiculous reasons. I really miss it. That's my favourite gear I've had so far. But right now it's my MacBook that I couldn't live without."



Oblivious Megaman

Contact: mistafoton@gmail.com



We love a nice restrained tight bit of Minimalism from time to time and this covert, secretive shuffler reveals

more than most as it journeys from undercover thudding through to some more obviously danceable beats.

It's all about selecting some dramatic and excessive effects then letting your sounds 'see' them at key moments and this is absolute masterclass material. The drums are as dry as a bone, meanwhile the glimmers of synth and that so-sweet 'drip' sound comes swathed in a vast, cavernous dome of

stereo reverb. Elsewhere there's some masterful EQ automation as indistinct tapping and thudding reveal themselves to be melodic and tension-building counterpoints to the rhythm and the beautiful synth/choral sampling is something to behold.

And all this from a set of kit that should make better equipped, far more expensive studios blush with embarrassment. There's a very strong software and samples dominance to the music right now – we're left yearning for something a little more 'real' and unpredictable but as an 'in the box' creation, this one is state of the art.

The Artist



Name:

Atli Már Júlíusson

Where:

A little island called Iceland

My track:

"A jumpy Progressive/Techno track with a hypnotic breakdown."

Which bit of this track are you most proud of?

"I've got to say the distorted bassline. It's basically a saw-ish synth chord that I threw in the sampler, plus some distortion. Last but not least, a little bit of sidechaining to the beat. For the drums and percussion I used Ableton Live's Drum Tracks.

"The bassline is the Ableton Live Simpler. I just added some nice bass chords and threw a Saturator distortion on it. The square delayed sound that flows with the beat is a simple square sound with an filter envelope and then delay and reverb."

If we were to give you £5,000 for gear what would you spend it on?

"A Moog Voyager, Apple Mac Pro, a bunch of expensive plug-ins and some kick ass recording hardware."

What are you working on now?

"Just the normal stuff: making originals, trying to get signed on labels, getting a job somewhere as well!"

The Best of the Rest...

Essential Engineering Under Sodium Street Lights

soundcloud.com/under-sodium-street-light



Yes! Go for it! Let's all get lost in a wet, rainy and bleak Thatcher's Britain for a bit of

Numan / OMD / Cabaret Voltaire-inspired dgergery!

It's like the miners are on strike all over again. Suddenly we're transported back to sixth form discos and ceaseless rehearsal studio jams with borrowed drum machines. It's a time capsule of early Electronica and

maximum respect to you for keeping it so very real.

"I love Ableton Live," says this track's maker William Brennan. "For me it has allowed me to do what and anything I want. There's no restrictions so far. When I first used it I couldn't believe the almost limitless

things it could do." It's a wonderful thing for sure but there's a few features we reckon would sharpen up your tracks.

We're all for a little looseness but there are times when quantisation is your friend. And we can't vote with any confidence on that vocal too. There's an interesting treatment at play there but using a compressor would give it the presence and level of consistency that we demand.

Class One Flume

myspace.com/Flume123



Don't let that out of tune intro put you off. Once the Rhodes and drums come together at 0:46 there's a strong melody that'll have you hooked. There's some great progressions here. It's very Air both in instrumentation and melodic construction. That quirky 'moving one

finger across in a chord just before the rest" is such a gorgeous trick that gives the track a real hook.

"My favourite bit would have to be the pitch bent lead sound that I made with Native Instrument's Massive," says Harley Streten. "It has an acoustic sound to it even though it is completely synthesized. Also I'm really happy about the fact that it's such a simple track, yet I think that with small variations here and there it keeps things interesting."

You're bang on there. The synth pad sounds lush and surprising every time it drops and the Rhodes seems to change throughout the song. Special mention to those great 'live' drums. We love it when a drum track actually sounds like someone hitting something.

"Right now I use a Novation 25SL MkII, Edirol FA-101, Blue Sky Monitors, Native Instruments Massive, Sylenth1, Live 8 and Spectrasonics Trilogy."

We reckon you've got that electronic/live balance just right and are looking forward to hearing more of your snappy and smart instrumentals.

New York City Suicide Folk Club Fundamentalist

soundcloud.com/folkclubfundamentalist



Dubious lyrical content. Not a good start but we're going to let this slide just

because we like everything else going on in this track. We reckon it's the mad snare drum – just what have you done to it? – that sounds like rattling a box of matches that makes it for us. That and the bongos in the chorus, of course. That said you can keep the uptempo ending from 3:01 onwards. Oh dear...

"We call this music therapy. A collaboration with my friend Victor Pope on an acoustic guitar song he'd written after a visit to NYC. I gave it a bit of synth and beats treatment," says Ben Nevis. Ben Nevis? Are you sure? Anyway...

There's a real Urban Folk vibe to the track that makes it quite anthemic in its own way. We're reminded very much of Bran Van 3000's superlative *Drinking in LA*. With a little more loops and some



SELECTED KIT

Hardware

- > Apple MacBook
- > Korg microKorg
- > Boss Metal Zone distortion pedal
- > Alesis M1 Monitors

Software

- > Ableton Live
- > Reason 4
- > Camel Audio Alchemy

FAVOURITE GEAR

> "I couldn't go without Ableton Live, but I do love my little Korg. I would have a favourite synth if I could afford one!"

Form and Function Evan Stanley Jones

Contact: evan.s.jones@hotmail.com

There's a whole shedload of Deadmau5 going on here but this is just

different enough to warrant a gushing write up in *Future Music*. There's not a lot of gear here but there's plenty of great ideas and plenty of bold intention and skill in how to make a track really come together.

"This track is just a number of chord progressions, builds and drops that add up to – I guess – a Progressive, Housey sound," says Evan.

"For me the best bit is the second 'movement'. It

changes from major to minor and gradually, in my opinion becomes more technically and musically complicated. It's also, in my humble opinion, a great drop!" Yes, it certainly took us by surprise and – after careful consideration and reference to the rulebook – we can officially say we love it!

"Right now I'm working on sounds and bleeps and hopefully they'll build up to something. I just finished a song called *Afrikah* which got featured on a couple of blogs, and I'm trying to improve the quality of my mixes." Great work.

Hot Pick



SELECTED KIT

Hardware

- > Roland Juno-60
- > Roland JX8P
- > SPL Transient Designer
- > Alesis 3630
- > Saffire Pro 40
- > Mackie Big Knob

Software

- > Logic 8

FAVOURITE GEAR

> "My Roland JX8P, so distinctive and warm. It's my go to hardware synth at the start of every project."



Tonight on the Floor Rousson

Contact: rousson-music@hotmail.com

We've featured Rousson on these pages before but this mix of fellow artist Robo1's *Tonight*

On The Floor is superb. The EQ trick where you keep half the track imprisoned at the start then unleash it for the drop has never been done better.

When this opens up at 1:05 it's absolutely textbook. And we can't get enough of that fat and flappy Simmons snare drum. There's some great layering of your synth chords and you've kept them superloud in the mix to

make a real powerful stack. And the analogue ebb and flow of your warm bassline acts as a perfect counterpoint.

Most of all though, it's your use of selective EQ – as in your intro – that makes this a bit of a classic. Sending the drums through a buss and sucking the life out of them before dropping them all back at once is a great effect. We're reminded of Aeroplane and Sebastian Tellier's Guy-Manuel de Homem-Christo-produced *Sexuality*. It's not often we compare a demo to the work of one of Daft Punk y'know...

The Artist



Names:

Ian Finch

Where:

London, UK

This track:

"A bit of a head nod,

stylistically, to the musical era of my youth."

Which bit of this track are you most proud of?

"I'm definitely most proud of the lightly vocoded element, it was tricky to harmonise correctly and was converted from a straight vocal using Prosoniq Orange Vocoder."

If we were to give you £5,000 for gear what would you spend it on?

"I think I'd probably invest in a new more permanent studio space with correct acoustic treatment. Then I'd try and hunt down and purchase a Roland Jupiter-8, but it might even cost me more than that."

What are you working on now?

"I'm working on a remix for Spacewalker Recordings called *Beach Runner* that's due out in mid-July."

more effects this would be right in the same class.

Sideways Heart The Idyllic Dead

pirate_999@live.com



You can't beat a bit of 'found sound' to fill up your track and the intro to this one is a real grabber. After that we've some great use of the soundfield that makes some quirky, tight little sounds sound big, exciting and interesting.

Love the ambience on the vocal and the confidence of the performance. And that mix – letting the track really breathe with a real sense of performance rather than editing and perfecting the crap out of everything really suits the off kilter approach to the track.

"I'm most proud of the sweep in between sections. The way the bass wobbles, with the white noise carrying it into the vocals with the repetitive synth line that's pushing the track forward. I added the wobble in the bass using LFO modulation. It's quite simple but I just never thought of using it before." Nice trick.

About To Blow Mtec & Detox

audioliteproductions@yahoo.co.uk



Like we always say. We love it when a track has a little 'flava'. That's to say something a little more urbanite gets through the Future Music inbox and this UK Hip Hop cuts it with the best.

There's a great upfront mix, a dangerous mix of sounds and a killer

vocal. Love the flanging on the string sound, the clean piano and some nice US-style double-tracked vocals.

There's a healthy amount of bass and the snaps really jump out at you. If anything there's a little mid-range missing but when the crazy-loud synth drops it really fills in that space. And how about panning out some those double tracked vocals? The track is very central and focussed. A little jumping around the soundfield would help uncage the energy that's obvious within the track.

Cyst (Extended Edit) JimmyJ

soundcloud.com/jimmyj



This one is positively bursting at the seams and once you crank it it fills the room (and doubtless the floor too.) What is it about Australia that brings out the massive Electro House in people? Dunno, but we're loving it.

"I'd call this an Electro House mishmash of dirty synths and catchy grooves," says its maker Jimmy Jerkovic. "I'm always fond of the drums and take the most pride in them, but for this track I love the breakdown and the stacking and layering of the synths. The build-up is also very cool and most of the synths in the breakdown were made from ES2 instances in Logic. The main synth was actually rewired from Reason to Logic."

We're most impressed with the SIZE of the track. That big kick promises much and when the bass drops at 0:30 it makes good on all its promises. Banging. Sorted. Etc. **FM**

Hot Pick



SELECTED KIT

Hardware

- > Apple MacBook Pro
- > Evolution UC33-e
- > Akai MPD24
- > M-Audio Axiom25
- > Mordaunt Short Avant 905i speakers
- > Korg Kaoss Pad
- > Native Instruments Audio Kontrol 1

Software

- > Reason 4.0
- > Logic Pro
- > Sugar Bytes Effectrix
- > Dreampoint FreeVerb3
- > iZotope Ozone4

FAVOURITE GEAR

- > "Without a doubt the Evolution UC33-e – there is nothing better than a blank slate of knobs and sliders just waiting to be programmed."



Jonathan Azzo

Contact: rmsandrew@gmail.com

There's a deceptive Glitch intro to this one, but once the warm drums drop

and it makes its calming, thoughtful intentions clear it's an altogether more soothing experience.

"For me Jonathan is the moment when you're falling asleep. You're drifting into a fantasy and your own headspace and this track is about what images are invoked. The song is a guide and you have to fill in the blanks." Wow. Nicely put Andrew Azzoardi. We're totally along for the ride. "I would have to say that I

am most proud of how the three slurred bands of sound mix and interact with one another," say Andrew. "Each is being pushed and pulled, coming into focus and dissipating. The low warm bass pad, the simple arpeggio in the mid range and the high brief chords. Each band is shifted from one another to slightly syncopate the composition, to give it a fragility. As the song progresses the shifts become more pronounced until they break apart and the song is returned to silence." We really couldn't have put it better ourselves.

Unsigned and Unloved? Get Your Tracks on These Pages!

If you're an amateur music maker wanting to take the next step up then we want to help. Broadcast your music via the *FM* DVD and bravely subject your work to our expert advice!



1 Non pros please!

Are you unsigned, non MCPS or PRS registered and making music that you think could be something special? Then our *Demos* pages are for you. We're here to help and want to broadcast your work to *FM* readers around the world! If you're already making money and living the dream then thanks, but no thanks. Everyone else should head to futuremusic.co.uk our virtual home and blog site where you'll find regular input from the *FM* team.



2 Look for the SoundCloud DropBox

We're big fans of SoundCloud, the online audio sharing service that let's you effortlessly pass around your audio to your friends or collaborators. SoundCloud lets you audition the audio in your drop box without the need to download it first – it plays in your browser with a click – making it the fastest and easiest way to get at audio files ever. Check out soundcloud.com to get your own SoundCloud box. Ours is on the right, just below the advert.



3 Click on the box and upload

Click on *Future Music's* SoundCloud DropBox then click on the big 'Choose files' button and upload your very BEST work. We haven't the time to wade through 12 tracks to get to the good ones! They need to be MP3s please. AND YOU MUST take the time to add a description – your name, address, band name, track name please – and give us your email address too! Include your track name and band name in any correspondence please!



4 Start work on that bio...

If your track is selected to be featured in the magazine we'll email you and ask you a whole bunch of questions such as your favourite gear, how you got your sound, you know – all the things you see us ask people! We're always up against one deadline or another here at *FM* so a rapid concise and easily understood reply to our questions is appreciated. Make sure you put your real name, artist name and track name on all correspondence!

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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.

€ 259.- **€ 217.-**

order code 118879

Behringer Xenyx X2442 USB

24-channel mixer with 60mm faders

10 mic ins with 48V phantom power, 75Hz low cut, compressor, 24bit multi FX with 16 presets, internal USB sound card, 2 stereo ins, 3-band EQ with parametric mids, 4 aux (pre/post), insert, Peak LED and mute each channel, 2-track I/O, XLR main out, 4 sub groups, internal power supply, includes 19" rack kit and energyXT2.5 compact music production software.

€ 309.- **€ 258.-**

o. code 242913

Yamaha MG 166cx

16 channel mixer

8x mono mic/line ins (XLR/jack), 2x mic/line ins (XLR/stereo jack), 2x stereo line ins (jack), 3x aux sends, 8x inserts, 3-band EQ with parametric mids, internal compressors per mic channel, SPX FX processor with 16 programs, 18dB high pass filter, high-end mic preamps, 48V phantom power. Dimensions: 47.8 x 10.2 x 48.9cm. Weight: 5.5kg.

€ 358.- **€ 299.-**

order code 115511

Mackie 1402 VLZ3

14-channel mixer

New XDR 2 preamps, 6x mono mic/line inputs (XLR/jack), 4x stereo line inputs (jack), 2x stereo aux returns, 2x aux sends, 6x inserts, 3-band EQ, 18dB lo-cut filter, PFL, 48V phantom power, internal power supply, balanced master outputs (XLR/jack). Dimensions: 8.1 x 35.6 x 32.9cm (HxWxD). Weight: 4.5kg.

€ 385.- **€ 322.-**

order code 112366

Alesis MultiMix 16

FireWire

16ch. mixer with FireWire interface
8x mic/line ins, 4x balanced stereo line ins, 3-band EQ per channel, 2x aux send/returns, 100x 28bit FX programs, headphone out. FireWire interface: 18 ins, 2 outs, 24bit/48kHz, ASIO/WDM drivers for Win XP SP2, Core Audio drivers for Mac OS X, includes Cubase LE.

€ 398.- **€ 333.-**

order code 186079

Mackie 1642 VLZ3

Compact 16-channel mixer

8x mono mic/line channels, 2x mic/line stereo channels, 2x stereo channels, 4x subgroups, 4x aux (2x pre/post switchable), XDR2 mic preamps, 60mm faders, 3-band parametric EQ (mono channels), 4-band EQ (stereo channels), 48V phantom power. Dimensions: 42.5 x 13.1 x 42.1cm (WxDxH). Weight: 8.3kg.

€ 499.- **€ 417.-**

order code 112362

Mackie 1604 VLZ3

16-channel mixing desk

16x mono mic/line XLR/jack ins, 4x stereo aux returns, 6x aux sends, 16x channel inserts, 8x direct outs, 3-band EQ with parametric mids, 18dB low cut filter, PFL, XDR mic preamps, 48V phantom power, internal power supply, 4 subgroups, master insert, balanced jack outputs, includes rack kit. Dimensions: 44.5 x 12.9 x 44cm (HxWxD).

€ 869.- **€ 726.-**

order code 112364

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.

€ 949.- **€ 793.-**

order code 132316

suitable flightcase

€ 179.- **€ 150.-**

order code 161855

Yamaha 01V96 VCM

Digital mixing console

24bit/96kHz, 24 analog inputs, 12x mic inputs, expandable to 40 channels, includes ADAT interface, 4 FX processors, parametric EQ, includes Studio Manager software.

€ 2369.- **€ 1980.-**

order code 161112

suitable flightcase

€ 188.- **€ 157.-**

order code 199056

www.thomann.de

Telephone Hotline: +49 9546 9223-55

Fax: +49 9546 9223-24

Miditech Midistart Music 25

MIDI master keyboard

25 touch sensitive keys, joystick for pitchbend and modulation, octave up/down, MIDI output, USB connection, includes USB cable and Magix Sampletime SE, dimensions WHD: 38 x 8 x 24cm, weight: 2.3kg.



order code 230804

€ 46.-
£ 38.-

Miditech Midistart 3 USB

MIDI keyboard

49 full-size touch sensitive keys, pitch bend and modulation wheels, USB port for direct connection to Mac/PC, MIDI out, includes USB cable and Magix Sampletime SE PC software. Finish: Silver



order code 116317

€ 55.-
£ 46.-

Kurzweil SP2 XS

88-note digital stage piano

Weighted action keys, 64 voices, split and layering function, 4 keyboard zones, 64 Kurzweil presets (pianos, e-pianos, mallets, strings and voices), 60 rhythm patterns, metronome, 16 user set-ups, four freely assignable knobs, pitch and modulation wheels, effects, USB port, LED display, connection for expression pedal and footswitch, MIDI in/out thru, internal stereo speaker, weight: 22kg.



order code 210648

€ 659.-
£ 551.-

Akai APC 20

Ableton Live USB controller

Exclusive bi-directional communication between the APC 20 and Ableton Live (no mapping required), USB plug-and-play, 40 triggers, 1 rotary control knob, 8 channel faders, 1 bus fader, compatible with PC and Mac, includes Ableton Live Lite Akai APC 20 edition.



order code 243147

€ 179.-
£ 150.-

Akai APC 40

Ableton Live DAW controller

USB plug-and-play, 40 triggers, 16 rotary control knobs with LED, 8 channel fader, 1 bus fader and 1 cross fader, 2 footswitch connections for tap tempo, tempo nudge, record enable, solo/cue function, for PC/Mac, incl. Ableton Live Lite Akai APC40 Edition.



order code 223229

€ 389.-
£ 325.-

Native Instruments Audio 2 DJ

Compact DJ audio interface

24bit/96kHz, USB 2.0, 2 stereo line/headphone outs, 1 LED each channel, low latency ASIO/Core Audio/DirectSound drivers, includes 2 jack to RCA cables, Traktor Pro demo version, Kore player, Kore soundpack free choice, Guitar Rig Go, for Windows XP/Vista and Mac OS X 10.4 or higher.



order code 235147

€ 88.-
£ 74.-

ESI DualFire

24bit/96kHz FireWire audio interface

2x ins with level controls (1/4" jack), mic preamps with phantom power (XLR), 2x hi-Z ins, 4x analogue outs, direct input monitoring with level control, headphone out, bus powered or via separate power supply. Supports DirectWIRE 3.0, MME, ASIO 2.0, GSIF 2.0, DirectSound and Core Audio. Includes power supply and Steinberg Cubase LE 4.



order code 206255

€ 95.-
£ 79.-

Tascam US-122MK2

24bit USB 2.0 audio MIDI interface

Supports 2 ins and outs, 2 XLR mic ins with 48V phantompower, enhanced highgrade mic preamps, 2 analogue line ins (1 switchable for Hi-Z guitar, bass in), MIDI I/O, 24bit/96kHz, latency-free monitoring with switchable mono function, USB 2.0, USB Bus powered, aluminium sidepanels, incl. Cubase LE4.



order code 235648

€ 129.-
£ 108.-

Line6 Pod Studio UX2

USB audio interface

2x mic ins with preamp and phantom power, guitar/bass input, stereo line I/O, headphone out, Line 6 POD Farm software with FX Junkie model pack, 18 guitar amp models, 5 bass amp models, 64 effects, 6 mic preamp models, 24 guitar cabinets, 5 bass cabinets, includes Ableton Live Lite and Reason Adapted.



order code 214446

€ 159.-
£ 133.-

Native Instruments Audio 4 DJ

Compact DJ audio interface

24bit/96kHz, 4 switchable 12dB line/phone inputs, 4 hi-gain outputs, headphone output, low latency ASIO/Core Audio/DirectSound drivers, 8 LEDs, includes Traktor 3 LE and Kore Player with 600MB soundpack, USB 2.0, for Windows XP and Mac OS X 10.4, dimensions WHD: 10,1 x 12,1 x 4,2cm, weight: 511g.



order code 223057

€ 185.-
£ 155.-

Cakewalk UA-25 EX CW

USB audio interface

2 channels, 24bit/96kHz AD/DA, mic/guitar/line ins, 48V phantom power, USB powered, integrated limiter and analogue compressor, ground lift, headphone out, MIDI I/O, direct monitoring, compatible with Windows (XP/Vista) and Mac OS X 10.3.9 and higher.



order code 235896

€ 185.-
£ 155.-

Tascam US-164 I

USB 2.0 audio interface

24bit/96kHz, 8x mic/line ins with phantom power and front level meters, 2x balanced line/instrument ins (front), 4x balanced line ins (rear), 4x line outs, monitor out, S/PDIF I/O (switchable to AES/EBU), MIDI I/O. Compatible with Win XP, Vista 32 and Mac OS X 10.4 or higher, includes Steinberg Cubase LE 4.



order code 138750

€ 279.-
£ 233.-

Apogee Duet Bundle

FireWire audio interface

24bit/96kHz, 2 channels, Firewire 400 I/O, breakout cable with 2 XLR mic ins, 2 1/4" jack instrument ins, 2 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

€ 415.-
£ 347.-

M-Audio ProFire 2626

24bit/192kHz FireWire audio interface

26x analog/digital I/O, ideal for project studios, 8x preamps with Octane™ technology, flexible onboard DSP mixer, user-assignable master volume knob, standalone operation, critically acclaimed jitter elimination, Pro Tools M-Powered compatible, 8x analog mic/line jack ins with phantom power, 2x instrument ins, 8x analog outs, 2x ADAT I/O.



order code 207107

€ 422.-
£ 353.-

Focusrite Saffire PRO 40

24bit/96k FireWire audio interface

20 I/Os, 8 mic preamps, 8 analog I/Os (2 mic/line/instr. combo XLR, 6 mic/line combo XLR), ADAT I/O, 2 S/PDIF I/Os, 2 monitor outs, monitor switch, 2 separate headphone buses, MIDI I/O, zero-latency DSP mixer/router, incl. plugin suite, 19", 1RU, internal power supply, weight: 3kg.



order code 219725

€ 458.-
£ 383.-

MOTU Ultralite MKIII Hybrid

FireWire and USB audio interface

24bit/192kHz, 2 mic/instrument ins, 6 bal. ins and 10 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

€ 495.-
£ 405.-

MOTU 828 MKIII

19" FireWire audio interface

28/16 digital mixer with FX, 24bit/192kHz, integrated DSP for EQ/compressor/reverb, new CueMix console, 2x mic/guitar inputs with internal hardware limiter, 48V phantom power, 8x balanced line I/Os, 2x XLR main outs, 2x sends, 2 ADAT I/O, S/PDIF I/O (24bit/96kHz), MIDI I/O, word clock I/O, 2x headphone outs, for Mac & PC. Dimensions: 19"/1U



order code 205183

€ 695.-
£ 573.-

RME Fireface 400

FireWire audio interface

24bit/192 kHz high performance FireWire audio interface, analogue technology from ADI-8 converter, mic preamp technology from Quad and OctaMio (2 mic preamps), TotalMix technology from Hammerfall DSP series, very reliable drivers.



order code 193883

€ 799.-
£ 668.-

RME Fireface UC

USB audio interface

36 channels, 24bit/192kHz AD/DA converter, 48V phantompower, 18x simultaneous I/O, interconnect input, 8x analog I/O, ADAT I/O, S/PDIF I/O, 2x MIDI I/O, WordClock, intelligent clock control, SyncCheck, SyncAlign, SteadyClock, Di-GiCheck and TotalMix. Dimensions: 9.5"/1U



order code 229395

€ 859.-
£ 718.-

Native Instruments Kore/Komplete Bundle

Complete hardware/software package

7 Native Instruments software products including Kore 2 systems (software and hardware), Kontakt 4, Absynth 5, Guitar Rig 4 Pro, Reaktor 5, Battery 3, FM8, Massive, about 7000 presets and sample library with more than 60GB.



order code 247961

€ 666.-
£ 557.-

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

€ 55.-
£ 46.-

AKG Perception 220

Large diaphragm condenser mic

1" diaphragm, metal housing, cardioid polar pattern, 20Hz-20kHz, switchable 300Hz lo-cut filter, switchable -20dB pad, 135/155dB max SPL, includes elastic holder and carrying case. Dimensions: 53 x 165mm (diameter x length). Weight: 525g



order code 208310

€ 135.-
£ 113.-

Rode NT1-A

Complete Vocal Recording Solution

Large diaphragm microphone 20Hz-20kHz, 100Ω impedance, 132dB dynamic range, 137dB max SPL. Includes SM6 deluxe shockmount, 6m cable and Peter Freeman 'Studio Secrets' tutorial DVD.



order code 235937

€ 179.-
£ 150.-

Neumann TLM 102

Large diaphragm condenser microphone

Cardioid pattern, 20Hz-20kHz, 500Ω impedance, 12dB-A equivalent noise level, 144dB max SPL for THD 0.5%, includes SG2 stand mount swivel. Weight: 260g.



Finish: Nickel
o. code 237768

Finish: Black
o. code 237769

€ 539.-
£ 451.-

Brauner Phantera

Large diaphragm microphone

Cardioid, 83dB signal to noise ratio, 142dB max SPL @ 0.3% THD, solid state, FET, 20Hz-22kHz, requires 48V phantom power. Includes shockmount, transport case and 5m Vovox link direct S connection cable.



order code 115752

€ 1369.-
£ 1144.-

tc Helicon Harmony-G

Compact vocal processor

Harmony arrangement algorithm listens to guitar and voice to follow your music, 6 reverb/delay combinations for vocal and guitar, 10 presets each with A/B location, selectable harmony voicing, XLR mic in with 48V phantom power, stereo line out (balanced XLR), guitar in and pass-thru for separate amp/tuner, includes external power supply.



order code 205731

€ 149.-
£ 125.-

tc Helicon VoiceTone Create

Vocal FX unit

99 music style based FX combinations, 5 'favourite' user presets, XLR mic level I/O in stereo or mono, clean studio quality mic preamp with phantom power, 2x XLR outs (for mono or stereo operation), tap tempo function.



order code 117131

€ 149.-
£ 125.-

SPL GoldMike 9844

2-channel valve preamp

Discrete Class A solid state, 48V phantom power, phase reverse, pad function, flair presence enhancement, very clear and warm sound. Dimensions: 19"/2U



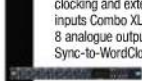
order code 123370

€ 425.-
£ 355.-

Focusrite Octopre MKII Dynamic

8-channel Mic preamp

with AD/DA converter, 1-button compression on each channel, integrated 8-channel 24bit/96kHz digital I/O, 5-LED input metering and direct out on each channel, internal clocking and external via BNC, 8 analogue inputs Combo XLR (2 mic/line/inst, 6 mic/line), 8 analogue outputs, 2x ADAT (dual LightPipe), Sync-to-WordClock, JetPLL jitter-elimination, no vent.



order code 242382

€ 585.-
£ 489.-

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

€ 679.-
£ 568.-

KRKR RP5 Rokit G2

Active studio monitor

75W, 5" + 1" speakers, 53Hz-20kHz, magnetically shielded. Dimensions: 27.6 x 18.5 x 25cm. Weight: 8kg. Unit price!



order code 213024

€ 135.-
£ 113.-

order code 213090

€ 215.-
£ 180.-

Yamaha HS50M

Active 2-way studio monitor

70W bi-amped bass reflex system, 5" woofer, 3/4" tweeter, 55Hz-20kHz, XLR & jack ins, adjustable input level, mid EQ, room control, full trim, switchable low cut, fully magnetically shielded. Unit price!



order code 186461

€ 139.-
£ 116.-

order code 186463

€ 225.-
£ 188.-

ESI nEar08 Classic

Active 8" studio bi-amp monitors

2-way bookshelf monitors, magnetic shielded, LF amplifier power: 70W, HF amplifier power: 70W, frequency response: 40Hz - 24kHz, 1 balanced/unbalanced input TRS, dimensions WHD: 35,8 x 25,5 x 32,2cm, weight: 10kg/unit. Pair price!



order code 222139

€ 215.-
£ 180.-

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 (

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?



Clavia Nord Wave | £1,395

Review FM196 If you liked the Nord Lead you'll love the Wave. It's more versatile and sounds fantastic.



Moog Taurus 3 | £2042

Review FM226 With more lows than an Eastenders omnibus, this beast will blow your socks off. Modern features make this a dream to use.



Roland Gaia SH-01 | £579

Review FM227 No menus with hands-on controls all over. Despite the rosey presets, Roland are starting to get back to what they do best.

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 Mangers	Warp your sound and break new ground
124	Performance Samplers	Take control of your audio live and direct
124	High-end Audio Plug-ins	Treat yourself to the best that money can buy
124	Field Recorders	Record your band or go searching for found sound
124	Microphones	The best mics around for everyone's budget
125	eBay Classic Retro Finds	Keep an eye out for our suggested list of nostalgic love
125	Ways To Stand Out	Dare to be different and reap the rewards
125	Digital Audio Workstations	Which DAW is best for the music you want to make?

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Waldorf Blofeld Keys | £699

Review FM211 A huge amount of exciting presets and solid good looks make for a killer all-round synth.



Korg microKorg XL | £439

Review FM210 This fresh update of everyone's favourite mini-synth gives a new engine and a great vocoder.



MFB Kraftzwerk | €580

Reviewed FM219 German-built modular synthesis on a budget. Prepare to get addicted to analogue with this flexible patch-happy synth.



Dave Smith Mopho Keys | £550

Review FM229 Hands-on controls and wooden-ended good looks make this another winner from DSI.



Korg microStation | £528

Review FM227 A mini-keyed workstation that delivers on quality while still being fun. Works well both on-stage and in the studio..



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.



Lennar Digital Sylenth1 | £139

Review FM208 This simple-to-use, Virus-like synth comes packed with a great set of presets.



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.



Korg Kontrol 49 | £319

Review FM160 Great keys and pads, with looks and build that elevate it above the competition. But there are easier to set up controllers out there.



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



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 Traveler | £795

Review FM177 Came out on top in our FireWire group test. Enough ins and outs for any project studio and still portable too. A real all-rounder.



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.



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.

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 MoogerFooger MIDI MuRF | £419

Review FM220 The old MuRF filters combine with the attractive features of MIDI and software patch editing.



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.

**APS IO Active Monitors** | £919

Review FM216 These provide an honest listening experience that could threaten the big boys.

**Focal Professional CMS65** | £1,230

Review FM215 The natural and detailed sound of Focal, delivered in a compact and affordable package.

**M-Audio Oxygen 49** | £228

Review FM189 An excellent budget controller range that continues to improve. Ideal for beginners.

**Novation 49SL Compact** | £269

Review FM193 The stripped-down alternative to a full-size SL. Cheaper, but still packed with unique features.

**Akai MPK88** | £600

Review FM226 A few minor issues considering the high price, but a great weighted hammer action keyboard redeems this controller.

**M-Audio Mid Air 25** | £199

Review FM181 Not only can you sling it in a bag, but you can also stride to the front of the stage thanks to its wireless power too.

**Korg microKontrol** | £275

Review FM143 Great build quality and looks and while its reduced-sized keys are an acquired taste, it's certainly more portable as a result.

**Echo Audiofire Pre8** | £579

Review FM228 A very high-quality interface from Echo Audio – heavy on I/O and mic pre quality.

**Mackie 1220i** | £799

Review FM224 This hybrid mixer and interface covers all recording bases in a neat package, with the added benefit of Pro Tools compatibility.

**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.

**Steinberg CI2+** | £289

Review FM230 Still lacking a MIDI interface, but a great software bundle means if you want Cubase as your DAW, then look at this package.

**Electro-Harmonix Voice Box** | £160

Review FM213 Give this a decent input and it will output robot voices or perfect harmonies with ease.

**OTO Biscuit** | £529

Review FM225 Gorgeous design details and fantastic for anyone who fancies a bit of lo-fi 8-bit computer game crunch in their music.

**TC Helicon VoiceTone Synth** | £225

Review FM221 A few teething problems, but this is still a fantastic hardware vocoding and tuning tool.

**Audioease Speakerphone 2** | £400

Review FM217 This creative and comprehensive speaker emulator adds air to your sounds and mixes.

**Avid Digidesign Eleven Rack** | £789

Review FM222 It's a guitar processor that makes re-amping a breeze. Plus it's a Pro Tools interface to boot!

Gear Chart

1

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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.



Electrix Repeater | £649

Review FM117 Used by our current fave Imogen Heap for building whole tracks, this discontinued unit still has a healthy second hand market.

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.



Lexicon Native Reverb Bundle | £1,174

Review FM225 The motherload of all reverbs brings the original digital algorithms straight to your DAW.



Pro Audio DSP DSM | £200

Review FM226 An incredible multi-dimensional EQ and dynamics processor that works magic!



UAD 4K SSL Plug-ins | from \$199

Review FM215 Brilliantly modded pieces of SSL goodness that are begging to be on your UAD card..



Brainworx BX Digital | €398

Review FM200 There's no other plug-in quite like BX's top of the line mastering tool – incredible software.

Field Recorders



Tascam HD-P2 | £729

Review FM186 Built to last and definitely the pro's choice. A multitude of formats and mic settings and superlative sound too.



Roland R-09HR | £259

Review FM204 This flagship recorder will produce crystal clear, 24-bit 96kHz recordings, all from the palm of your hand.



M-Audio MicroTrack II | £229

Review FM202 Not only does this new version look better, but it's also cheaper. A superb update.



Yamaha PocketTrak | £260

Review FM202 This ultra-compact 2GB recorder is a really useful weapon in your recording arsenal.



Edirol R-44 | £499

Review FM205 Record four tracks simultaneously via its quality pre-amps. If you need the flexibility it does the lot and more besides.

Microphones



Neumann Retro NR47 | £999

Review FM225 Despite the choice of name, this mic definitely delivers the classic sound. Bargain.



sE X1 and Project Reflexion Filter Bundle | £169

Review FM223 Unbelievable value for a robust recording solution.



Blue Bottle Rocket Stage One | £600

Review FM222 Interchangeable capsules make this great sounding mic even more of a must-buy.



Sontronics Saturn | £699

Review FM227 It looks drop-dead gorgeous and has a flexible airy sound that suits many different recording situations.



AKG C214 | £450

Review FM205 As part of the classic AKG family, this mic sets itself up nicely to be a recording bargain that holds its own around the studio.

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eBay Classic Retro Finds

**Roland HS-60** | £250

Released 1984 Same guts as the Juno-106 but the ugly built-in speakers mean it's often overlooked.

**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.

**Yamaha MK-100** | £30

Released 1983 Bargain analogue style workstation that has limited synthesis options but a great programmable drum computer.



NEW ENTRY

Roland JX3P | £160

Released 1983 Great presets, a quick sequencer plus a nifty DIY update to add MIDI CC messages make this one fab bargain synth.

**Sequential Circuits Multi-Trak** | £250

Released 1984 Easier to program than a Six Trak with a better sequencer – a gem find.

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.

**Jazz Mutant Lemur** | £1,799

Review FM166 Techni-coloured touchscreen controller. Why not put a camera on it feeding a projector?

**Percussa Audio Cubes** | 399 Euros

Review FM207 Expensive, but one of the ultimate ways to stand out when performing electronic music.

Digital Audio Workstations

Best all-in-one solution

**Logic Studio** | £399**Review FM218**

The home studio regular and all-in-one studio package goes V9.1 adding 64bit support – if your Mac can handle it.

Best features include:

- > Incredible time-stretching with Flex Audio technology.
- > New amp designer and pedal board options for guitarists.
- > The best and biggest range of 'built-in' plugs and synths of our favourite DAWs.

Good and bad:

Fantastic Flex Audio raises Logic's appeal even further and despite that stealthy price increase to £399 it remains a bit of a bargain all told.

Best combo of ease and power

**Cubase 5** | £499**Review FM212**

Cubase 5 sees Steinberg lower the price and raise the plug-in and feature list. VariAudio, Batch Export and new effects plug-ins all come bundled with 5.

Best features include:

- > The new VariAudio Melodyne-style pitch editor.
- > Plenty of built-in plugs to get you creating professional tracks from the moment you install the software.

Good and bad:

Although Cubase is playing catchup in terms of both bundled content and price, it's can't be argued that it's only getting better. Loyal Cubase users rejoice – Cubase 5 is a winner.

Best for recording audio

**Pro Tools 8** | £319**Review FM210**

The industry standard DAW gets a fresh modern update with a brand new GUI, enhanced MIDI editing capabilities, and a heap of new instruments and plug-ins.

Best features include:

- > For mixing, recording, processing and editing audio there isn't anything easier to use or more stable and reliable.
- > Now that it's MIDI is finally up to scratch, it's a great choice.

Good and bad:

Great performance and stability with tempting upgrade offers to a HD system. Well-conceived though limited plug-ins.

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 8** | £349**Review FM207**

Updated from the much loved Sonar 7, this new version adds even more features and amazingly puts less pressure on your CPU due to a streamlining of it's core. It's a firm favourite with PC-based producers.

Best features include:

- > Beatscape – a fantastic slicing and warping groove-based beat and drum machine.
- > The TS-64 Transient Shaper is a simple but brilliant plug-in addition.

Good and bad:

A continuous effort to streamline and an incredible amount of features make Sonar 8 a great choice DAW on PC.

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