

DVD
4GB+
EOM

£10,000 SSR
MUSIC COURSE
TO BE WON!

MusicTech

Issue 96
March 2011

The magazine for producers, engineers and recording musicians

CUBASE 6
REVIEWED



Acoustics & technique for a **BETTER STUDIO**

MTM Masterclass Improve your recordings with our in-depth guide to getting the most from your live room

NAMM 2011 roundup

News on the pick of
this year's show

Pioneering Sounds

How the past helped
shape recording today

Software Tutorials

LOGIC PRO 9 | LIVE 8
SONAR X1 | GUITAR RIG 4
PLUS CUBASE 5 TIPS

The MTM Interview

Youki Yamamoto

Perfecting the
Harry Potter and
*Never Let Me
Go* soundtracks



The Latest Reviews

ORIGIN KEYBOARD LINE 6 HD500

Focusrite VRM Box | Vir2 Q
Cinesamples Voxos
Telefunken AR-51 | More...



DVD
4GB+ INSIDE →

VIRUS BASS SOUNDS

1GB of classic synth sounds

STEEL GUITAR

34 exclusive loops & FX

PRO TOOLS 9

85 minutes of video tuition





OUTSTANDING TECHNICAL
ACHIEVEMENT
Signal Processing Technology/
Software

Our reputation precedes us.



CHAMBER | CONCERT HALL | HALL | PLATE | RANDOM HALL | ROOM | VINTAGE PLATE

PCM NATIVE | REVERB BUNDLE

A COLLECTION OF UNIQUELY CRAFTED REVERB PLUG-INS

Heard on countless gold and platinum records, and every major motion picture over the past 40 years. The most trusted name in reverb introduces a collection of 7 signature plug-ins.

Lexicon

www.lexiconpro.com



Distributed in the UK & Eire by Sound Technology Ltd | 01462 480000 | www.soundtech.co.uk | info@soundtech.co.uk



Leading soundtrack composer Youki Yamamoto talks to MTM – p44



We suspect there'll be a lot of salivating going on by the time you get to page 19 – this is, of course, where our coverage of this year's NAMM Show sadly ends. As ever, the sheer volume of new kit and software on display means we cannot show you everything, but we've done our best to bring you news on many of the products that got our attention (and one even made it our way in time for review in this very issue). Chief among them were new releases from Arturia in the form of THE LABORATORY and SPARK (see page 9), new workstations from Korg (page 10), lots of new toys for guitarists (page 12) and an interesting new take on the

location recording mic from Audio-Technica (page 13). And that's not forgetting new UAD formats from Universal Audio, mics from Blue and MXL, plus new monitors from Quedad as well as sE in conjunction with Rupert Neve Designs (we can't wait to get our hands on these!).

But in this industry, new gear is only half the story: having the latest kit won't necessarily make your recordings any better – knowing how to use it properly will. Huw Price's feature (starting on page 22) explores just some of the ways in which you can best utilise both your recording space and your existing kit to make better recordings, while John Pickford goes back in time to see how many of the early recordings that helped shape studio practice today were made – perhaps ultimately demonstrating that it isn't necessarily what you've got that counts, but how you use it...

It isn't necessarily what you've got that counts, but how you use it

Huw

Lewis Brangwyn Editor
lewis.brangwyn@anthem-publishing.com

THIS MONTH'S WRITERS, PRODUCERS AND MUSIC TECHNICIANS



HOLLIN JONES
Long-serving Music Tech crew member Hollin Jones is a hip hop producer and writer as well as a Mac specialist and occasional university lecturer. He specialises in Reason and Cubase.



MARK COUSINS
Mark is, among other things, a composer for BMG Zomba. His work has been used on BBC, ITV, Channel 4 and Five. Mark's long career makes him ideally placed to bring you our Logic Workshops every month.



HUW PRICE
Huw is an engineer and producer with specialist knowledge in all areas of music technology, though his favourites are monitors and mics. Check out his in-depth feature on studio technique starting on p22.



MIKE HILLIER
Mike Hillier started his career at MTM, helping to bring you the latest news and reviews. He's still with MTM, of course, but also works as a freelance engineer at London's prestigious Metropolis studios.



SUBSCRIBE NOW AND GET FREE ONLINE SUBSCRIPTION!

Plus THREE FREE issues of Music Tech – turn to page 32 for more details.

MTM Contents

Issue 96 March 2011



Acoustics & technique for a **BETTER STUDIO**

The space in which you record can have a big impact on the sound of your tracks. We explore how you can optimise the acoustics of your live room. p22

Pro Tips series

25
Pro tips for
Cubase 5 p54



Feature



Education:
your options p69

Classic studio techniques

**We pay tribute to the
60s pioneers** p49



The MTM Interview

**In the studio with
Youki Yamamoto**
The soundtrack guru
shares some secrets p44



The latest reviews



On test: Steinberg Cubase 6, Standard Audio Level-Or, Line 6 POD 500HD, Vir2 Q, Focusrite VRM Box, Arturia Origin Keyboard, Telefunken AR-51

Software tutorials

Clockwise from top left: Logic Pro 9, SonarX1, Guitar Rig 4, Ableton Live 8.



Vintage gear



Studio Icons p20



Plus...

10 Minute Masters

This month: notch filtering and string articulations



MTM Issue 96 Full listings...

- 006 | Incoming
- 018 | Rack 'em Up
- 020 | Studio Icons
- 022 | Improve your recording environment
Optimising acoustics to get the most out of your workspace
- 032 | Subscribe to Music Tech
- 034 | Guitar Rig 4 Workshop
- 038 | Ten Minute Master No193
Notch filtering
- 040 | Logic Pro 9 Workshop
- 044 | Interview: Youki Yamamoto
Soundtrack advice from a man who really knows the score
- 049 | Studio pioneers
What did Meek, Spector and Martin ever do for us?
- 054 | 25 Tips For... Cubase 5
- 058 | Ten Minute Master No194
Sampled string articulations
- 060 | Step-by-Step: SonarX1
- 069 | Education: your options
Choosing a music course
- 076 | Live 8 Workshop
- 080 | Sound Advice
- 084 | Review: Steinberg Cubase 6
- 088 | Review: Arturia Origin Keyboard
- 092 | Review: Line 6 POD HD500
- 094 | Competition
- 096 | Review: Vir2 Q
- 098 | Review: Antares Mic Mod EFX
- 099 | Review: Sonic Charge μ Tonic 3
- 100 | Review: Voxos Epic Choirs
- 102 | Review: Focusrite VRM Box
- 103 | Review: Studio Devil VGA II
- 104 | Review: iZotope Stutter Edit
- 106 | Review: FabFilter Pro-L
- 108 | Review: Standard Audio Level-Or
- 110 | Review: MSpectral Dynamics
- 111 | Review: Telefunken AR-51
- 113 | Mobile Tech Reviews
- 118 | Mini Reviews
- 128 | Your MTM96 DVD – what's on it



MTM Incoming

News Analysis & Comment New Products

NAMM 2011: A ROARING SUCCESS

Trade show finds music hardware industry in a bullish mood

Taking place at the Anaheim Conference Center in Anaheim, California from 13–16 January, this year's NAMM Show saw both the hi-tech and more traditional sides of the musical equipment industry in a confident frame of mind. Which, in the current economic climate, is probably as good news as you'll hear anywhere!

This year's Show attracted 1,417 exhibitors from all sides of the industry and all over the world, with 247 of those exhibitors taking space at NAMM for the first time. Attendance figures were also very positive, with 90,114 registered attendees – a three per cent increase on last year. Given those impressive numbers, you'll appreciate that attempting to cherry-pick the 'most interesting' products then compress all that information into the limited number of MTM news pages available has been something of a Herculean task. But over the next 12 pages, you'll find details of those products that caught Music Tech's attention the most while we were at the Show – with apologies in advance to any manufacturers who feel they've been overlooked!



If it's trend-spotting you're after, then there were certain product sectors that are clearly seen as key by manufacturers this year. Some of these can be attributed to developments elsewhere, of course; for instance, new legislation regarding the allocation of radio frequencies in the US meant that mic manufacturers were falling over themselves to show off their new legally compliant wireless models (see page 16). In the

Products that **just wowed us** included a new, updated model of the legendary **Fairlight synth**



DJ sector, meanwhile, four-channel controllers seem to be the 'hot product' right now due to the unstoppable rise of Traktor and Serato – though there were plenty of other DJ'ing goodies on offer. See page 14 for more details.

Avid's recent decision to move Pro Tools away from its reliance on proprietary hardware paved the way for new products that reflect this 'democratisation' – notably, Universal Audio's new FireWire versions of its DSP accelerator hardware, about which there's more on page 16.

And, of course, there was iPad-specific hardware and software galore. As well as the Alesis StudioDock (see right), the Omni TR app caught our eye. This is an iPad application for users of Spectrasonics' Omnisphere that gives much greater control. It was being demonstrated at NAMM by progressive metal legend Jordan Rudess. Rudess was just one of several famous faces who appeared at the show; British R&B songstress Natasha Bedingfield was another.

Beyond the trend-spotting, though, there were also the products that just wowed us when we saw/heard them – these included Smithson Martin's Emulator touchscreen MIDI



What is NAMM?

NAMM, the National Association of Music Manufacturers, is an American trade association that has been in existence since 1901. Based in Carlsbad, California, the not-for-profit organisation serves to represent and defend the interests of all involved in the making and selling of musical instruments and associated equipment. It also encourages more people to become actively involved in music-making and supports numerous music-related charitable initiatives.

However, for most of us, NAMM's name is most readily associated with the NAMM Show, which has taken place in California every January since 1902. Since 1993, there has also been a NAMM Summer Show, which this year can be found at the Nashville Conference Center in Nashville, Tennessee from 21-23 July.

For more information on either NAMM the organisation or NAMM the shows, hit up www.namm.org

controller for Traktor **e**, the new Venom synth from M-Audio seen on page 17, a limited-edition version of the ever-popular Virus TI, a new, updated model of the legendary Fairlight synthesizer (and an accompanying iPad app) **f**, Korg's new Kronos workstation synth **g** and the incredibly funky-looking Kitaro MIDI 'guitar' controller-cum-synth **h**. More on those last two on pages 10 and 14.

Not only was there plenty of cool new kit on display, but another heartening sign was the presence at NAMM 2011 of a whole bunch of manufacturers that simply didn't exist this time last year! All told, then, NAMM 2011 would have left anyone working in the hi-tech side of the music industry with the feeling that there's plenty to be cheery about, despite the general economic doom and gloom elsewhere – while for those of us who actually use all of this hardware, rest assured: there's lots of exciting new stuff coming in 2011.

Which of course means that there are plenty of reasons to keep reading Music Tech regularly, because we'll be bringing you the full MTM verdict on all of these new goodies just as soon as we can get our hands on them...

iPad gets serious

StudioDock from Alesis brings unparalleled connectivity

One of the most exciting products on show at NAMM was the StudioDock from Alesis. Billed as 'the first pro audio dock for iPad', StudioDock enables the connection of all manner of studio hardware to your Apple tablet.



The device features two combination 1/4-inch jack/XLR inputs, one with a Hi-Z switch to plug in a guitar and both featuring individual gain controls and phantom power for microphones as well as MIDI in, USB MIDI in and a 1/4-inch footswitch input. On the output front you'll find MIDI out, two XLR jacks, a 1/4-inch headphone jack and a composite video output if you prefer to work on a larger screen (ie, a TV or computer monitor).

The StudioDock is said to be compatible with 'virtually all' sound and video applications available in the iTunes App Store and will retail in the UK for £140. An exact launch date hadn't been announced as Music Tech went to press, but you shouldn't have to wait too long – many of the leading online retailers are already taking pre-orders.

Contact **Numark Alesis 01252 896000**

Web www.alesis.com

SOUNDBYTES ■ New compressor

The 6030 Ultimate Compressor is a new compression plug-in from McDSP (McDowell Signal Processing) that includes no fewer than ten different virtual compressors. What's more, it's available in AU format – as all McDSP plug-ins now are, for the first time. Full details at www.mcdsp.com



Sonar X1 Producer for £129!

Incredible offer for Music Tech readers

If you make music on a PC, then you're doubtless already aware of Sonar X1, the recently released new incarnation of Cakewalk's popular DAW. Well, now you can have your own copy of Sonar X1 Producer for a mere £129, thanks to this excellent offer brought to you by Music Tech and Et Cetera Distribution.



Sonar X1 Producer is the full professional version of the software. Picking up nine stars when we reviewed it in Issue 94, it normally retails for £389. But you can get yours for just £129 if you simply visit the Et Cetera website or give them a call on the number below and purchase a copy of Sonar 8.5 Producer. All you need to do after that is register your software at the Cakewalk website, then take advantage of the free upgrade to X1. Best get moving, though – remaining stocks of Sonar 8.5 are strictly limited...

Contact **Et Cetera 01706 285650**

Web www.etcetera.co.uk

www.scan.co.uk

t: 0871 472 4747

SCAN COMPUTERS

Parts or systems...



Scan 3XS Performance SP15

"A solid audio laptop that has it where it counts – in the performance department. The powerful CPU and a modern 64-bit system cope with whatever you throw at it"

Reviewed by MusicTech, November 2010



Scan 3XS Performance SP17

"The 3 S's of Scan 3XS stand for Specification, Service and Satisfaction, and judging by this latest model they have once again achieved this goal."

Reviewed By Martin Walker

Sound On Sound Magazine, September 2010 issue.



we've got it covered.

Supplier of performance hardware and pc audio workstations

Scan 3XS Performance SP15

The USA's finest PRO audio laptop exclusively in Europe, only from Scan Computers.

- 15" ADK 1Q AR ProAudio Notebook
- Intel® Core™ i7-620M processor
4M Cache, 2.66 GHz
- 320GB Seagate ST9320423AS Momentus 7200
- 4GB (2x2GB) Corsair DDR3
- Texas Instruments Firewire & Wi-Fi options available

Intel® Core™ i7 Processor. Intel's best processor.

Hardcore multitaskers rejoice. The Intel Core i7 mobile processor family delivers maximum processing performance in response to peak demands. You'll fly through everything you do on your PC— from playing intense games to creating and editing digital video, music, and photos. With Intel® Turbo Boost Technology and Intel® Hyper-Threading Technology, you get intelligent performance when you need it most.



Don't buy hardware without Scansure protection. 28 day installation damage insurance www.scan.co.uk/scansure



Scan Finance. Buy now, pay 10% deposit & spread the cost over 36 or 48 months when you spend £300 (inc vat) or more.

Classic credit options (36 or 48 months). Customers will initially only have to pay a 10% deposit, with the original loan amount payable over 36 or 48 months. *Example: £1,000.00 Deposit: £100.00 Amount of loan: £900.00 Total charge for credit: £1,276.12 Total payable: £1,276.12 Total 36 Monthly instalments of £35.45 APR: 19.9%. Terms and Conditions Apply. Intel, the Intel logo, Intel Core and Core inside are trademarks of Intel Corporation in the U.S. and other countries.

Back to the Lab

New keyboard and drum machine from Arturia

Arturia had two new products on show at NAMM: Analog Experience THE LABORATORY – the third in the Analog Experience series of keyboards – and SPARK, a new drum machine.

THE LABORATORY is a 49-key keyboard controller built with live performance and playability in mind. A new Scene mode enables several sounds to be played at once, with the addition of arpeggiation, FX loops and drums. Presets are supplied from Arturia's virtual classic synths such as the CS-80V, ARP 2600 V, Prophet V and Jupiter-8V.

SPARK, meanwhile, is a hardware/software combo drum machine based on a mixture of samples and modelling. It features include a 16-track mixer, eight velocity-sensitive pads, a 16-key, 64-step sequencer, an FX pad and a loop mode.

Both products will be available very soon, priced €349 and €499 respectively.

Contact **2twenty2 0845 299 4222**

Web www.arturia.com



SOUNDBYTES Three is the magic number

New from AKAI is the RPM3, a hybrid monitor and USB audio interface. The RPM3s feature 3.5mm, 6.5mm and RCA inputs, a headphone jack and a bass boost switch; with an MSRP of \$199, they're also some of AKAI's most affordable monitors. More info at www.akai.com

iRIG UP YOUR iPHONE!

New iPhone mic and AmpliTube Fender app

Following the success of the iRig guitar interface and AmpliTube amp modelling software for iOS, IK Multimedia has launched two new recording products for your iPhone, iPad or iPod Touch.

iRig Mic is a hand-held condenser microphone for iOS devices. It features a dual mini-jack connector for monitoring and will be available very soon for just €50. That price includes three free apps: AmpliTube, iRig Recorder and Vocalive, a suite of vocal FX.

AmpliTube Fender, meanwhile, is a Fender-specific AmpliTube featuring six Fender pedals and five classic Fender amps, from a 1959 Bassman Ltd onwards. The app is available in iPhone or iPad versions, priced €12 each, with a 'lite' version available free.

Contact **IK Multimedia 0800 093 4066**

Web www.ikmultimedia.com/iphone



And Another Thing!



UnderDog on why 'albums of the year' lists are nothing of the kind...

The problem with lists of 'albums of the year' is that they're always wrong. This is mainly because there is no such thing as a definitive list of anything – and you can't please all the people all of the time. But, as a result, we're stuck with collections of records ranked in order of how cool music journalists think it makes them look to talk about them. The relative artistic merits of the albums rank in importance somewhere below how hard it was to get the plastic wrapping off the CD case.

Loads of good albums will be ignored because the people who made them didn't have beards and play 'edgy' guitar music with stupid synths wobbling away in the background, while bands that aren't called Cholesterol Vampires, Fat Frank's Rabbit Emporium or Blaaargh! will be sidelined because they don't sound as sexy when you bleat about them at parties in Camden. So here are some ideas for getting your album onto next year's lists...



Under no circumstances prioritise songwriting over production. If 2010 taught us anything, it's that reverberated synths, dance beats played on real drum kits and chukka-chukka guitars will always win out over structuring an actual piece of music. Songs must always be in minor keys and feature high-pitched yelping instead of actual singing. Lyrics are utterly irrelevant – you could probably just read the list of ingredients off a soup tin.

Consider being the only 'other' type of act to appeal – this year – to NHS glasses-wearing music journos who can't pronounce the letter R. 'Other' acts can include some dreary take on electro, twee acoustic wittering or anything by Kanye West. Be warned, however, that only one 'other' type of act will ever be considered, so tread carefully. It's a far safer bet to be five scruffy white blokes with guitars and one who plays a synth with one finger.

Finally, never overestimate your audience. If you finish your record and realise it's a horribly cynical, derivative 80s rip-off that sounds just like everything else on the radio, you are well on your way to critical acclaim.



NAMM 2011

As you've probably realised by now, there was no lack of exciting new stuff to talk about at this year's Show...

DISNEYWORLD

Just a quick cab ride away from the NAMM exhibition centre. Big kids? Us? Oh yes!

ALESIS STUDIODOCK

We're quite excited about this.

ANDROID TABLETS

Rapidly catching up with the iPad in the number/quality of apps, and Honeycomb looks set to raise Android's game even higher.

↑ Highs

Ups and downs in the world of music technology this month

& Lows ↓

WEBSITES WITH 'CONTACT' FORMS

...but no phone number or email address. If you want the public to buy your product, why make it almost impossible for them to get hold of you?

ONLINE MUSIC SALES: A DAMP SQUIB?

A new report from the International Federation of the Phonographic Industry suggests that growth in legal digital download sales is slowing already, way short of predicted levels.

VALENTINE'S DAY

At last count, no more than 25 per cent of the MTM editorial team will be celebrating this year. Not a great hit rate, is it?



© istockphoto.com

KRONOS TRIO

New workstations head up Korg's 2011 range



Korg was at NAMM with a whole raft of new products, of which definitely the most striking is the KRONOS Music Workstation.

KRONOS is Korg's new flagship workstation, featuring nine sound engines: SGX-1 Premium Piano, EP-1 MDS Electric Piano, CX-3 Organ, HD-1 High-Def Synth, AL-1 Analog Synth, the PolysixEX and MS-20EX Legacy Collections, MOD-7 Waveshaping VPM Synth and STR-1 Plucked-String Synth. These are backed up by Korg's Virtual Memory Technology, for latency-free playback of samples,

while the KRONOS also features an eight-inch colour touchscreen display, a four-way joystick, ribbon controller, two assignable switches, nine sliders and eight knobs. 61-, 73- and 88-key models are available.

Other products on show in Anaheim included three nanoSERIES2 USB-MIDI controllers, the Pa3X workstation, the Pandora Mini FX box for guitarists and the microPIANO, as well as the Wavedrum Oriental (see below). Pricing on all these products was still to be confirmed as MTM went to press.

Contact **Korg 01908 857100**

Web **www.korg.co.uk**



SOUNDBYTES Rob Papen gets Punchy

A key software launch at NAMM was Punch, a virtual percussion synth from Rob Papen that combines sampled sounds (both supplied and user-loaded) with drum synthesis to create custom kits. Punch will be available from the spring, priced £125. For more see www.timespace.com



GIVE THE DRUMMER SOME!

New at NAMM: a plethora of pleasing percussion products

There was no shortage of beat-making goodies on display at this year's NAMM Show, including new products from Arturia (see page 9), Zildjian, Alesis, Dave Smith Instruments and Korg.

Zildjian was at NAMM showing off its new Gen-16 array of virtual drum tools. These include the Acoustic-Electric cymbals (real cymbals that play at low volume and feature a built-in mic and DSP modelling), a new AE drum rack and the Groove Player app for iOS devices.

Alesis' new drum products also concentrate on digital emulation of analogue drumming. As such, the company has launched two new multi-pad instruments – the \$299 PerformancePad Pro and \$99 PercPad – both of which are designed to integrate with a traditional drum kit and bring electronic sounds within a 'proper' drummer's reach. There was also two new all-digital kits,

the DM8 USB (\$699) and DM8 Pro (\$799).

Completing Alesis' drum line-up at NAMM were the DMPhones isolating

headphones, a \$49 pair of cans designed to enable owners of Alesis' digital kits to practise without annoying the neighbours.

Dave Smith Instruments' Tempest, on the other hand, is a 'traditional' hardware beatbox.

Developed jointly by Dave Instruments and Roger Linn Design, it features 16 pads in two banks of eight. Each of its six voices has two analogue oscillators, two digital oscillators, HP and LP filters, five envelopes and two LFOs.

Finally, new from Korg comes the Wavestation Oriental, a new limited-edition of the company's popular digital percussion instrument that's been tweaked so that it now offers 300 sounds taken from traditional oriental instruments such as the bendir, darbuka and riq.



Focusrite sees Red



RedNet is a new range of networking devices from Focusrite designed to make the process of getting all your various pieces of studio gear talking to each other that much easier.

The RedNet range consists initially of five products. RedNets 1-4 are all interface units: RedNet 1 features eight channels of analogue I/O and RedNet 2 has 16, while RedNet 3 offers 32 channels of digital I/O via AES/EBU, ADAT and S/PDIF connections. RedNet 4 brings eight Focusrite mic preamps to the party. All of these units operate at up to 24-bit/192kHz resolution with a dynamic range of 120dB and comply with Audinate's Dante protocols for studio network architecture. The RedNet line-up is completed by the optional RedNet PCI Express card.

The RedNet range is set to go on sale this summer. We're told to expect a price of 'around \$1,250 to \$2,500' per unit.

Contact **Focusrite 01494 462246**

Web **www.focusrite.com**

SOUNDBYTES

It's Grove-y, baby!

Lisson Grove is a new pro audio company set up by Grammy-winning producer Hugo Nicolson. The company made its public debut at NAMM with the R-124 compressor seen here, a hand-built, valve-based unit emulating classic British audio hardware of the 1960s. For the full skinny, see www.lisongrove.us



QUICKER ENCODING

Sonnox and Fraunhofer launch new plug-in

Anyone working with audio may need to supply files in various formats for various purposes – and will testify what a pain it can be encoding the same piece several times over, particularly if anything goes wrong. If a low-res mp3 turns out to have clipped, for instance, you've got to start all over again.

Well, help is at hand. Plug-in maker Sonnox has teamed up with mp3 inventor Fraunhofer IIS to develop the new Sonnox Fraunhofer Pro-Codec plug-in. Compatible with just about all DAWs on both Mac and PC, the plug-in enables mix and mastering engineers to encode (and batch encode) up to five different codecs simultaneously. What's more, each resulting file can be monitored in real time, so if anything does go awry, you don't have to wait for the whole process to finish to find out.

The plug-in incorporates an FFT display to illustrate the input and output singles, as well as a graphical indication of the audibility of codec-induced noise, while a 'blind listening' mode is included to assist in truly objective A/B comparisons. An exact release date for the plug-in has yet to be announced, but we do know that it will cost \$499.



Contact **support@sonnoxplugins.com**

Web **www.sonnoxplugins.com**



Latest Releases



DEEP & DUST HOUSE £12.95

Sounds To Sample

Late-night house grooves, dusty keys, sparse percussion, raw basslines, deep instrumentals and 4am ambiances.



GLITCH & TECH VOCALS 3 £9.90

Hy2rogen

Another 100 hot-off-the-press tweaked toplines, kinky hooks, robo-snatches and Parisian-blended glitched vox.



DISCO GOLD £81.95

Zero-G

Funky disco, smooth soul, Chicago underground and Italo-disco: 1.8GB of guitar, keys, brass, bass, strings, drums and synths.



TOOLROOM RECORDS 01 £39.90

Sample Magic Presents

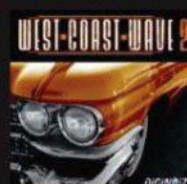
Toolroom Records join forces with Sample Magic to present 535+MB of loops and hits, many from head honcho Mark Knight.



CLASSIC HOUSE £22.49

Waveform Recordings

From Chicago to Detroit: vinyl-esque music loops, funk basslines, warehouse grooves, live drums and glitched vox.



WEST COAST WAVE 2 £8.95

Diginoiz

90+ loops of warm and melodic synths, orchestral strings, piano, rhodes and guitar atop sizzling beats and boom-tastic bass.



TRAILER VOICE 2 - THE SCRIPTS £32.90

Sonokinetic

Second block-busting instalment in the Trailer Voice series boasting 3,300+ dramatic voice-over cues and clips.



NU ELEKTRIK £23.49

Samplestar

640MB fusion of French electro, Italo and indie-disco that distils the fiuro sounds of the global dancefloor.



SO SMOOVE SINE LICKS £7.95

MVP Loops

172 silky riffs, chords, licks and chops for lead lines and sweet backings in R&B, hip hop and pop productions.

www.soundstosample.com

Pro Tips

Massive Skrillex Basslines
Big Up Your Breaks
Deep Tech-House Production
Progressive House Tips

How To

Get Your Demo Heard
Make A Living In The Music-Industry
Compression Basics

Q&A

Radio Slave
Catz N Dogz
Technasia
Mason



AKAI ANALOG DELAY

AKAI had no fewer than ten new stompboxes on display at NAMM this year. The (fairly self-explanatory) Analog Delay seen here is but one of a new range that also includes Phase Shifter, Blue Overdrive, Chorus, Compressor, Tri Mode Overdrive, Deluxe Distortion, Flanger, Tri Mode Fuzz and Tri Mode Distortion. Expect to see them in stores from March onwards.

£99, www.akai.com



T-REX REPTILE 2

Danish company T-Rex Engineering also made a strong NAMM showing on the pedal front. The Reptile 2 seen here is a new, more affordable version of the company's popular Reptile, with new additions including a new Tap Tempo function and an enhanced set of Flutter controls for the creation of 'tape-delay warble'. Also new from T-Rex at NAMM were the Twister 2 – an update of the existing Twister – and the all-new Tonebug Sustainer.

£200 approx, www.t-rex-effects.com



Studio Essentials

If we detailed every new pedal on show at NAMM we could fill half the magazine! Here are four that caught our eye...



APHEX PUNCH FACTORY

One of two new pedals from Aphex on show at NAMM (the other being the \$250 Exciter), the Punch Factory brings the optical compression found in the company's high-end rackmount gear to a more portable, affordable product. A Ratio knob controls the amount of compression applied, while Aphex says it can do all this without generating any of the 'pumping' artifacts often heard from cheaper units.

£99, www.aphex.com



ELECTRO-HARMONIX STEREO TALKING MACHINE

This resurrected version of Electro-Harmonix's Talking Pedal from the 1970s is a vocal formant filter that is controlled by the player's dynamics and has nine selectable voices that can be used to create vowel sounds. It was one of several EHX stompboxes on display at NAMM, with the Neo Mistress flanger, Deluxe Memory Man delay and Killswitch also attracting much attention from six-string-botherers.

£TBC, www.ehx.com



SOUNDBYTES DigiTech amps it up

DigiTech is known for its effects units, but NAMM saw the company making a move into the amp market, with seven guitar and bass amps ranging from 15W to 150W, and from \$80 to \$3,000. Full details at www.digitech.com



SOUNDBYTES KK audio labs is born

KK audio labs is a new company headed by Keith R Klawitter, formerly of KRK Systems. The company's debut products, launched at NAMM, are the DS-6 and DS-8 monitors. For details of both, visit www.kkaudiolabs.com

X/Y's the limit for AT

New mic from Audio-Technica

There were plenty of new microphones on display at NAMM, but one that we were particularly struck by was this X/Y condenser model from Audio-Technica.

The AT2022 is designed for use both in the studio and in the field and features two unidirectional condenser capsules that can be rotated to enable their positioning in anything from a 90-degree (narrow) to a 120-degree (wide) stereo configuration. There is a pad switch that arms an 80Hz high-pass filter to reduce ambient noise and the AA battery-powered mic has a standard XLR connector. Included in the price are an XLR cable, stand clamp and protective pouch.

The microphone will be available from March, priced £99.

Contact **Audio-Technica 0113 277 1441**

Web **www.audio-technica.com**



SOUNDBYTES Very metal

Unless you're a progressive metal aficionado, the name Misha 'Bulb' Mansoor may not mean much. But his productions have been at the forefront of that scene for years, and now his powerhouse drum sound is within reach of all producers in the form of this new set of Bulb-programmed presets for Superior Drummer 2.0. Full details at www.timespace.com

LATEST LUNCHBOX LAUNCHED

API's new 500-6B is available now

API's hugely successful 'Lunchbox' modular system shows no sign of waning in popularity, with hundreds of

compatible modules available from dozens of manufacturers. Accordingly, API has seen fit to overhaul the 500-6B Lunchbox itself with the newly updated model, available now in the UK through KMR Audio.

As previously, the new 500-6B features six slots for API-standard modules of the user's choice, supplying 215mA of power to each slot. It features XLR input and output jacks and is self-powered, with a rear-panel voltage selector switch and a removable power cable.

Outwardly, the unit retains the same design and build that made the API Lunchbox series so popular in the first place, with rubber feet, a rugged steel chassis and a carry handle that makes it easy to take a professional line-up of audio-processing equipment into whatever remote recording location you may find yourself working.

The 500-6B is available now, priced £420.

Contact **KMR Audio 020 8445 2446**

Web **www.kmraudio.com**



Amazing Comfort And Superb Sound

New from Puretone Music - The Generic Fit Micro Monitor Rapid Fit 2



Sculptured
Cosmetic Finish

Puretone Music
In-Ear Monitors & Noise Protection
For Musicians, DJs & Music Lovers

Combining the best sound processing technology without the need for a custom-made fitting, the new Micro Monitor Rapid Fit 2 offers **a new level of quality in universal fit in-ear monitors.**

Experience your music like never before. Dual balanced armature drivers deliver stunningly clear sound reproduction and musical fidelity **that has to be heard to be believed.**

www.puretonemusic.net

HEY MR DJ...

The latest DJ gear, unveiled at NAMM 2011

Although the Show's mostly about equipment for *making* music, DJ types were also well catered for at NAMM this year. Four-channel controllers for Serato Itch, Traktor *et al* seemed to be the hot product, with Numark's NS-6, Denon's DN-MC6000, Gemini's CTRL-47 and the Hercules DJ 4Set all falling into this category.

Numark made a strong showing all round, with eight other new products. These comprised the DJ2go mini controller for laptop DJs, a new dual-deck CD/USB

player, two new budget mixers (the M101 and M101USB), two mixers with iPod docks (iM9 and iM1), some new pro headphones called Red Wave and a tabletop CD deck – the NDX800 – that doubles as a Traktor controller.

Denon was showing off its own hybrid CD/controller, the DN-S3700, as well as a new two-channel, digital professional-level mixer, the DN-X600.

Not to be outdone, Gemini had a range of new media players (CDJ-700, CDMP-7000 and CDMP-2700), as well as a new entry-level DJ controller called FIRSTMIX.

And finally, with all those new controllers around, is it time for some new digital DJ software? Avid certainly seems to think so: its stand was showing off Torq 2.0, the latest incarnation of Avid's DJ package.



Clockwise from above: Numark NS-6, Denon DN-S3700, Gemini FIRSTMIX, Numark iM1



New rackmount EQ

New from American manufacturer A-Designs Audio is the JM-3001, a preamplifier, equaliser and DI box housed in a 1U rackmount case.

The JM-3001 features mic and instrument inputs, each with its own preamplifier, as well as an EQ/insert input that enables you to bypass the preamps and use it simply as an equaliser/filter.

The three-band parametric equaliser itself features 33 frequencies, its three bands of overlapping frequencies ranging from 50Hz to 15kHz. Both the frequency selectors and the EQ/filter controls themselves are on step-type switches and each EQ band has a three-position Q switch (with sharp, wide and narrow settings). The high and low bands can also be toggled from peak/dip-type to shelf-type operation at the flick of a switch, while further sound-sculpting possibilities are on offer thanks to the additional 12dB/octave high- and low-pass filters.

The unit is set to go on sale towards the end of February, with a suggested retail price of £1,885.

Contact MTR Audio 01923 234050

Web www.adesignsaudio.com



THE KITARA'S THE STAR

Imagine if Hendrix had got his hands on one of these!



It may look like a Star Labs Ztar MIDI controller at first glance, but the Kitara, from Misa Digital, is a different proposition entirely in that it offers onboard sounds as well as MIDI control for external sounds. Designer and creator Michael Zarimis says the aim is not to replace the humble guitar, but that it's 'for guitarists who want to design and control synth sounds in a familiar format'.

The touchpad can work in either 'Ball' mode (pictured) or 'String' mode should you want a more traditional

interface. When we tried the unit for ourselves, Ball mode made controlling the device feel part guitar and part drum pad as we quickly grasped the ability to trigger onboard sounds by tapping the pad in various places, controlling elements like amp attack and distortion levels. It took a few minutes to get used to the button-based fretboard, but in no time at all we were creating quite complex synth parts with the Kitara.

The Kitara won't be shipping until April, but pre-orders can be placed now, with a choice of two models on offer: the basic polymer-bodied Kitara is \$849, while the rather flashier aluminium-bodied model will set you back \$2,899.

Contact **Via website**

Web www.misadigital.com

SOUNDBYTES ■ New monitors are truly unik

ESI Audio launched a new series of active monitors at NAMM. The uniK 04, uniK 05 and uniK 08 feature (as their names suggest) four-, five- and eight-inch bass cones made from Kevlar, while the uniK 05 and 08 can also boast a ribbon tweeter. More at www.esi-audio.com



Technically Brilliant (from every angle)



Hollin Jones of Music Tech:

"A solid audio PC - Very quiet and with lots of storage and I/O.
Attractively priced too.

This is a great system for anyone after a serious music PC"

Rated 9/10 + the **MusicTech CHOICE**



Martin Walker of Sound on Sound said:

Inta Audio have created a very stylish-looking system, with Blu-ray for backup, plenty of spare slots and ports, and an acoustic noise level even lower than most of the other computers that I've tested to date. Overall, the i5 Pro Music PC is an

"extremely impressive package" that will undoubtedly prove to be very popular with musicians."

SOUND ON SOUND



Pro Music PC Systems starting from £579.00

Talk to the experts on ☎ 0845 299 4242
or configure your machine online

www.inta-audio.com



For sales and advice:

☎ 0845 299 4242

Follow us on: [twitter](#) [myspace](#) [facebook](#)

IntaAudio

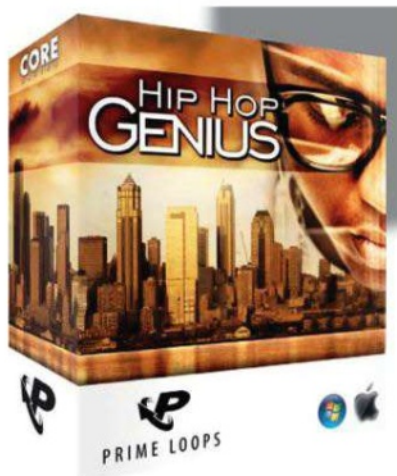
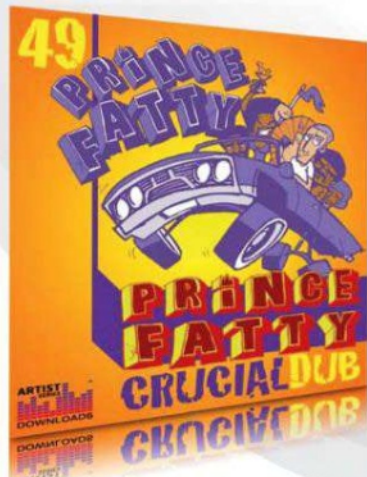
www.inta-audio.com

PRINCE FATTY CRUCIAL DUB

Size 1.5GB Formats ACID WAV, REX2, Kontakt, HALion, NN-XT, EXS24, Apple Loops, Ableton Live Price £34.95

Everyone's favourite contemporary producer of classic, all-analogue dub presents a pack crammed with all manner of sounds, including, of course, lots of seriously heavy bass.

Web www.loopmasters.com



HIP HOP GENIUS

Size 761MB-878MB Formats WAV, ACID WAV, AKAI MPC, Apple Loops, FL Studio, Roland (various) Price £8.98

It doesn't take a genius to realise this is one for the hip hop massive, with 250+ one-shots and ten full construction kits.

Web www.primeloops.com



Samples Zone

A very brief round-up this month! But from house and hip hop to heavy, heavy dub, we've still got it covered...

DEEP & DUST HOUSE

Size 264MB Formats 24-bit WAV, 30 bonus MIDI files Price £12.95

Quite what 'dust house' is meant to be we're not sure, but for those producers wanting to plough a deeper dancefloor furrow, this collection of over 300 sounds ranging from drums, bass lines and piano chords to flutes, hand percussion, vocal snippets and '4am street ambience' should be well worth a look.

Web www.soundstosample.com



UAD via FireWire

The caveat with Universal Audio's Powered Plug-in range, the choice of many top-flight producers, has always been that you needed a PCIe or ExpressCard slot and the appropriate UAD-2 DSP accelerator card to use them. Enter a line-up of five FireWire-based UAD-2 Satellite DSP accelerators.

The UAD-2 Satellite range comprises the DUO (Core), DUO Flexi, QUAD (Core), QUAD Flexi and QUAD Omni cards, which feature either two or four Analog Devices SHARC processors and vary also in the number of plug-ins bundled with them. Initially, UAD-2 Satellite FireWire cards are for Mac users only, but PC versions are expected soon. UAD's Lev Perrey said, "We anticipate this product expanding our 40,000-strong user base significantly."

Contact Source Distribution
020 8962 5080

Web www.uaudio.com



ON THE MIC

Plenty of new microphones at NAMM

If you're in the market for a new microphone, for whatever application, then the NAMM Show again had plenty to choose from.

Blue Microphones had two new mics on display: a new Pro version of the Yeti that supports recording up to 24-bit/192kHz resolution and adds an XLR output, as well as the all-new Reactor – you can read more on that one on page 19.

MXL, meanwhile, was touting its UR-1 (billed as the world's first

USB ribbon mic but not in stores until June) and the new



\$900 GENESIS II, an update of the popular GENESIS mic that now features a dual diaphragm.

Elsewhere, wireless mics seemed to be all the rage this year, due not least to the reallocation of RF frequencies. Shure's PGX line-up is the company's first foray into the digital wireless arena and includes five microphones, all with MSRs around the \$600 mark, while Omnitronic has upgraded its popular 1000 series to support the new 740-764MHz frequency range.

Electro-Voice's new R300 Wireless system, meanwhile, is billed as 'entry-level professional', while the company's RE range of wired mics is augmented with the new \$500 RE320, featuring a humbucking coil and E-V's Variable-D proximity control technology.



SOUNDBYTES Shine on

Seen here is the new four-channel rackmount version of the Shiny Box 500 Si4 preamp. The unit offers 72dB of gain in 6dB steps, features eight-segment metering, switchable input loading and a built-in PSU. It will retail in the UK for £1,200 via KMR Audio. Full details at www.kmraudio.com



It's Venom-enal!

M-Audio's new Venom synth announced

Venom, from M-Audio, is a new hardware/software combo synthesizer that its maker suggests

offers a degree of 'virtual analogue realism' that 'stands apart from the glossy sheen of other virtual analogue synths'.

The 49-key Venom comes preloaded with 512 single and 256 multi patches, but if you do want to program your own sounds you can go in as deep as you like, with each of its 12 voices offering three oscillators, FM, sync and dynamic wave-shaping, a resonant multi-mode filter with two- and four-pole modes, three LFOs and three AHDSR envelopes. There's also a built-in Pro Tools M-Powered-compatible interface and the synth comes with editor/librarian software for both PC and Mac. Full details of pricing and availability, however, are yet to be announced.

Contact **M-Audio** 01753 655999

Web www.m-audio.com/venom



SOUNDBYTES Virus updated

The Virus TI gets a couple of tweaks this month. Firstly, the Virus TI OS 4.5 firmware upgrade adds a number of effects including Air Chorus and vibrato. Secondly, a limited-edition gun-metal version of the Virus TI Polar is also now available. Full info at www.access-music.de



MONITOR MAKEOVER

Quested's best-selling VS2108 revamped

Quested's VS2108 monitors can be seen in professional studios the world over, and now the popular speaker has had a 2011 refit by Roger Quested himself.

The new V2108 (they've dropped the 'S') looks pretty much exactly like the old one – all the improvements are on the inside, with Quested's tried-and-tested eight-inch bass cone and 1.125-inch tweeter now coupled to a floating drive stage Class A/B amplification platform derived from the company's V3110 amp. The new monitor is said to offer a much clearer midrange and a cleaner response at the lower end of the frequency spectrum thanks to improved stiffening in the LF cone. It also features three/four-position LF/HF EQ and pumps out 200 watts per channel.

The V2108 is available now, priced £1,650 each (£3,300 per pair).

Contact **Quested** 01404 41500

Web www.quested.com



Beware! There is a great danger upon us ...

The world is overflowing with terribly evil beats!

Now is your time to become the ultimate
Superproducer - the saviour of sound!

Fear not, you can do it!
With the power of...

PRIME LOOPS



50% OFF ALL SOUNDS!



SAVE THE SONIC UNIVERSE WITH THE...
50% SUPERPRODUCER SALE!
YOU CAN DO IT... WITH THE POWER OF PRIME LOOPS!

www.primeloops.com

SALE ENDS 28/2/2011



6 THE EGG
Price £1,199

Contact Sonic Distribution 0845 500 2500
This striking-looking monitor is The Egg, developed jointly by Rupert Neve Designs and sE Electronics. The peculiar shape is said to eliminate sound colouration and virtually all internal vibration plus minimise spectral distortion. It features a 50-watt HF driver and 25mm silk-dome tweeter alongside a 50-watt LF driver with a 165mm polypropylene cone. The result is a monitor described as 'unforgiving'; its makers say that, "Bad mixes will sound embarrassing and that won't please everyone, but those who want the truth will find it here."

Web www.sonic-distribution.com

Rack 'em up

A closer look at some of the coolest new kit we saw at NAMM 2011...

1 NORD STAGE 2
Price TBC

Contact Sound Technology 01462 480000
Hand-built in Sweden by Clavia and available from March, the Nord Stage 2 is the first keyboard in the Stage range to offer playback of user-loaded samples as well as sounds generated internally by its three sections (piano, organ and synthesizer). Other new features include MIDI-over-USB and master clock sync.

Web www.nordkeyboards.com



5 AKAI EIE I/O
Price £TBC

Contact Numark Alesis 01252 896000
This new studio-grade interface from AKAI Professional also goes by the rather grander name of 'Electromusic Interface Expander'. The four-in, four-out tabletop USB audio interface enables Mac and PC users to record at up to 24-bit resolution. Each channel is equipped with combo 1/4-inch/XLR inputs with phantom power, while the unit as a whole also features MIDI in and out, a 1/4-inch headphone jack, four balanced outputs and two VU meters, plus three additional USB ports so you can use it as a USB hub if spare ports are in short supply.

Web www.akaipro.com



2 ALESIS MULTIMIX 16 USB FX

Price £240

Contact Numark Alesis 01252 896000

The clue's in the name with this one: it's a 16-channel mixing desk providing USB connectivity and a range of onboard digital effects. By Alesis. There are eight XLR inputs with a phantom power option, plus 1/4-inch jack, RCA and Hi-Z inputs, as well as an aux input so you can use the effects to process any audio signal. It's fully plug-and-play with all major DAWs on both Mac and PC, but comes bundled with a copy of Cubase LE.

Web www.alesis.com

3 BLUE REACTOR

Price £350 approx

Contact Blue Microphones
+1 818 879 5200

The striking Reactor was one of two new mics Blue was showing off at NAMM (the other being the new Pro version of the Yeti). The Reactor offers a choice of three polar patterns (cardioid, omni or bi-directional), with noiseless live switching between them, and also features an innovative swivel head that rotates through 90 degrees to enable more precise mic positioning.

Web www.bluemic.com



4 KORG KAOSS PAD QUAD

Price £TBC

Contact Korg 01908 857101

Some ten years after the original Kaoss Pad caused such an upheaval in DJ circles, NAMM 2011 saw the unveiling of this next-generation model, which offers X-Y pad control of up to four simultaneous effects. Each of these effects has five options plus a module kill, giving a total of 1,295 combinations that cover all the usual bases such as reverb, delay and filters, plus turntable FX and multi-mode looping.

Web www.korg.co.uk



Studio
Icons No5

Neumann U 47

It's without a doubt the most famous microphone in history, but just what makes this 1940s classic so special? **Mike Willox** reveals its secrets...

The ubiquitous photos of Frank Sinatra recording at Capitol Studios after World War II helped to create the iconic image of the man who would go on to become the most famous singer in the world. The other star of those images was the microphone that 'Ol' Blue Eyes' was singing into: the Neumann U 47. Look at any jazz record sleeve from the 50s onwards and the chances are that if there's a microphone in the picture, it's a U 47.

Georg Neumann founded his Berlin-based company in 1928 with his then-partner Erich Rickmann. Their developments were not limited to the manufacture of microphones, though – as well as designing direct-driven disc-cutting machines, Neumann is credited with the development of the first gas-tight nickel cadmium battery, of which the modern version powers everything from Flash memory to hearing aids.

It was this prodigious inventiveness that led Neumann to produce the first mass-produced condenser microphone, the CMV 3 or 'Neumann Bottle'. This had interchangeable heads for different polarities and it was off the back of this incredibly successful mic – built to the exacting standards of German State radio – that the U 47 was born.

Developed in 1947, the U 47 was the first ever switchable-pattern (cardioid or omnidirectional) condenser microphone and took the world – especially the US – by storm. The U 47's double-diaphragm M7 capsule had two back-to-back cardioid capsules and enabled both diaphragms to be polarised with the same voltage or neutralised with respect to the centre electrode, enabling the two cardioid capsules to create an omni field. This technology paved the way for the plethora of high-quality multi-pattern mics that are available today. Neumann later produced the U 48, which is essentially the same as the U 47 except that it produced a figure-8 pattern instead of an omni one.

The ribbon mics that were in use by the major studios of the time just didn't stand up to the big sound of the U 47 with its Telefunken VF-14 pentode vacuum tube. Along with the M7 capsule, it's without a doubt that this valve lies at the heart of the U 47 legacy. Telefunken originally produced the steel-covered tube for the German army's field radios in World War II, but it was Georg Neumann who gave this vacuum wonder a second life. Another characteristic of the Neumann was a lift in the upper-mids which, when used on a vocalist, enabled the microphone to rise above the high frequencies of an orchestra's string section in a way that other mics couldn't.



In the days before colour photography, Neumann U 47 user Frank Sinatra was known as 'Ol' Shut Eyes'.

Nick Robbins, of Soundmastering, who's used the U 47 to record Van Morrison, Shane MacGowan and Morrissey among many others, says: "The secret behind the U 47's sound is the Telefunken tube, it gives [it] a big, fat, open sound and a wonderful smoothness."

The microphone was adopted by every corner of the recording industry. Mercury Records utilised it as part of the *Living Presence* series (which heralded the general use of stereo recording for orchestral works) and it was used by almost every renowned recording artist at some time or

George Martin famously used a U 47 on nearly everything on The Beatles' *Rubber Soul* album

another during the 50s. George Martin famously used one on nearly everything on The Beatles' *Rubber Soul* album, while Nat King Cole and Ella Fitzgerald were also big fans of the new Neumann valve sound, using U 47s exclusively.

End of an era

Unfortunately, however good the VF-14 tube may have been, Neumann was the only customer for it – by the late 1950s Telefunken had ceased its production. Neumann replaced the original tube with a 13CW4 NuVistor, which people generally agree does not have the same sound quality as the Telefunken. The Holy Grail for collectors has always been the first U 47s (these originally bore the Telefunken brand in the US due to distribution issues) and a second-hand one with the VF-14 pentode vacuum tube can set you back up to £6,500, while a single, new old-stock VF-14 tube on its own can go for nearly £1,300...

By the early 1960s, the manufacture of tube mics was largely being replaced by FET (Field Effect Transistor) technology and Neumann produced its first transistor mic, the KTM 1965, in 1965. It wasn't long before the U 47 had its final major overhaul, and these days the FET version is almost as desirable as the original valve model.

With the explosion of lookalike microphones now being produced around the world, the U 47 continues to live on in studios that are not lucky (or wealthy) enough to own one of the original Neumanns. It's possible to purchase a valve mic based on Georg Neumann's first switchable condenser design for as little as £500 – but there's a reason why the original still holds its place in recording history. **MTM**



The U 47 was the world's first multi-pattern mic.

FOR REAL PRO AUDIO

api
anthony demaria labs
apogee
apple
avid
barefoot
brauner
coleman
crane song
dav electronics
dramatic audio
fmr
jdk
lavry
lynx
neve
peluso
pmc
prism
roll music
shadow hills
shinybox
soundfield
soundman
towersonic

TALK TO US

KMR are Europe's leading supplier of high-end recording equipment. We stock a huge range of audiophile gear - available to audition in either our North London demo rooms or the comfort of your own studio. If you like your supplier to know one end of a Lundahl transformer from a T4 opto-compressor, our highly experienced staff will help you choose the best equipment for your needs. Combining a passion for great recording kit with good old-fashioned service and competitive pricing, we look forward to hearing from you.

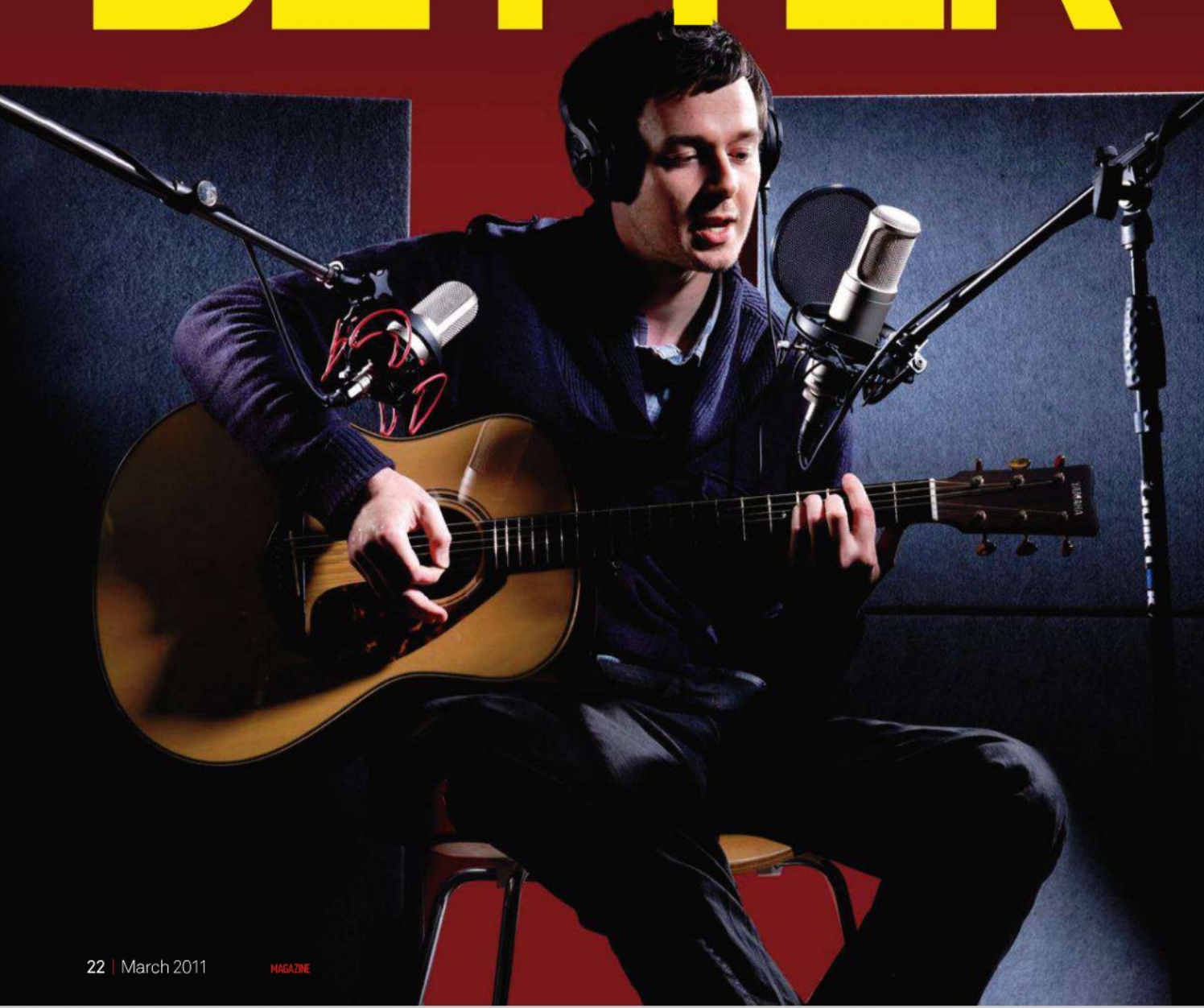
 **KMR** AUDIO

email • sales@kmraudio.com web • www.kmraudio.com
kmr audio, 1375 high road, whetstone, london N20 9LN

020 8445 2446

MTM Masterclass Improving your recording space

Acoustics & te **BETTER**



technique for a STUDIO

We've recently covered the acoustic issues that concern control room monitoring, but are things any different for recording rooms? **Huw Price** investigates live and dead rooms, the creative use of room acoustics and old-school tricks with gobos...

Serious recordists tend to obsess about stuff. We'll pick over the minutiae of a classic drum sound, a landmark guitar tone or a particularly fine vocal recording. We may search online to discover which microphones, preamps or compressors were used for a particular recording, or even get totally hung up on cables or electronic components. Checking out recording forums, it's not uncommon to find contributors squabbling over all manner of technical inconsequentialities.

But the one factor that always seems to be missing from these discussions is the acoustic

environment in which great recordings were made. There's no getting away from it: every time you use a microphone you have to deal with room acoustics, and the sound of a room can

have a more profound influence on the final outcome of the recording than any other factor. For instance, let's assume you have a pair of bright-sounding omnidirectional condenser microphones and they have always sounded great as drum overheads in your dry and slightly dark-sounding recording room. Then, one day, you're asked to record drums somewhere different, in a room with a concrete floor, lots of flat reflective walls and plenty of windows.

A room like that will sound extremely bright and ambient and the upper frequency lift of your mics might make cymbals sound clanky, harsh and edgy. The mics and your signal chain are exactly the same, so what can you do?

The first thing *not* to do is panic. If you have a basic understanding of room acoustics, microphone positioning and pickup patterns as well as acoustic treatment, you can still get the sounds you want. In fact, overcoming fears about →

Every time you use a microphone you have to deal with **room acoustics**

→ exploiting room acoustics can open up a world of creative opportunities. Gear selection, obviously, will always be important, but if you factor in a degree of acoustic awareness, you may find that your recordings will become more individual, characterful and interesting.

Room acoustics

For our purposes let's define the opposite extremes of room acoustics as 'wet' and 'dry'. Reverb is actually formed by multiple echoes that are so close together they appear to sound continuous. When a room is very 'reverby', we'd describe it as 'wet' and you may have experienced reverberant environments in large areas such as stairwells, churches, cathedrals and big empty halls.

When there is no absorptive material, the soundwaves will continue to bounce around for quite a while, so we'd describe this a long reverb time. If some absorptive material is present, like carpet or curtains, the reflective soundwaves will be soaked up more quickly.

As long as there are some reflective surfaces, the room will retain a degree of reverb, but we'd describe shorter reverb times as ambience. If you've ever gutted a room for decorating then gradually re-introduced carpet, curtains and soft furnishings, you'll understand how the acoustic ambience of a room can change.

Completely non-reverberant spaces are called anechoic chambers and are really only useful for measuring loudspeakers, microphone responses and so forth. However, heavily furnished rooms can sound quite dry and if any your cupboards are large enough, try recording in there for a seriously dry



Philip Newell designed the stone live room at London's legendary Blackwing Studio. This was a very bright-sounding room and typical of many 1980s stone rooms. Note how an irregular stone pattern was used to diffuse soundwaves. Gil Norton recorded many of the guitar sounds for *Trompe Le Monde* by the Pixies here using close and ambient mics.

sound. The late Fad Gadget recorded all his early work in his airing cupboard and Mickie Most often put Jeff Beck's amp in a wardrobe.

Acoustic trends

Many of the earliest pop and rock recordings were made in studios that had already been around for decades and were originally designed to accommodate orchestras. Listen to the recordings The Beatles made at Abbey Road and you can hear that they weren't made in small, dead rooms. Or check out Jean-Luc Godard's film *Sympathy For The Devil* to watch The Stones recording at Olympic. Could you even imagine putting Jimi Hendrix's rig in a vocal booth? He'd probably have 'blown the bloody doors off'. Room acoustics and spillage had a huge impact on recordings from the 50s and 60s.

Contrast that natural and airy quality with many recordings from the 1970s. The studio scene had evolved and the role of the new breed of engineer/producer had moved beyond technician/project manager to become something more akin that of a film director. There was a growing realisation that the studios themselves could be 'musical instruments', and in order to realise the full

Tech Terms

COMB FILTERING

Comb filtering occurs when reflected soundwaves interfere with the direct soundwaves reaching a microphone. It takes longer for reflected soundwaves to reach the microphones than direct soundwaves, so phase shifts occur that results in partial cancellation and reinforcement throughout the frequency range.

PICKUP PATTERNS

Microphones can pick up soundwaves coming from the front, back or sides depending on what pickup pattern has been pre-set at the factory or selected by the user in the case of multi-pattern mics. The most common patterns are cardioid, omnidirectional, figure-8 and hypercardioid.

Room acoustics and spillage had a huge impact on recordings from the 50s and 60s

MTM Pro Technique Vocal recording

Much depends on the type of singer – opera divas, for instance, do not sound good in tiny, dry vocal booths. Their voices have been trained to project and they're best mic'd from some distance in a room with a degree of natural reverberation. For pop/rock vocals the situation is usually the opposite. Most engineers prefer to record lead vocals with as little room ambience as possible as it provides scope for selecting the required reverb or echo effects during the mix. However, some prefer more room sound on backing vocals.

The sE Reflexion Filter was developed specifically to achieve dry vocal sounds in less than ideal spaces. Essentially, it comprises several layers of absorption materials held in a former that curves around the back and sides of the microphone. This product proved so effective and popular that several other manufacturers have designed their own versions.



A notable exception to the dry vocal rule is David Bowie's vocal on *Heroes*. It was recorded in an orchestral room at Hansa, in Berlin, and producer Tony Visconti set up three mics with noise gates on mics two and three. Mic number one was located up-close, mic two was about 15-feet away and mic three was placed at the far end of the room. The thresholds of the gates were set so that the second mic opened up when Bowie sang louder; the third mic opened up when he was at maximum volume. So any reverb on Bowie's voice was actually the room itself and you'll notice that Bowie's voice gradually becomes more distant as he sings louder. This is just one example of a microphone technique that tests the norm – see the feature starting on page 49 for others.

sE's Reflexion Filter is specifically designed for optimising recording results in any environment. www.sonic-distribution.com



Artist Q&A

Steve Albini

Affectionately quoted as a 'skinny wizard with his box of mics' in our Tom Elmhirst interview in Issue 93, Steve has an excellent track record as a musician, and as a recording engineer has worked with Nirvana, Cheap Trick and the Pixies among many more. Steve gave MTM a bit of time to chat about various acoustic considerations and challenges in his field of work.

When it comes to positioning and recording a sound source, what are the first critical decisions you make before you get started?

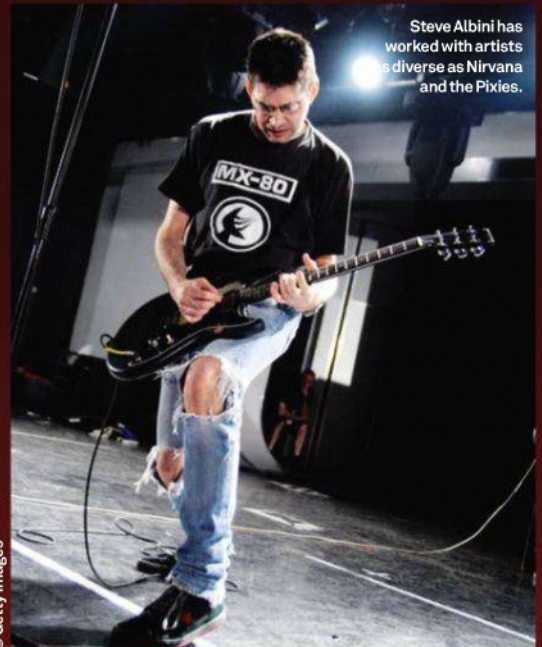
The major consideration is whether this is a solo instrument recording or part of an ensemble. With a solo, you can make use of the room sound where appropriate. With a group, you need to physically accommodate everything else in the room, then worry about the mics. I'll still try to suit the mic to the source, but sometimes ensemble considerations force your hand. For example, a piano recorded by itself in a room can have a bunch of options: close spot mics for a bright, direct sound, a stereo mic at a middle distance with the lid all the way open for a bit of room sound as well and lots more. In an ensemble

■ The room is the biggest factor in the ambient character of big dynamic sounds ■

setting, you're often limited to very close mics and sometimes you even need the lid closed for isolation, so I tend to use very small mics inside the piano, like the Crown GLM or DPA 4061. The same considerations apply to recording a number of amplifiers in a room, but paradoxically, the louder the sound sources are that share a room, the less bleed you'll get between their close mics because you'll be using so much less gain on the mics. The real problem is when you have one loud instrument in a group of quiet ones or vice versa.

Do you have any favourite places for recording certain sounds or styles of music?

Sure. It's really important to spend time with the band asking them what they want their record to sound like, because that will make a lot of the **decisions for you**. For a dry, flat drum sound you really need a **dead room**. For a bigger, more lively sound you need a **room with a decent amount of reflection and good bass response**. You need appropriate mics and techniques, **of course**, but the room is the biggest factor in the ambient **character of big dynamic sounds**. Acoustic instruments **generally** sound more natural in a setting where you can



© Getty Images

Steve Albini has worked with artists as diverse as Nirvana and the Pixies.

hear some of the room ambience, so I usually try to organise the session so we can record the acoustic instruments in a flattering room

Can you remember a particular project that was the most challenging acoustically and how did you cope with it?

The biggest challenges are working in uncontrolled environments with limited resources. I've recorded records live onstage, in people's houses, in empty theatres, in warehouses and even outdoors. You just need to think things through and apply what you know. In a noisy environment, like a live gig, then you're going to be using mostly close-mics, though typically you'd have some room mics for crowd noise and ambience.

How do you like to integrate close and ambient mic'ing in relation to a song's arrangement and dynamics?

Depending on the mood of the music, it may be appropriate to have the sound open up and become more reverberant for a chorus or dramatic moment. Alternatively, it might sound more dramatic to have the ambience dry out suddenly to place emphasis on a single instrument or voice. I've done all permutations of this kind of manipulation and I've also done records where every song was intended to share a common ambience for the sake of continuity and flow. One thing that comes in handy is to have the ambient mics attenuated when there's no playing going on to reduce room rumble. This is pretty easy to do by using a gate with the sidechain keyed to the instrument you're recording, so that when it's playing the room opens up, but when it's not there's no rumble. Taken to a more dramatic extreme, this becomes the gated room sound gimmick that ran like a rash through records in the 1980s after Phil Collins' records became popular. Executed more subtly it can sound completely natural.

Steve is the owner and engineer at Electrical Audio studios in Chicago. For more information and contact details, visit www.electrical.com

Offering excellent detail and resolution, DPA's 4061 has a neutral sonic character.



MTM Pro Technique Recording drums

There are no hard-and-fast rules regarding suitable recording rooms for drums, because everything depends on the sound you want to achieve. Achieving a close, dry drum sound in a live-sounding room is even trickier than making dry drums sound like they were recorded in an ambient environment. Medium-size rooms are sometimes harder to record in than very large rooms because early reflections are so prevalent.

Properly designed large rooms with plenty of absorption and diffusion don't necessarily sound reverby. Since there are relatively few early reflections you can get well-focused and intimate drum sounds with a lovely sense of airy openness. Of course, you can use ambient microphones too, then when you add the ambience to the close mics you can achieve a big, roomy sound without losing detail or crispness.

Try enhancing the dynamics of mixes by keeping the drums tight and close in verses then adding the ambience tracks for choruses. For room ambience, omnidirectional condensers and figure-8 ribbon mics work really well and you could try spaced stereo or coincident techniques.

Mono ambience is cool too, so try setting up a figure-8 ribbon directly in front of the bass drum with the deaf side pointing towards the kit. Ambience mics

often sound better placed just above the floor, in corners. This beefs up the bass and the cymbals won't dominate the overall balance of the kit. You can also change the apparent 'size' of a room by moving the ambience tracks forwards or backwards in time relative to the close mics. This is easy in most DAWs.



Manipulating the recording in your DAW can be key to creating the impression of size and space in a track.

Many of those 80s drum sounds were achieved in rooms that were lined with stone

→ potential (and establish complete control) of all those groovy effects, extraneous things such as room acoustics needed to be eradicated.

Studio live rooms became 'dead' environments and drums were often recorded in 'booths' lined with copious quantities of absorbent materials. Think of the thuddy, dry-as-dust drums on *Dark Side Of The Moon* (Pink Floyd) or just about any disco/funk track.

These sounds were also great, but they were just different. However, some bands, like Led Zeppelin, bucked the trend and made heavy use of ambience mics while recording tracks like *When The Levee Breaks* in large country houses. Many of the earliest punk recordings also had more of a 'live' sound that better suited the raw energy of the genre.

Although guitar and vocal recordings mostly remained dry, 80s producers like Steve Lillywhite started getting into 'big drums'. Big drums meant big rooms with lots of microphones to capture all the ambience. Remember: those were the days when most records were done on 24-track tape and it wasn't uncommon for 12 or more of those tracks to be dedicated to the drums alone.

Tech Terms

- **AMBIENCE**
The sonic character of the room in which the recording is taking place. So, 'ambience microphones' or 'room microphones' are the microphones that are placed specifically to record the sound of the room itself.
- **REVERB**
In an empty hall, clap your hands once and listen to the way the sound continues after the initial impact. That's reverb; the time difference between the clap and the sound level dropping by 60dB is the reverb time – RT60.

Technological advances had provided producers with the tools to manipulate and process the drum sounds. For instance, they could apply such extreme compression to the ambience it would almost flip backwards. Gates could also be applied to ambience tracks and triggered from the close microphones. Prime examples include Robert Palmer with *The Power Station* and Phil Collins' *In The Air Tonight*.

Many of those 80s drum sounds were achieved in rooms that were lined with stone, which gave the sound added brightness. Things were made even brighter by powerful desk equalisation and Aphex Aural Exciters (combined with an ear-numbing vogue for cocaine).

Whether by design or accident, many of us find ourselves recording in dry spaces once again. Old-style studios with large live areas are now comparatively scarce and expensive. Many commercial recordings are made in programming rooms with small, acoustically dry recording rooms, and you may even find artists and engineers working in the same room. Those who are serious about acoustic recording are often obliged to find locations with suitable acoustics where they can work. Many of us keep our gear permanently flightcased to make dismantling and reconstructing our studios easier when we have location work. Popular makeshift studio locations may include village halls, churches or large country houses (depending on your budget, of course!).

Ambience and spill

We've established that recording musicians individually and together in ambient spaces can produce some amazing sounds, but it does present some technical challenges. Principally, these include unwanted ambience and spillage – whereby sound from instruments leaks into the 'wrong' microphones. As these are both issues that every recordist will have to deal with at some point, let's look at controlling ambience first.

DIY acoustic control is now well established in the home recording sector and it's invariably applied to rooms in which accurate monitoring is the first priority. Of course, all the same acoustic phenomena applies to control rooms and live rooms, but while we generally seek to neutralise the frequency →



Setting up to record a three-piece rock band in a typical village hall. This room has bright, lively acoustics and drums sound really huge in there. Seek out any space that gives the sounds you want.

INTRODUCING **2 IN 1** TECHNOLOGY



Gemini 5

**The world's first
dual technology
FET / Tube mic in
one**

- Simultaneous, discrete FET and Tube outputs
- 2 high end mics for the price of one mid range mic
- Gemini II capsule gives exceptional performance
- Record your one perfect vocal or guitar take and have 2 options to drop into your mix

0 8 4 5 . 5 0 0 . 2 . 5 0 0
www.sonic-distribution.com

SONIC



Sound Engineering
www.seelectronics.com

Tech Terms

● ABSORBERS

An acoustic treatment method that seeks to control standing waves and flutter echoes in a room by turning acoustic energy into heat.

● DIFFUSERS

An acoustic treatment method that seeks to control standing waves and flutter echoes by dispersing sound waves in multiple directions.

→ response and reverberation of a mixing/monitoring room, those same characteristics can actually be desirable in a recording space.

Control room acoustic treatment usually involves the permanent installation of absorbers and diffusers of some description. The same techniques can also be applied to recording rooms, but it's preferable to be able to add acoustic control only when and where it's needed. Different instruments and production techniques require varying amounts of acoustic ambience, so most live-room acoustic treatment needs to be impermanent and portable if it is to be practical.

But is spill necessarily bad? There are various schools of thought on the issue, but from the inception of multitrack recording, engineers sought to control it. This was eventually taken to the extreme, with individual instruments often being

acoustic ambience also apply to minimising mic spillage, so let's take a broad view, starting with microphone techniques.

Microphone magic

Engineers can control and manipulate room acoustics through the selection and placement of microphones, much of which comes down to common sense. Try to stick to close-mic'ing whenever you want a dry sound with minimal spillage. Also consider how you can make pickup patterns work in your favour.

If you've got a ribbon microphone on a guitar amp, try aiming the 'deaf' side of the mic towards the drum kit. Remember that hypercardioid microphones, unlike regular cardioids, do pick up some sound from the rear, so avoid pointing the rear of a hypercardioid mic towards anything loud. Obviously, omnidirectional mics aren't the best choice when you're trying to minimise spill.

Some engineers swear by lavalier microphones – like the ones that clip onto the shirts or jackets of TV presenters. Try slipping one through the vent hole of a snare drum or tom in place of an 'underneath' mic. Also investigate stick-on miniature condensers, like the DPA SMK4061, on acoustic guitar. They're very good on grand piano, too, because you can attach them to the inside lid then close it and cover the piano with duvets or blankets. PZM mics can also be stuck to piano lids with gaffer tape.

Don't be afraid to use bass roll-off switches. If there's a load of kick drum or electric bass ambience flying around the room, high-pass filter switches can remove some low-frequency content and shouldn't affect higher-pitched instruments too much.

Companies like Auralex produce absorbent foam collars that provide a bit more isolation for microphones. If you're on a budget, try cutting a mic-size hole in a square of foam and pushing a microphone through it. If you're using a cardioid mic, be careful not to cover the rear of the grille area with foam because this will turn it into an omni mic and make matters worse.

Room to manoeuvre

Sound engineers have always used whatever comes to hand, and this particularly applies to controlling ambience and spill. Although there are plenty of

Try cutting a mic-size hole in a square of foam and pushing a microphone through it

recorded in complete isolation – at which point, some daring souls began to wonder if having musicians playing together in a room might actually inspire better performances...

Some engineers take the view that spill can be 'the glue that holds mixes together'. However, most would regard spill as desirable – or even acceptable – only so long as it isn't excessive and doesn't compromise the overall production values in any way. But many of the techniques for minimising

MTM Pro Technique Electric guitar recording

Most engineers go for dry sounds when they're recording guitars, with as little room ambience as possible. An acoustically dry room with some added damping from gobos, blankets and so forth is the order of the day. Sometimes reverb is added during mixing, but some styles, like clean funk and extreme metal, work best when the sound is completely dry. If you ever watch *A Year And A Half In The Life Of Metallica*, which documents the recording of the *Black* album, you'll see how they build a 'room' around the guitar amps using packing blankets.

Other recordists prefer to avoid reverb effects and capture the guitar as it sounds in the room. After all, if you've already got a great sound happening, why would you want to try to re-create it later by artificial means? In this scenario, ambience microphones are used in conjunction with close microphones and either mixed together onto a single track or recorded separately to be combined at mix time.

Ambience microphones in a dead room can be a bit of a waste of time. Instead, look for acoustic spaces with some ambience and maybe a degree of brightness. If you do combine an ambient mic with a close-mic, watch out for comb filtering and listen to the sound of both mics when you're deciding where to place the ambient mic.

If you rely on a single microphone to balance the direct sound and the room sound, comb filtering can cause some nasty side effects. The mic near the floor is set to omni – a great way of minimising comb filtering. This technique is called boundary mic'ing.



Here's how to achieve amazing separation by placing two amps close together with some absorbent material in between and close-mic'ing them. This might seem counter-intuitive at first, but it actually works surprisingly well.

AS RECOMMENDED BY YOUR NEIGHBOURS



THE STUDIO CONTROL ROOM IN YOUR HEADPHONES



ALSO AVAILABLE Saffire PRO 24

Saffire PRO 24 gives you similar i/o and the same class-leading audio performance as its DSP brother. However, without DSP-powered dynamics, reverb and VRM, it's even more affordable.



Saffire PRO 24 DSP

It's 11pm, you're at the most crucial stage of your track - the mix. The baby next door has just stopped crying, the city slicker is checking his stock portfolio and downstairs are dancing towards bed. But you're just getting started. Unfortunately you've been told, wind your monitors down to whispering level, or wrap up the session. We all know you can't mix on headphones - or can you?

Imagine if you could use your headphones to hear your mix as you would in the studio. Imagine you could model an ideal control room, choose between 10 pairs of industry standard monitors, and select from different listening positions. Imagine being able to reference your mix on hi-fi, radio, television or computer speakers, all through your headphones.

The Saffire PRO 24 DSP comes with 'VRM' (Virtual Reference Monitoring) - a Focusrite technology that models different rooms, monitors and listening positions. VRM transforms headphones into listening environments that are essential for mixing. With VRM you can mix anywhere... and did we mention you also get an industry-leading 16 in 8 out Focusrite Firewire Interface?

www.focusrite.com/VRM



Focusrite®
SOUND IS EVERYTHING

→ specialised products on the market, room acoustics and microphone isolation can be dramatically improved using household items such as duvets, sleeping bags, blankets and cushions.

For instance, it's very common to build a bass drum tunnel using any of the above items to isolate the kick drum mic from other sounds in the room. Throwing a blanket or duvet over a guitar or bass cab can also work wonders if you're aiming for a dry sound. Just make sure that you're not blocking any air vents, otherwise you could start a fire...

If the room is generally too live, try scattering some rugs or carpet pieces over the floor and drawing curtains or blinds across any windows. If there's too much bass build-up, leave the door open to let some of those soundwaves escape. Remember that anything goes, and whatever you use doesn't necessarily need a brand name stamped on it to achieve professional results.

Tech Terms

● SPILLAGE

Unwanted soundwaves from other instruments finding their way into microphones that are being used for a completely different instrument.

● SEPARATION

The practice of minimising spillage through physical isolation, microphone pattern selection and placement, and acoustic treatment methods.

● EARLY REFLECTIONS

The indirect soundwaves that reach the microphone after bouncing off hard surfaces that are in close proximity.

On the gobo

Gobo is a US studio term for movable, free-standing acoustic panels or baffles that are used to achieve extra separation in studio recording situations. They can also be used to alter acoustics in the vicinity of a microphone and commercially made gobos often have a reflective side and an absorptive side to liven up or deaden the sound respectively.

Ideally, a gobo should go all the way down to the floor; if there's a gap at the bottom you won't notice much improvement in separation. Even with well-designed gobos, the best you can hope for is a reduction in direct sound spill because gobos aren't particularly good for dealing with ambient spill.



Flightcased preamps, monitors and invaluable Mackie Big Knob desktop controller set up and ready to go on-location.

If you're looking to buy some gobos there are plenty of manufacturers out there making them. The advantages of buying professionally made gobos are that absorption should be fairly even across the frequency range and they will look good. Some control room absorbers are also designed for stand-mounting, so when you're recording you can take them into your live room then replace them come mix time.

Home recording enthusiasts may be interested to learn that gobos are actually quite cheap and easy to make and there are plenty of online sources that can tell you how to do it. Alternatively, look out for acoustic screens from second-hand office equipment dealers. So, how can gobos be useful?

Memphis-based producer and engineer Jeff Powell learned a trick or two about setting up bands together in a room from the legendary Glyn Johns: "We were recording bass and guitars in the same room as the drums, so he had me put tall screens on each side of the kit then we put the bass amp on the left and all the guitar amps on the right, with screens placed between each one. He said the key to this was getting the bass cabinet parallel with the outer kick drum head. I've done it and it's like they're playing in booths – the spill is inconsequential. If you get that going on and isolate the singer it sounds like an old Stones record. The only time it doesn't work is when the band starts getting into volume wars!"

Splendid isolation

Although it seems counter-intuitive, you'll achieve better separation between two guitar amps by placing them right next to each other rather than at different ends of a room. Bring the sides of the cabinets right up next to each other so the fronts are lined up and firing in the same direction. Then place a gobo between them – or even some cushions from a sofa – and close-mic each cabinet in cardioid.

The close-mics will pick up almost no direct sound from the other amp and since they're placed right up against the speaker, the direct sound will be much louder than any ambient sound that's floating around in the room. The degree of separation will probably amaze you.

If you're recording bass at the same time, arrange all three amps in the same way, with the bass amp in the centre. If you're recording drums, too, try

MTM Pro Technique Acoustic guitar recording

Rather than use multiple microphones to record an acoustic guitar, most engineers will balance out the direct and reflected components of the sound by moving the microphone around. If you want to hear more room, move the mic away from the guitar; if you want a drier sound, move it closer. Some also suggest that cardioid mics should be used only once you have established that omni and figure-8 don't work.

Early reflections from hard surfaces can sometimes enhance an acoustic guitar sound. In studios, sliding glass partition doors often provide the necessities; if you're recording at home you might be lucky enough to have some patio or balcony doors.

Corners can be useful too, as the legendary bluesman Robert Johnson discovered back in the 1930s. Johnson was probably exploiting an acoustic phenomenon called corner loading, which dramatically increases low frequencies and produces a type of natural compression.

Try aiming the guitar into a corner with reflective walls and place a microphone over the player's left or right shoulder, firing down towards the guitar. For amazingly realistic stereo recordings, try an omni mic placed each side of the player's head then pan hard left and right.

Here's how you arrange a pair of microphones for the Robert Johnson dummy head corner-loading technique. If you're recording in mono use one mic over whichever shoulder sounds best, right above the player's head (or even an omni mic between the guitar and the corner). If the bass is too strong, simply move the player further away from the corner.



arranging screens in front of the drums and place any amps right in front of the screens. If the cabs are open-backed, push the backs up against the screens to minimise rear radiation.

Soundwaves can build up in corners and the junctions between walls and floors to create a low-frequency lift. Some engineers like to place gobos across any corners in a room to nullify this effect. You can achieve similar results by propping up mattresses. However, some engineers use gobos specifically to create corners – Jeff Powell, again: “I’ll often take a couple of baffles and arrange them in a ‘V’ shape pointing at the kit, maybe ten feet away. I’ll put a decent-size tube condenser into the ‘V’ somewhere near the floor then compress the hell out of it. The baffles help to keep some of the cymbals out so they don’t control the dynamics of the compressor too much. It gives that John Bonham power thing if you just mix in a bit with the rest of the kit mics.”

British rock and metal producer Chris Tsangarides is famous for his ‘vortex method’ of recording guitars, as he explains: “I was a tape op at Morgan Studio and I was left to record a guitar solo when everybody else went down the pub. The band was Phil Collins’ side project, Brand X, so there I was with the guitarist, John Goodsall, and I thought, ‘how can I make this guitar really loud?’”

We had these huge screens so I decided to build a whopping great bass bin to channel the sound. We ended up with a couple of walls that were 30-feet per side, like a ‘V’ formation coming off the stack. So I put mics up everywhere and started panning the

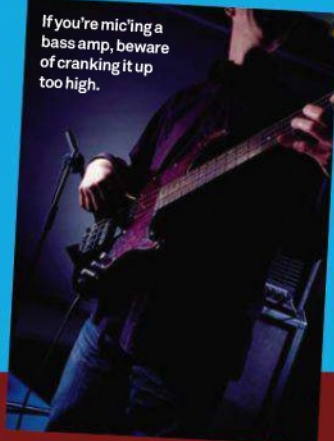
Surrounding a drum kit with absorptive gobos can help tame excessive roominess

MTM Pro Technique Electric bass

Again, most recordists prefer to record electric bass as dry as possible; the ultimate way to eliminate room ambience from your bass track is to record direct via a DI box. This applies to electric guitar, too. Sometimes the sound quality is better than recording through an amp, but for many bass players – and almost every guitarist – the amp is integral to their sound.

No worries, because the recorded DI signal can be sent back through the amp at a later time and re-recorded. That way you can get exactly the right sound, and not only will the bass track be free from ambience and spill, there’ll be no bass spill on the drum and guitar tracks either.

If you are recording the amplified sound rather than the direct signal, watch out for anything vibrating in the room and don’t turn up the amp louder than the room can handle. Close-mic’ing is usually best, but you may experience some boominess with cardioid mics due to proximity effect. Moving the mic further away or switching to omni will cure this, but you may also hear too much of the room.



If you’re mic’ing a bass amp, beware of cranking it up too high.

MTM Pro Technique Using rooms for reverb effects

If you’re lucky enough to be mixing in a studio with a great-sounding live room, you might consider using that live room for reverb. All you need to do is set up a pair of powered speakers in the live room along with a mono or stereo mic setup. For mono we’d suggest an omnidirectional mic, but for stereo, anything goes.

Send a signal to the speakers from an auxiliary send then bring up the room mic signals on one or two channels of your mixer and treat the room as a regular reverb effect. In fact, many of the great old studios, such as the legendary Abbey Road, had dedicated reverb rooms permanently set up. This works really well on drums, bass, guitars and vocals and can make an overly dry recording sound far more live and natural.

You can do something similar at home because tiled bathrooms with hard floors can give you a very natural bright, small room effect that will work with a lot of instruments. Try it and see for yourself.

Don’t be afraid to experiment with bathroom recording if you’re looking for a natural, live sound.



This is the echo room from EVE Studios in Manchester, where they take vintage-style recording very seriously. www.evestudios.co.uk

ambient mics around on the quadraphonic desk we had. After I while I stopped panning but the guitar sound carried on moving. It was like, ‘what the hell is going on?’

“I soon figured out that I didn’t need all those mics. I find a spot in the room where I like what I hear, then I put the room microphone where my head is. I liked the principle of having the close-mic on one side of the mix and the room mic on the other. Then, when I double-track, I reverse the panning so that the close-mic and the ambient mics are the opposite way around on the second take. You get a wall of guitar but with a distinguishable left and right.”

Although the usefulness of gobos for reducing spill is limited, they can be pretty effective for reducing room ambience. For instance, surrounding a drum kit with absorptive gobos can help tame excessive roominess. You can also arrange them in a square to create a ‘booth’ for vocalists – sometimes with packing blankets or a duvet spread over the top for a ‘roof’. As well as keeping the room sound away from the vocal, many singers enjoy the intimate and private space this creates.

Sound proof

Much of what we’ve covered here is just old-school sound engineering. Although there are some amazing products out there for controlling spill and ambience, you can still achieve incredible results using regular household objects, ingenuity and a bit of technical nouse. **MTM**

SUBSCRIBE TO MusicTech MTMP94

☐ UK Direct Debit – Just £26.95 every 6 issues – 3 free issues – PLUS free online subscription.
(Please complete the DD mandate below).

☐ I wish to purchase a gift subscription
(Please fill out gift recipient details below)

INSTRUCTION TO YOUR BANK OR BUILDING SOCIETY TO PAY DIRECT



Originator's Identification Number

837181

1 Name and address of your Bank or Building Society

To the Manager Bank/Building Society
Address
Postcode

2 Name of account holder(s)

3 Branch sort code

4 Account number

5 Instruction to your Bank/Building Society Please pay Anthem Publishing Direct Debits from the account detailed in this instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this instruction may remain with Anthem Publishing and if so, details will be passed electronically to my Bank or Building Society.

Signature(s) Date

YOUR DETAILS

Title Forename Surname

Email address**

Address

Postcode Country

Mobile**

GIFT RECIPIENT'S DETAILS (if applicable)

Title Forename Surname

Address

Postcode Country

OTHER PAYMENT METHODS (All subscription options come with free online access)

- ☐ UK – 12 issues by credit/debit card or cheque for just £53
- ☐ Europe – 12 issues by credit/debit card or cheque for just £74
- ☐ USA & Canada – 12 issues by credit/debit card or cheque for just \$99
- ☐ ROW – 12 issues by credit/debit card or cheque for just £84

Please debit my card

☐ Visa ☐ Mastercard ☐ Maestro ☐ American Express

Card no

Valid from Expiry date Issue no

Signature(s) Date

☐ I enclose a cheque made payable to Anthem Publishing Ltd for £



Send your completed form to Anthem Publishing Ltd,
Freeport RRBS-LRRG-CTBJ, 800 Guillat Avenue,
Kent Science Park, Sittingbourne ME9 8GU

Code MTMP94 Offer ends 30 March 2011

*Sorry, this offer is available to UK Direct Debit orders only. Your subscription will start with the next available issue.

**Please enter this information so that Anthem Publishing Ltd can keep you informed of newsletters, special offers and promotions via email or free text messages. You may unsubscribe from these messages at any time.

Anthem Publishing Ltd, publisher of MusicTech Magazine, may contact you with details of our services or to undertake research. Please tick here if you prefer not to receive such information by post ☐ phone ☐ We occasionally pass your details on to carefully selected companies whose products and services we feel may be of interest to you. Please tick here if you prefer not to receive such information by post ☐ phone ☐

FREE DIGITAL SUBSCRIPTION WHEN YOU SUBSCRIBE!



As a valued Music Tech subscriber, you will be entitled to a FREE online subscription worth up to £39.99. Read the magazine at your computer or on the move via your iPod/iPhone/iPad.



How to access Music Tech magazine digitally:

- Visit www.exacteditions.com/print/musictech either on your computer or iPhone/iPad
- Enter your unique WEB ID, which we will send you once you subscribe
- Enter your email address and choose your unique password
- View your online subscription

Special
NEW YEAR
subscription offer!

3 FREE ISSUES*

Plus **FREE** online subscription when you **subscribe** to **MusicTech** today...



**Subscribe
online at**

www.subscribeonline.co.uk/musictech

entering code MTMP94



**Or call
us on**

0844 844 0398*

quoting code MTMP94

* Readers outside the UK should call +44 (0)1795 592848

Guitar Rig 4 Workshop



Using Guitar Rig on synthesizer sounds

Although designed as an amp and effects simulator for guitarists, Guitar Rig 4 can be useful to keyboard players as well. **Mike Hillier** shows you why...

Guitar Rig has always been the sound designer's amplifier simulator of choice, providing guitarists with the same kind of flexibility that synth players are used to. You can create custom patches that morph slowly between different sounds and use the modulation modules to control parameters in real time – leaving you to concentrate on your guitar playing – just like LFOs and envelopes are used on synthesizers to modulate the sound in real time. Ironically, this has made Guitar Rig almost as popular among synth players as it is among guitarists. In this Workshop, we're going to look at using it to process synthesizer parts.

Better effects

The majority of software synths these days include some built-in effects of their own, even frequently including simple amp emulation, but these are usually an after-thought, tagged on to provide the synth with a more expansive range of sounds for the presets. Compare these limited effects not only to the scope of



PRO TIP

As well as the Pre and Post tape machines, Guitar Rig has a Loop Machine, which can be used for creating quick sound-on-sound looping effects. This effect is included in the Master FX module.

Guitar Rig 4's effects but also the quality, and you will soon begin to understand why many synth players are opting to use Guitar Rig to process their sounds.

Lusher leads

Analogue synth players will frequently push their signal out to an amp rather than simply direct-injecting to the mixing console. However, as is the case for guitarists, the choice of amplifier is a tough one, limiting your sonic options. Pushing the signal through an amp modeller such as Guitar Rig 4, on the other hand, opens up the options considerably, enabling you to carefully select the amp and effects for each voicing.

Just like a lead guitar part, a lead synth line needs to be able to cut through a mix, delivering clarity and character to the synth line. Picking the right amp and effects chain is just as important for your tone as it would be for a guitarist, and there are no 'right' answers.

Fire up an empty instance of Guitar Rig 4 and load the file Lead1.WAV into the Pre Tape Deck. Alternatively, if you're using Guitar Rig as a plug-in within your DAW, you could load the audio loop onto an audio track and then add Guitar Rig 4 as an insert. ¹

The loop is based on a simple analogue mono-synth patch. Let's start by finding a suitable amp to give the loop a little more life. Just as with guitar amp'ing, the choice of amp has a big effect on the final tone, even before you start dialling in the sounds. Do you want a big, high-gain amp or something a little mellower? Do remember that a lot of the really fine-sounding guitar amps add a lot of their own distinctive overdrive characteristics to the sound. For guitar this is essential, but it's not always so useful on lead synth lines.

/// The right **amp and effects chain** is just as important for your tone as it would be **for a guitarist** ///



Putting a synth through one of Guitar Rig 4's amp emulations can open up a whole range of different drive types and characteristics.





Your choice of amp will have a huge effect on the final tone, just as it would for a guitarist. The Ultrasonic and Gratifier are two of our favourites for use on synth parts.



Once you've **chosen an amp**, you need to think about **what kind of effects** you'd like to have

The Twang Reverb, for example, has a nice mellow sound, but the gain from this amp can really muddy the bite, especially if you're using a resonant filter on your synth sound. So don't push it too hard. **2**

The Ultrasonic amp, however, is one of our favourites for use with synths. Set to Clean mode, the amp can be driven lightly to add some extra character to a synthesizer part without interfering too strongly with the existing character of the synth. **3**

For higher-gain sounds, the Gratifier is almost untouchable. Set to Modern or Vintage it has an overdrive that can really send a synth sound in new directions, while in Raw mode it has a more mellow sound that we find easier to tame than the Vox or Fender emulations. **4**

Once you've chosen an amplifier, you need to think about what kind of effects you'd like to have with the sound. Delay or reverb, for example, can be useful tools for adding depth to a lead synth. Try adding the Dual or Quad delay after the amp emulation, set to quarter notes (either by using the Sync option in the expanded settings – click on the triangle to the right of the module to bring up the expanded settings – or by using the Tap Tempo button if your synth isn't running to the session clock). **5**

Beef up the bass

Synth basses can go very low – far lower than a bass guitar – and if you've got a sound with plenty of low-end weight, processing it through a guitar amp emulation is going to thin out the sound quite a bit. However, Guitar Rig 4 comes with Bass PRO – an amp that does have plenty of bottom-end wallop.

That said, a guitar amp emulation can be useful for bringing out some clarity and character through the mids, and thanks to Guitar Rig 4's modular environment you can create custom dual-amp setups, using a bass amp alongside a guitar amp to get both the low-end weight and the grit through the midrange. You can do

this equally, using the Split module or, alternatively, send only the low end to the Bass PRO and the top end to the guitar amp using the Crossover module. **6**

Keeping the low end clean is a good tactic (especially with sub-heavy basses) as it can quickly use up a lot of energy. But adding grit through the midrange is a great way of adding character to a bass part. One of our favourite tricks is to leave the low end below 400–800Hz completely clean, but process the midrange with an amp such as the Tweedman, applying quite a bit of gain and even some extra modulation processing from something like the Chorus/Flanger effect or distortion from the Big Fuzz. As you start to experiment in this section, you'll no doubt discover some neat tricks of your own.

PRO TIP

When dragging an amp into the signal chain, Guitar Rig will always add a Matched Cabinet module. However, you can get more sonic options by using either the Cabinet & Mics module or the Control Room option, both of which include cabinet response emulation.

Designer pads

Whereas leads and bass sounds need clarity to cut through the mix, pads are usually designed to sit back in the mix: to fill the spectrum, create a harmonic bed





Many analogue synth players make use of outboard effects units such as the Moogerfooger range, which include CV processing. Guitar Rig 4 emulates such functions via its Modifier modules.

→ and add a sense of space to the track. This being the case, you can get away with all sorts of processing tricks to give your pad sounds a unique character.

Add the PadSynth1.WAV audio file to the Tape Deck or to a new track in your DAW and add another instance of Guitar Rig 4. This time we're going to use the Split module to send the mono audio track to two different amp rigs and use the module's built-in pan knobs to pan the first side to the left and the other to the right. We're going to use an AC box on the first channel, with an instance of the Control Room module instead of the Matching Cabinet module, followed by a Spring Reverb module for a sense of space. **7**

To bring a greater sense of movement to this channel, we're now going to add an LFO module to control the faders on the Control Panel module, rhythmically bringing out different harmonics by emphasising different mic emulations. **8**

In the second channel, we're going to use a Gratifier amp set to Raw, followed by the Ice Verb and Grain Delay effects modules. **9**

By using the Modifier modules you could add further movement to the pad, even going as far as using the Sequencer modules to control the Grain Delay's pitch in order to create pre-defined, rhythmic, arpeggio-like sequences. By balancing the levels of these two sides using the various level controls and crossfader we can create an unusual pad texture from even the simplest of synth sequences. You could even experiment with

Many of Guitar Rig 4's effects are actually superior to similar effects found elsewhere

modulating the pan or crossfader parameters of the Split module to create more movement in the patch. There really are countless possibilities here.

Sometimes, though, the effect of processing a sound through Guitar Rig can alter a synth patch too much, and while the new sound might help to give character to the synth patch, it's often useful to use Guitar Rig as a send effect so you can dial some of the dry signal back in. Often, all that is needed is the tiniest hint of amp emulation, giving the synth patch more drive without losing too much of the patch's initial characteristics.

You can also try removing the amp from the chain entirely, simply making use of Guitar Rig 4 as a multi-effects suite – many of its effects are superior to similar effects found elsewhere. For instance, try adding the Pro Filter and Tape Echo modules to a lead synth patch, with an Input Level (envelope follower) module controlling the Pro Filter cut-off. These three modules alone can turn a plain synth patch into a rhythmically exciting sound. With a little resonance, the Pro Filter can add real bite to the sound without any filtering even being required from the synth itself. **MTM**



When creating pad sounds, the wealth of sound-sculpting possibilities offered by Guitar Rig can help you to come up with something sonically rich and interesting.

Get World-Class Session Players on Your Tracks

Try any of our musicians for as little as £77

Upload your scratch and we will send you a track that you'll love, or your money back - Guaranteed!

In the July 2009 issue of Sound on Sound magazine, features editor, Sam Inglis reviewed 3 of the top online recording studios using one of his songs. Here are some of Sam's conclusions:

"All the instrumental parts Studio Pros delivered were straight out of the top drawer."

"...I would choose 'Studio Pros' version ahead of the others"

"Very high quality of playing and recording; strong production skills. Ideal for: anyone who wants to hand over production of their material to someone else and get top-quality results."

Full Music Production special!

£662 NOW JUST £579

Includes: 5 musicians playing live drums, bass, guitars and keyboard tracks, a dedicated producer to help you with every aspect of the process and a 4-time Grammy Nominated engineer to mix and master your song.

100% MONEY-BACK GUARANTEE

If you think that our session musicians aren't the best you've ever heard and you don't approve the service, we'll refund your money in full.

Call StudioPros today to collaborate with world-class players on your songs!

- License your songs for films & TV
- Get an exceptionally high quality demo for record labels
- Complete the album you've always dreamt of

Listen to demos and order online at: www.StudioPros.com

StudioPros

World-Class Session players on Your Tracks

☎ 0208.196.2429

10 Minute Master No193

Notch filtering

The notch filter is an important part of the arsenal of EQ and filtering tools, but it often goes under-used. Grant Bridgeman filters out the details.

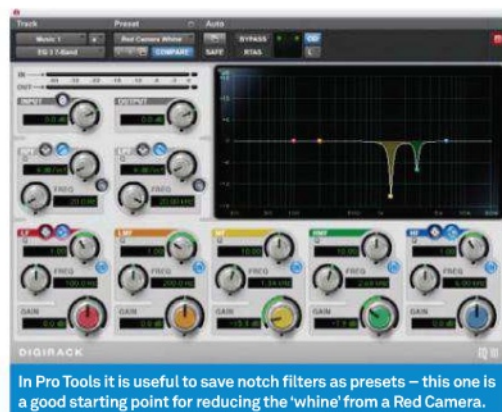
EQ and filtering are some of the most fundamental aspects of the recording and mixing processes. Best practice is always to be thoughtful about microphone selection and placement within the recording space, and to use the natural characteristics of the mic's frequency response and polar pattern to get the best possible sound. However, there are often times when it is not possible to get the 'perfect' sound – seemingly more often than not in the project studio – and it becomes necessary to reach for the EQ as a corrective tool. The art of notch filtering is something that should be understood, as it can be one of the most useful tools for audio correction and restoration – and when done well, it can often sound transparent.

Cutting a notch

A notch filter reduces the gain of a narrow band of the frequency spectrum while (theoretically at least) leaving the surrounding audio unaffected. It has three main parameters that go some way to defining its operation: cut-off frequency (the frequency around which the notch is centred and more accurately called the centre frequency); Q (the steepness of the roll-off of the filter itself); and gain – the overall 'depth' of the filter (the amount of gain reduction within the frequency band – although, strictly speaking, this is relevant only when the notch filter is being used as part of a parametric equaliser). These parameters define the shape of the filter and the frequencies it will operate over.

Tech Terms

- **PARAMETRIC EQ**
An EQ that has a variable frequency element (and possibly Q) as well as gain. Graphic EQs are the opposite of this as they operate on fixed frequencies.
- **OCTAVES AND FREQUENCY**
There may be 13 semitones in an octave, but in frequency terms, going up an octave is a doubling in frequency. Concert A is pitched at 440Hz; an A an octave above that is 880Hz (then 1,760Hz, 3,520Hz and so on).
- **50Hz MAINS HUM**
In the UK, the mains AC supply cycles at 50Hz (in the US this is 60Hz). Mains hum can often be heard from an amplifier and can be caused by an earth loop. Earth (or ground) loops are caused when there is more than one path to earth in connected bits of equipment, so a circuit is formed.



In Pro Tools it is useful to save notch filters as presets – this one is a good starting point for reducing the 'whine' from a Red Camera.



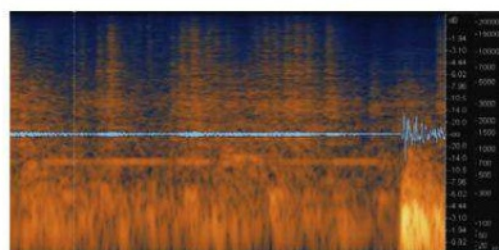
The Remove Hum tool in iZotope's RX2 can automatically calculate the harmonics from the fundamental – and have very high Q values.

Notch filters are most commonly found within a parametric EQ, where it is possible to select a specific centre frequency, then tighten the Q sufficiently to be able to act on a tight range of frequencies. This makes it possible to remove very specific elements of a sound that are problematic to a recording, and it is always quite surprising just how much can be taken out by good notch filtering and still leave the body of the recording in very good shape – frequency-dependent, obviously. It is the steepness of the Q that is key.

Quality control

Q is regularly seen as a parameter on filters and EQs that is used to provide a numeric value describing the steepness of the cut-off slope of the filter/EQ in question. The problem is that in many cases the way in which the Q value is calculated does not appear to be consistent and so becomes confusing. Q refers to 'quality factor' and is a dimensionless measurement of the amount of damping within any physical system that displays resonance.

To keep things simple: for notch filters, Q is most commonly defined as a ratio between the centre cut-off frequency and the frequency bandwidth at which there is a 3dB drop. So, for filters with a high Q, the frequency at which 3dB of attenuation is achieved would be nearer the centre frequency; conversely, for a low value of Q, 3dB of attenuation would be achieved further away from the centre frequency.



The horizontal region at around 720Hz is a prime candidate for notch filtering – this source was possibly a shoe squeak.

To give this some real figures: for a 1kHz centre frequency with a Q value of 1, the 3dB drop-off curves would be at 500Hz and 1.5kHz, giving a bandwidth of 1,000Hz. If Q is increased to 10, then the 3dB points would be at 950 and 1,050Hz, a bandwidth of 100Hz. For a final example, if the centre frequency is at 5kHz but with the same value for Q (10), the 3dB points become 4,750Hz and 5,250Hz – a bandwidth of 500Hz. The point is that even though the Q factor of the filter has remained the same, the bandwidth of the filter has changed purely because the centre frequency has changed.

It would be far more meaningful, then, to regard the bandwidth in terms of octaves instead of purely in terms of frequency. When we go up an octave, in frequency terms the value is doubled – so the scale is a simple logarithmic function. This can then be applied to the bandwidth when measured in Hertz, such that the bandwidth in octaves can be calculated just from the Q value. So a Q factor of 10 gives a value of bandwidth (in octaves) of 0.144 wherever the centre frequency is located. Working backwards through this, if the notch filter was to have a very wide bandwidth of one octave, the Q setting would be 1.414.

Swinging cuts

The anatomy of a notch filter is similar to the combination of two filters working together: a low-pass filter and a high-pass filter. However, this combination of



DIY band-stop filters can be made in Logic by parallel processing and using low-pass and high-pass filters on each channel.



A sine sweep that has been notched at 2kHz by an analogue emulation (upper plot) and a linear-phase filter (lower plot).

filters, which can incur significant latency issues when used as plug-ins (notwithstanding latency compensation within the DAW). By using the sum of a low-pass and high-pass filter on the same source audio to create a band-rejection filter, it can be possible to introduce phase issues, especially around the 'slope' region of the filter. It is quite rare that audio is parallel-processed through different filter elements and subsequently summed together – yet this is exactly what is happening here, so phase shift can become a problem.

In the loop

What makes narrow notch filters so useful is their ability to pinpoint specific elements within a sound and reduce (if not remove) their presence. This is done all the time with EQ when broad frequency band manipulation is necessary, but for some reason, notch filtering with an EQ is often not thought of when trying to remove extraneous elements. The most obvious/regular requirement for notch filtering is mains hum. This is a low-frequency drone that is generated by earth loops and can be picked up by the microphone within the live room just as easily as it can be created at the patchbay. In the UK the fundamental frequency is at 50Hz (in the USA it is 60Hz), but the key thing is that, like most sounds that are recorded, the mains hum has overtones and harmonics that make up the 'full' sound.

Solving this problem requires a series of notch filters to be built up that each has a related centre frequency that is part of the harmonic series. The Q of each filter still needs to be quite steep so as to filter only the specific harmonic content relating to the fundamental, but also the depth (gain) of the filter can often be reduced on each successive harmonic, as the relative amplitudes of each harmonic will decrease by comparison to the fundamental. **MTM**

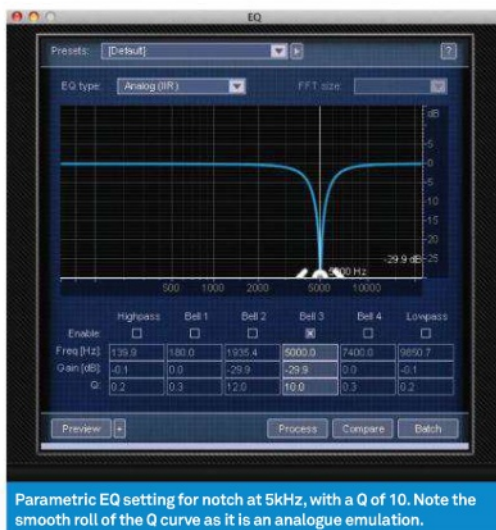
FURTHER INFO

- Ethan Winer's articles on filters are excellent: www.ethanwiner.com/filters.html
- For those with an interest in analogue electronics, this has more detail and circuit board designs: www.analogzone.com/avt08062.pdf
- A great example of notch filtering on vuvuzelas: www.youtube.com/watch?v=SWAA-CddnIA
- The Audacity wiki has some nice examples and descriptions of noise reduction with notch filtering: wiki.audacityteam.org/index.php?title=Noise_Removal

The notch filter can be one of the most useful tools for audio correction and restoration

filters is more often called a band-rejection (or band-stop) filter as it generally has a much wider frequency range than a notch filter.

A problem that can present itself with both notch and band-rejection filters is the effect of the filter on the phase of the audio signal. Part of the inherent operation of analogue filters is the phase shift – and this is resolved in the digital world only by using linear-phase



Parametric EQ setting for notch at 5kHz, with a Q of 10. Note the smooth roll of the Q curve as it is an analogue emulation.

Tech Terms

• **HARMONICS AND OVERTONES**
Unless formed by a tuning fork or an individual sine wave, most notes have a fundamental frequency along with a complex series of overtones and harmonics that make up the full sound. The harmonics relate to the fundamental frequency (f) and are either even (2f, 4f, etc) or odd (3f, 5f, etc). When the overtones are not related to the fundamental the sound becomes less musical and dissonant (a bell, for example).

• **DIMENSIONLESS MEASUREMENT**
A value that has no units of its own, but represents a property of a device (most ratios are dimensionless measurements).

Logic Pro 9 Workshop



Delay plug-ins

Part one: the basics

Unlocking the full potential of Logic's delay plug-ins can seriously transform the effectiveness of your mixing. **Mark Cousins** gets delayed.

Some of the simplest effects are also the most versatile and useful tools for mixing and production. Take delay, for example. It's a simple enough effect on the surface, but when exploited to its full potential it becomes a creative tool that can produce myriad interesting results. It's no surprise, therefore, to find that Logic includes a number of delay-based plug-ins, including everything from simple tape-like delay effects through to sample-accurate delay lines and, of course, the surround-enabled Delay Designer.

This Workshop is the first in a two-part series on the use of delay, covering everything from the basics through to some highly unusual, innovative effects.

Delayed reaction

Of Logic's five delay plug-ins (Delay Designer, Echo, Sample Delay, Stereo Delay and Tape Delay), arguably the most useful is the good, old-fashioned Tape Delay, which provides just a single 'tap' of delay alongside controls to influence the qualities and tonal colours of the delay in question. Although some of the more complicated multi-tap delay effects might seem tempting at first, it's often a single delay tap that seems to work best in the majority of mixing applications. ¹

Having decided to start with the Tape Delay plug-in, let's now consider the best way of instantiating it in our mix, using the Fender Rhodes channel from the Logic project included on the DVD. With but few exceptions,



PRO TIP
Use the Flutter control to add pitch inconsistencies to the output of the Tape Delay plug-in. Interestingly, this can work particularly well with 'fixed pitch' sounds (like a Fender Rhodes piano, for example) as the pitch modulations add an extra touch of chorus-like warmth.

the best way of applying delay is via a buss send, with your delay plug-in (in whatever form) instantiated across an aux channel. Although this routing does admittedly take a few more mouse clicks to configure by comparison to a delay directly instantiated into the channel's insert slots, it ultimately offers far greater creative potential, from simple tricks such as being able to pan the delay separately from the main signal through to more experimental possibilities such as a 'dub-like' regenerative delay triggered only from strong, accented beats. ²

Into the Groove

One of the easiest delay effects to create (and one that Tape Delay defaults to) is a simple tempo-sync'd delay with the tap set to 1/16th, 1/8th or any other appropriate musical division.

In the Tape Delay plug-in – assuming that the Sync button is enabled – the current delay value is easy to see via the small note icons. Clicking on the various notes enables you to change the delay time in musical divisions; by bringing the Groove slider into play you can then adjust the basic setting to a 'dotted-note' setting at 75% or triplets at 33.33%. On the whole, the dotted-note setting (with Groove set to 75%) seems to work best, giving the delay a distinctive 'syncopated' feel. ³

An important part of this simple tempo-sync'd delay is the panning of the dry signal on the channel faders and the relative stereo placement of the delayed signal on the auxiliary fader. One solution is to pan both signals to the same place in the mix – maybe positioning the instrument and its delay slightly left-of-centre, for example. In this case, the delay is



Although Logic features a choice of delay plug-ins, the basic Tape Delay is often the best place to start. Although comparatively simple, it still offers a surprising degree of control, especially when routed to an aux channel.



You can sculpt the sound of the Tape Delay in various ways. Use the Groove slider to control the amount, pan the effect, apply some feedback or use the High and Low Cut controls to shape frequency content.



When exploited to its full potential, delay can produce myriad interesting results

somewhat locked-in with the original sound, which may or may not be the effect you're after. Putting the delay in a slightly different position in the mix immediately creates a stereo dimension to the effect, although this is controllable (between extreme and subtle) given the relative differences of the two pan settings. **4**

Positive feedback

As well as establishing the basic delay time, there are also plenty of additional features in Tape Delay that allow you to fine-tune the effect. Feedback routes a proportion of the wet signal back through the delay line, creating a distinctive 'regenerating' delay effect. If the delay is used prominently in the mix it's often beneficial to keep feedback relatively low (this helps to create one or two distinct delays rather than a mush of sound), whereas longer feedback settings can be useful if you want a more 'spaced-out' quality to the delay. Of course, when pushed above 50% or so the delay will start to self-oscillate – an effect we'll be exploring in more detail later on. **5**

Important features to use in conjunction with feedback are the Low Cut and High Cut controls. Delay always seems to work best when it has a different timbral colour from the original input, arguably helping the ear to make a distinction between the dry and wet signals as well as mimicking the tonal colouration of an 'echo' that might occur in the real world. Using these filtering controls (which are positioned as part of the feedback circuit) you can make the delay darker (using High Cut), thinner (using Low Cut) or narrower (using a combination of both filters). **6**

Slapback delay

Although Tape Delay defaults to tempo-sync'd delay treatments, it's well worth exploring a few applications that aren't related to musical divisions. So-called 'slapback' delays use a delay time of between 40 and 120ms so that the delays aren't heard as discrete

tempo-based echoes or repeats of the original sound. To create slapback with Tape Delay you'll need to deactivate the Sync feature, then fine-tune the delay time using note values and the Groove slider (as before), reading off the delay time in the Delay display. In this application, therefore, the notes move between 'macro' delay settings, while the Groove slider enables you to fine-tune the amount of delay on a millisecond-by-millisecond basis. **7**

Slapback delay can be used in several ways. Try using a slapback setting with little or no feedback – this is a great way of adding a subtle amount of extra body to a sound, especially vocals. As before, you can use panning to great effect here, either locking the delay to the same position in the mix or using the short slapback to create a greater stereo dimension. Adding feedback turns the effect into a form of 'lo-fi' reverb that sounds particularly effective on electric guitar parts or even drums. **8**

PRO TIP

Ultra-short delay times with a moderate amount of feedback applied can be used to create unusual 'drum resonators'. The delay time needs to be in the region of 10–60ms, with the time actually defining the pitch of the effect. Feedback sets the 'ring', with settings of about 53% generally producing the best results.

Stereo sound

Having looked at the essentials of Tape Delay, let's compare and contrast this with the Stereo Delay plug-in. Given some understanding of the controls in Tape Delay, the Stereo Delay plug-in should be relatively straightforward, although, of course, we're now dealing





Slapback delay can be used to give any individual sound a little extra body or to give it a greater stereo width. But if you want to explore the latter more fully, head for Logic's dedicated Stereo Delay plug-in.

→ with two delay taps, panned hard left and right appropriately. Each tap now has its own delay time as well as the opportunity to feed back on itself or across to the opposite side of the delay to create a type of 'ping-pong' delay that jumps from left to right.

However, the greatest asset of the Stereo Delay – namely, its expansive left-to-right width – is also its greatest curse. On the Hammond Organ sound, for example, Stereo Delay can help add width and depth to a sound, but once several sounds have made use of this 'super-wide' delay, the mix can start to take on a mushy quality. In truth, only a few select instruments should occupy the three 'golden' positions of the soundstage – namely, middle, left and right. Restricting your use of the Stereo Delay to just a few sounds, therefore, will ultimately produce a better-defined mix.

Super dub

To finish this part of the Workshop, we're going to look at a solution for creating dub-like delay effects whereby the delay is triggered 'on-the-fly' to catch individual drum hits or words within a vocal line. The original effect was created on the Roland RE-201 and exploited the unit's ability to switch the echo input in and out so that the delay was applied only as and when required.

The delay effect we need to use is already available across auxiliary 2, using buss send 2, which we're going to use to process the drum track. The delay itself has a deliberately thin and nasal sound to it (created with

some extreme low- and high-cut) as well as some pitch modulation and virtual tape flutter to re-create the sonic inaccuracies of the RE-201. To enable us to switch the delay in and out we're going to instantiate a Gain plug-in across the first insert of auxiliary 2 and pull down the gain level to -96dB (silence).

To give the delay its dynamic qualities we'll need to automate the Gain plug-in's Bypass control to bring the effect in and out accordingly. First, create a new track lane in the Arrange area by opening up the mixer and selecting Options>Create Arrange Tracks for Selected Channel Strips from the local menu. With the channel strip in Touch mode you can then move through the song, dropping in the delay effect by bypassing the Gain plug-in. If you're feeling adventurous, you could also try automating feedback so that the delay appears to regenerate into distortion before dying away.

Taking effect

So far we've covered the two essential delay plug-ins – Tape Delay and Stereo Delay – and a number of typical applications, including tempo-sync'd delays, slapback and the classic RE-201 dub effect. However, with plug-ins such as Sample Delay and the impressive Delay Designer, there's still plenty for us to explore in the next instalment, from techniques that will improve the phase consistency of your mixes through to altogether more extreme ways in which delay can be used as an abstract effect. **MTM**



One obvious use of delay is to re-create those classic dub echo effects. With a little tweaking, Logic's plug-ins can sound almost indistinguishable from classic tape-based units.

VIRTUAL INSTRUMENTS

SOUND SAMPLES

TUTORIAL VIDEOS

REFERENCE BOOKS

HARDWARE

TOONTRACK

Superior Drummer 2.0
High quality virtual drum sampler.
£199.00

EZ Drummer
Easy to use multi-microphone drum software.
£88.95

THE CLASSIC
EZ Drummer
NEW
EZx expander with the sound of a classic Helios recording console merging the best of the past and the present. Works with EZ Drummer and S2.0.
£49.95

SPECTRASONICS

OMNISPHERE
POWER SYNTH
1.5
Omni TR

NEW

- 700 new patches – now includes a total of 8,000 sounds
- Expanded synthesis capabilities
- Innovative new 'Orb' circular sound manipulation interface
- Plus, introducing Omni TR – Touch Remote iPad app free to 1.5 users

Available on the App Store

cinesamples

Drums of War £69.95
Hollywoodwinds £204.00
VOXOS £683.00

DRUMS OF WAR 2
NEW
Features entirely new instruments including mighty taiko drums with wonderfully rich character – a driving, powerful tone.
£149.00
Kontakt

Produced by composers, for composers.

SAMPLE LIBRARIES

ZERO G
Alien Skies
Emotional and evocative timbral experiences.
£91.95
Multiformat

BIG FISH AUDIO
Trailer Blues
Modern Electric Blues loops and construction kits.
£83.95
Multiformat

SONOKINETIC
Trailer Voice 2
Performances from 3 male Actors and 1 female Actress.
£33.95
Kontakt

ZERO G
Shimmer & Shake
Shaken hand percussion patches & loops.
£65.95
Multiformat

ZERO G
Animato
Orchestral string and flute FX for cinema.
£91.95
Acid Wav, Kontakt

LOOPMASTERS
Utah Saints
Electro House & Indie Dance.
£29.95
Multiformat

BELA D MEDIA
Deva Revamp
Captures the true splendor of the female voice.
£152.00
Kontakt

SAMPLE MAGIC
Electro
Pumping bass, jackin' beats and twisted synths.
£54.95
Multiformat

PROJECT SAM
Organ Mystique
Haunted sounding church organ.
£99.95
Kontakt

THE PARADISE SESSIONS
SOULFUL, LATIN & LOUNGE HOUSE
£60.95
Acid™ Wav, Apple Loops, Rex2 Files
EXS24, Kontakt, Reason NN-XT

SONOKINETIC
Optimum Ext. Musica

Bundle price £170.00

Maasai £49.95
Tigris & Euphrates Voice £66.95
Desert Voice £49.95
Voices of Israel £49.95

SAVE 50%

INSTRUMENTS & EFFECTS

SPECTRASONICS
Trilian
Award winning total bass module.
£199.00

CINESAMPLES
CineOrch
An orchestral mockup enhancer.
£97.00

SAMPLE LOGIC
Cinematic Guitars
Atmospheres, instrumentals & percussives.
£265.00

ROB PAPER
SubBoomBass
Ultra-deep groove bass synth with step sequencer.
£78.95

VIR2
ElectriCity
The ultimate electric guitar instrument.
£265.00

OVERLOUD
TH2
Guitar Amp Simulator with new features.
£203.00

GARRITAN
Jazz & Big Band 3
Create realistic arrangements quickly & easily.
£109.00

GARRITAN
World Instruments
Over 350 sampled instruments.
£109.00

PROJECT SAM
Symphobia 2
Symphonic effects & legato ensembles.
£999.00

The second generation of Ivory Grand Pianos.
£240.00

Ivory II
SYNTHOLOGY

Rob Papen
RP-Delay
Delay insanity. reverb, 6 lines, 8 filters, 4 LFOs & more. The perfect accompaniment to RP-Verb.
£41.95

Rob Papen
RP-Verb
Musical algorithm reverb with easy controls, includes RP-Delay.
£125.00

CARMEN RIZZO
Musician, Producer, Remixer
Uses Rob Papen Synths

SUBSCRIBE TO OUR NEWSLETTER TO RECEIVE 500MB OF FREE SAMPLES

Features Gesper Kyd
Assassins Creed composer talks soundtracks and Symphobia

ANALOGUE & DIGITAL

Saturday 19th March
Phoenix Centre, Exeter

www.timespace.com/events

EMAIL: SALES@TIMESPACE.COM

TELEPHONE: 01837 55200

WWW.TIMESPACE.COM

Office hours: Monday - Friday 9.00am - 5.30pm. All prices correct at time of going to press, errors and omissions excepted.



“Whether it’s a big Hollywood work or a small independent film, I find all of it **incredibly satisfying**”

The MTM Interview Youki Yamamoto

This month we delve into a slightly different area of the music industry – music for films – as **MTM** hooks up with this leading composer of movie scores. Photography by **Zen Inoya**



Youki Yamamoto has worked as a film music composer, arranger, orchestrator and programmer for many years, picking up credits on everything from Hollywood blockbusters to obscure arthouse movies. He’s also listed on some films as a ‘music associate’, a slightly less well-defined role that can involve “some or all of the other tasks”.

Born in Japan, Youki studied composition at the Royal Academy of Music in London. After he graduated in 1999, one of his early breaks was working with composer Patrick Doyle on the Harry Potter movie *Goblet Of Fire*, released in 2005. For that film, he was a programmer and assistant composer. Youki also worked on the first *Nanny McPhee* movie, with the additional role of music editor, and he explains his move from the role he had in those films to his current work.

“I felt it would be a good time to move into more composition-based work, but the salary wasn’t as high, so for a while I did both composition and arranging, which luckily I enjoy equally. Whether it’s big Hollywood work or a small independent film, composing or arranging... I find all of it incredibly satisfying.”

Going private

Youki recalls the day he got his pay packet for the Harry Potter movie. “I looked at the cheque and thought, ‘I may never get this kind of money again,’” he laughs. So, wisely, Youki chose to invest the money in building his current private studio, where he now works with the Grammy Award-winning engineer Matt Howe.

This studio is in the Pinewood Studios complex in west London and has a rich history – it was once Stanley Kubrick’s private viewing theatre. This had certain advantages, as Youki explains: “It was already a soundproofed theatre, so it didn’t need so much work doing to it for our own use.”

Although he moved into this particular studio only in the last three years, he’s worked in the Pinewood complex for around five; before that he worked at Shepperton Studios. It was during the *Goblet Of Fire* project that he met Matt in 2000. He explains how this came about: “We were working on a particular track with Jarvis Cocker and Radiohead, which was being produced by Mike Hedges, with Matt as mix engineer and myself on keyboards. When we started chatting, I discovered he could engineer other genres as well – he’s worked on orchestral music for James Horner and contemporary commercial music like Lauryn Hill’s



→ *Miseducation Of...* album, for instance, so he's a very versatile engineer. To me he's the perfect person for the kind of work we do, as you sometimes need to write rock or jazz as well as more classical-sounding scores. He's been recording and mixing all my music since 2005, either here or on-location."

Matt was trained at George Martin's Air Studios in the mid-80s and learned under Martin's engineering team, which included the legendary engineer Geoff Emerick. Although they both state they can't imitate the production values of places like Abbey Road, it is this level of quality that they strive for in everything they do.

The initial creation

Youki says his usual starting point when composing is in Logic, while he's constantly resisting the urge to use all the great orchestral packs installed on his computer. This is so he can focus on the score itself rather than be misled by how fantastic everything sounds. He goes on to say, "Another reason for this is to avoid influencing the orchestrator, because I like the added layer of creativity they can bring to the process with their interpretation."

So he will work with just a piano sound, and if he's using a click he'll set it to have no accent, so it's easy for him to switch between time signatures without having to program them into the computer. Other times, he will work detached from the click and record MIDI freeform so he can just feel, perform and record the tempo changes while viewing the film; if necessary, he can always add tempo mapping to this later. He also reveals a technique he uses for emotional scenes: "If the actor starts to cry, I will slightly delay the music, starting it around five or six frames later. It seems a bit

"Great music is already everywhere, so making original music is getting harder all the time"

odd if the crying and music start happening at exactly the same time." Once the director approves his initial idea, Youki can then go ahead and transcribe the parts manually to score. At this stage he might also orchestrate for a small orchestra, depending on the project.

Asked how he stays creative in the job, Youki says: "Well, great music is already everywhere, so making original music is getting harder all the time – almost impossible, sometimes – and yet originality is still very important. My approach could be compared to the recording ideology of, let's say, a guitar amp. If the instrument going into that amp is good and played well, then the output will also be good. So when it comes to my own approach to making music, I listen to a lot of different stuff to give me lots of ideas and then, hopefully, my own output will be good and good ideas will come out of me."

MTM StudioEye Youki's private facility at Pinewood

a TANNY ELLIPSE 10 IDP
"This is a very pure-sounding speaker with incredible detail on acoustic instruments. They are set up for 5.1, but the IDP software is so useful for switching from a film mix to a stereo soundtrack. The bass management is also very good."

b COLES 4038
"Initially made in time for the Queen's coronation, these mics still haven't been bettered. The magnets are so strong they are very hard to pull apart. Matt [seen left] first heard them used by Geoff Emerick as drum overheads and was blown away by their sound."



Travelling to work

When it comes to recording, Youki and Matt go all over the globe: the pair recently visited Japan, Bulgaria, Germany and Holland in the course of just one month. Matt explains the reasons for this span of locations. "There's no doubt that if Youki had a half-million-pound budget for every project he'd use Abbey Road all the time... with the London Symphony Orchestra! So business economics is part of it, but it's also necessary to work from where the project is based. Youki had to go to Germany 20 times in a year for a project, as the 20 actors involved were over there and it doesn't make sense to fly them over each time they are needed."

Even though finances may dictate travelling to record, the pair will never compromise on the equipment they use, and that involves carting a lot of it with them wherever they go. Youki tells us they took about 30 mics with them on the last trip, so it's almost like they have the entire studio with them.

When it comes to recording locations, microphones, size and scale are the three main factors involved in their choice. Equipment and venue reliability are also big concerns, but this doesn't mean they will choose on reputation alone. Matt adds: "There's a lot of private studios out there that are better than commercial studios. We'll go for the highest standard every time, within the reach of what we're allowed to spend."

Youki says that "70–80%" of the kit you hear on their recordings is taken with them through Customs, which helps give them consistent control over this high standard. Matt

Youki's best-of... Yamamoto highlights

2007 | *Ace Combat 6*

"My first major game music project. The big challenge was that it was the first 5.1 orchestral mix done in my studio, but it all went very smoothly. The Tannoy Ellipse was just perfect for the job."



2010 | *Ascenseur Pour L'Echafaud*

"A remake of a 1958 French film. The original soundtrack was done by Miles Davis! I could never compete with Miles, so I just wrote what I thought would work."





c **PRISM SOUND ADA-8XR**
"Aside from having a true sound that we can trust, I use these for headphone monitoring as it's very easy to do this from the interface's own software. Prism's portable Orpheus interface is also very good: we use this with our laptop setup and have had great results."

d **VINTAGE NEVE 5315 DESK**
"This is a very quiet desk thanks to its size. The larger the desk's footprint, the more noise is created, and we need a quiet noise floor. It also colours the sound in a way that compliments the transparency of the Prism Sound AD/DA nicely."

e **STUDER A80**
"This is used to mellow a sound when other methods aren't getting us quite there. It also slows down the transients. It's a good fixing tool: recording to digital makes the sounds very united and tight, but on tape each sound gets more separation."

f **ROLAND SDD-320 DIMENSION D**
"We find only button four sounds good on this. But button four sounds good on anything, and we still haven't found a substitute for it in plug-in form yet!"

g **DBX 500**
"The DBX 500 is a 1970s-era box with lots of character and a deep sound. It's useful for making the ceilings of a theatre shake. A bit of kit drum & bass heads would die for!"



recalls the time they stayed at the same hotel as George W Bush: "I had a special mic stand array made by DPA, which consisted of telescopic tubing. You can guess what they thought when I turned up with a suitcase full of this stuff. We had to explain all of it in a special room with a heavy armed presence. But we go through all of this so we can record to our own specification each time."

Start as you mean to go on

Their large array of mics offers many possible tones, and the pair have chosen Prism Sound as their audio interface due to its neutral sound. Matt explains the choice a little more: "The point is, we use technology that means we work less, not something that we have to compensate for later. With the Prism equipment in the studio here or the Prism Sound

"We use technology that means we work less, not something that we have to compensate for later"

Orpheus and a laptop, they don't mask or hide any elements... they just sound true, and by picking the best equipment to record with, you make your life easier further down the line."

Youki says much the same thing, stressing the importance of preparation before starting a job: "Whether it's composition or recording, preparation takes the stress out of things and just gives better results. Matt might spend nine hours setting up microphones for a classical recording, but this actually means that half the mix is already finished because he doesn't have to use corrective EQ afterwards."

Matt adds: "We try to record in a way that requires minimal post-processing. For instance, we might ask a drummer to tune up their snare for a brighter sound as a source-based option, along with mic choice and positioning rather than thinking of EQ later." Another example was recording a female chorus in Bulgaria, whose performance was, "quite shrill-sounding – not a velvety smooth sound by any means! So we needed a microphone to counterbalance that tone... not a bright mic to capture the brightness of the sound as that would over-emphasise its harsh and edgy character."

There's clearly a lot of thought and hard work involved in all this. But Youki says in closing: "The whole process of going through the analogue desk, using tape and outboard and so on, is always more hassle. But to me it means our work sounds like a proper record, a proper cinema sound. And I know how privileged I am to get to use these machines." **MTM**



2010 | *Never Let Me Go*

"This was my fourth film working with the composer Rachel Portman and it was a real privilege because it was based on my favourite book. As music associate, I did an orchestral mock-up and recorded solo violin and cello for the demos."

2011 | *Bel Ami*

"We recorded this with some top-flight musicians, so I knew I could challenge them with my arrangement. With David Snell as conductor, they nailed it easily."



Liberis

LIBERIS - ANGELIC CHOIR

AVAILABLE NOW AT TONEHAMMER.COM





George Martin (left) and Geoff Emerick pioneering sounds at Abbey Road Studios.

Pioneering SOUNDS

Many of the recording techniques we take for granted today were actually pioneered during pop music's formative years.

John Pickford explores a golden age of audio innovation...

Between the years 1962 and 1972 a revolution took place in sound recording and record production. In this feature, we'll discover how a few maverick pioneers – alongside the most famous band of all time – invented recording techniques that have since become commonly used in studios worldwide. At the start of the 1960s, most pop recordings were made direct to single-track or at best two-track tape, with the band and singer playing live in the studio. All sound-balancing decisions had to be made before the record button was pushed. If extra parts were required, the existing recording would have to be dubbed onto a second recorder simultaneously with the new sounds.

By 1972, multitrack recording technology had progressed through three-, four- and eight-track to reach a then staggering 16 tracks. This enabled each instrument to occupy its own track on the tape and the final mix could be worked on at leisure, just as we do nowadays. In fact, if you listen to a typical 1962 pop record and compare it to one that was made ten years later, the overall sound quality is worlds apart. But compare a good recording from the early 70s to a modern equivalent, and the difference is not nearly as obvious.

In 1962 there were two pioneers who, in their own individual styles, were creating sounds that were streets ahead of the competition. In Britain there was Joe Meek; in the US it was Phil Spector. Famous for his trademark 'Wall of Sound', Phil Spector recorded multiple musicians playing live, often doubling or even tripling parts to create a full-bodied, cavernous aural assault that stood out when reproduced on the lo-fi radios and jukeboxes of the day. 'Little symphonies for the kids,' he called them.

Although Spector undoubtedly had a unique sonic vision, he had to rely on the skills of musical arrangers and sound engineers to achieve the results he was after. On the other side of the Atlantic, Joe Meek was taking on the recording business establishment single-handed, producing chart-topping records from a small converted bedroom in his flat.



→ As Britain's first truly independent record producer, Joe Meek pioneered several recording techniques that are now common practice. Recording in such a small space meant that he could not adhere to the standard procedures of the major studios. Back then it was common practice to capture the sound of the instruments in the room with a minimum of mics.

Drums, for example, would often be recorded with a single microphone placed high over the kit to achieve a naturally balanced sound. But Meek wasn't necessarily interested in achieving a natural sound and developed a close-mic'ing technique using four or five mics placed strategically around the kit. He always removed the front bass drum head and stuffed pillows inside to deaden the sound. Likewise, the snare drum and toms would often be covered with a tea towel. Sometimes he would dispense with the drums altogether and instruct the drummer to play the cases instead.

Blanket coverage

In order to avoid excessive spillage from guitar amplifiers Joe would cover them with piles of blankets; as for the bass, he built a unit that enabled him to directly inject (DI) the instrument into his home-made mixer. He was almost certainly the first person to do this. He also modified his upright piano, inserting drawing pins inserted into the hammers to give a sharper tone that would cut through the mix. All of these sounds can be heard on his masterpiece, *Telstar*, by The Tornados, a tribute to the world's first communications satellite.

The track features the sound of a Clavioline – a small monophonic keyboard – that Joe overdubbed in octaves to create an ethereal, otherworldly sound. The harp-like sound on the record is, in fact, the tack piano, and the whole thing is book-ended by a montage of Meek's sound effects, which contain the sound of electrical wires shorting, massively echoed percussion and domestic appliances that have variously been

A brochure for the original Clavioline – as heard on The Tornados' *Telstar*.



speeded up, slowed down and reversed. The results sounded like nothing that had been heard before and it became the first record by a British group to top the charts on both sides of the Atlantic.

The commercial success of *Telstar* – and its unorthodox sound – did not escape the attention of the major studios. In November 1962, with *Telstar* lodged firmly at No 1 in the charts, one of EMI's technical experts, Len Page, sent a formal

Joe Meek pioneered several recording techniques that are now common practice

letter to all recording personnel at EMI's Abbey Road Studios suggesting, "much more attention should be given to the production of gimmicks and special effects, especially for 'pop' recording". Little-known to Page, a 45RPM single (remember them?) on one of EMI's record labels, Parlophone, was also in the Hit Parade (as it was called then) at the time. It was the debut disc by a quartet from Liverpool that would go on to do more to push the development of record production than anyone else in the history of pop music.

Track count

It's hard to imagine these days, but the first Beatles album was recorded in just one day (11 February, 1963), live onto Abbey Road's in-house-designed BTR3 twin-track (stereo) tape machine. All of the instrumental backing tracks were recorded onto one track, with the vocals – performed simultaneously – onto the second track. This meant that the only mixing required was to adjust the relative balance between the backing track and the vocals.

Towards the end of 1963, producer George Martin began using a Telefunken four-track tape machine to record the group. Now they were able to double-track vocals and superimpose (EMI's tech term for overdub) extra instrumentation to produce a richer sound. In 1965, Abbey Road acquired four Studer J37 four-track recorders. Around the same time, The Beatles' production team (including engineer Norman Smith, who would later produce Pink Floyd)

When mic'ing a bass drum, try removing the skin and experimenting with mic placement. Stuffing a pillow into the shell can help to further deaden the sound.



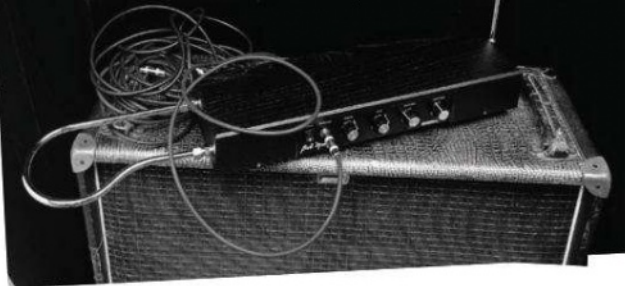
began to make 'reduction mixes' utilising two J37s. Once the four tracks of the first recorder were full, a mix would be created and bounced down to one or more tracks of the second J37, then further overdubs could be performed.

During this period, EMI's engineers began using the now-legendary Fairchild 660 limiter (check out the Studio Icons feature in Issue 95). Apart from being used to track instruments and vocals, a limiter was permanently strapped across each four-channel output from the mixing desk going into the Studer J37, helping to glue together the many sounds on each track of tape.

Life's a Beach

In early 1966, Brian Wilson – the genius composer and producer of The Beach Boys – began work on *Pet Sounds*, an album recorded on three-track and intended to eclipse anything The Beatles had achieved in the studio up to that point. Wilson was a huge fan of Phil Spector and adopted his approach of large ensemble recording. (Spector once remarked that he wished he had a dollar for every joint Brian Wilson smoked trying to emulate the Wall of Sound!) During the making of *Pet Sounds*, Wilson began work on *Good*

Russian inventor Professor Léon Theremin patented his new instrument in 1928. Modern-day equivalents are available (Moog Music makes one) and widely used.



sonic trick that was employed was vari-speed: the group had discovered that the texture of sound could be altered when speeded up or slowed down. Speeding up audio has the effect of sharpening the attack of notes, while slowing it down produces a gooier, dream-like effect.

Backwards (or retrograde) recording was also used extensively during this period. The track *I'm Only Sleeping*, from the *Revolver* album (1966), features a backwards guitar solo that took six hours to perfect. Once the required melody of the solo had been worked out, the sequence of notes was performed back-to-front with the tape reversed. When the →

It's hard to imagine, but the first Beatles album was recorded in just one day

Vibrations, a ground-breaking work that took several months and the use of four recording studios to perfect. Countless versions of the backing track were completed and the final mix was an edit of these vastly different-sounding takes. When it was released in October 1966, it significantly upped the ante in terms of what could be achieved in the studio.

Back at Abbey Road, The Beatles were just about to start work on what is arguably the most famous album of all time, *Sgt. Pepper's Lonely Hearts Club Band*. The first song recorded (although it never made it onto the LP, instead being released as a single in February 1967), was *Strawberry Fields Forever*, a recording that would surpass *Good Vibrations* in its complexity (see the 'Let me take you down' box).

Whereas their first album was recorded in a single day, the sessions for *Sgt. Pepper* spanned four months and almost nothing was done in a conventional manner. One

MTM Pro Technique The Meek phenomenon

Joe Meek knew no limits when it came to creating new and unconventional sounds. One of the key features of many of his recordings is the distortion he achieved by overloading his tape recorders and saturating the tape. Most sound engineers of the day considered distortion to be their greatest enemy, but Meek used it to his advantage to create raw, exciting sounds. Percussion effects were a speciality and few of his records feature a natural drum kit sound. Snare drums were often augmented (or replaced) with the sound of a thwacked padded chair. Some of his later tracks feature the sound of a tambourine that has been attached to the snare drum rather than played or overdubbed separately. The Honeycombs' 1964 chart-topper *Have I The Right* features the sound of the band stomping on Joe's stairs, which he recorded by attaching mics to the banister with bicycle clips. Tape speeding was another of Meek's favourite tricks; he once remarked that no record had been made that wouldn't benefit from revving up a little. Meek's most famous quote was: "It's not what you've got it's the way that you use it" and Meek used his home-made and modified kit to the extremes of its capability. His studio did not have a mixing desk as such and Joe would record and mix standing up with his microphone mixers and outboard gear contained in racks.

Joe Meek was without doubt a sound-recording genius, but he was also a troubled man. He committed suicide in 1967.

Unconventional practices and kit were Joe Meek's trademark.



The Studer J37 was the machine that made many pioneering sounds possible.

→ tape was played back normally, the melody was as originally conceived, but with the added aural attraction of backwards sound.

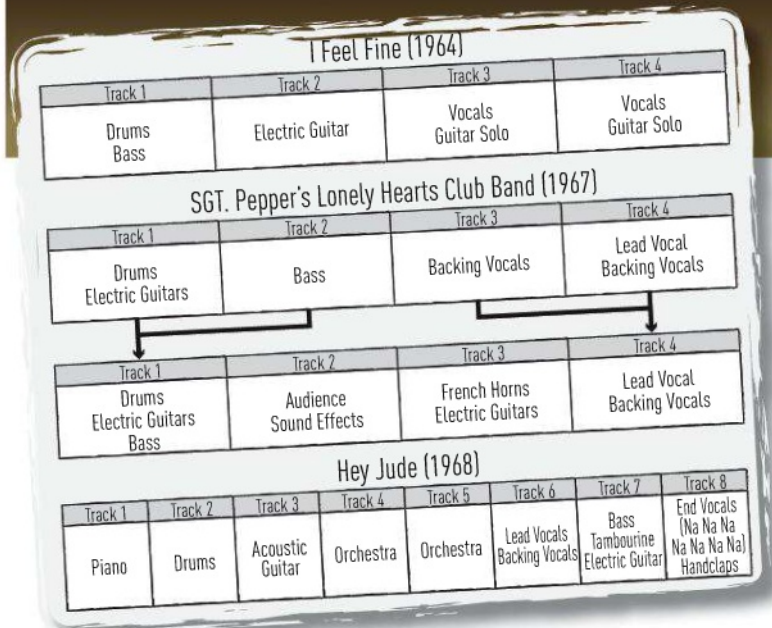
Artificial intelligence

The technical engineers at Abbey Road were highly skilled and developed several effects to facilitate The Beatles' ever-growing demands for new and unusual sounds. Chief Technician Ken Townsend built what he believed to be the first DI transformer box to enable instruments to be directly injected into the mixing desk, although, as we have seen, Joe Meek had been secretly doing it for several years. The effect so impressed John Lennon that he asked if his voice could be injected directly into the desk, to which George Martin replied: "Yes, if you go and have an operation. It means sticking a jack plug in your neck!"

Probably the most famous and imitated of all Abbey Road's inventions was ADT – Artificial Double Tracking, a method that employed two tape machines to create a very short delay (around 40 milliseconds) that could not be achieved with a standard tape delay unit. Double-tracked vocals were a prominent feature of many Beatles recordings but it was a laborious task that could be difficult to get right. One evening in the studio, Ken Townsend overheard John Lennon asking George Martin if he could double-track his vocal without having to sing the song twice. Martin could not produce that effect but it got Ken thinking...

Townsend realised that the record/sync head on EMI's mono BTR2 was twice the distance apart from the playback head than it was on the J37 multitrack. During mixdown, a pre-recorded signal could be taken from the record/sync head of the J37 and sent to the record head of the BTR2. With the sound now on both machines, the tapes run forward to their respective playback heads. With the BTR2 running at twice the speed of the J37, the signals emerge from the two machines at almost the same time, creating the effect of two distinct images.

Beatles multitrack timeline. Basic four-track recording in 1964. Reduction mixes (bouncing between two four-track recorders) in 1967, and an eight-track recording from 1968.



A by-product of ADT was phasing. By making use of vari-speed, the two signals could be brought very close together indeed, so that instead of hearing the double-tracked effect of two sounds, a single, phased sound was produced. This is what we know as the comb filter effect.

Phased out

A further discovery was made when the vari-speed control was wobbled, causing the signals to move in and out of phase at various frequencies. The whooshing sound that resulted became a featured gimmick on many records from the psychedelic era. For an excellent example of this phasing technique (called 'skying' at the time), check out The Small Faces' 1967 hit *Itchycoo Park*. It should be pointed out here

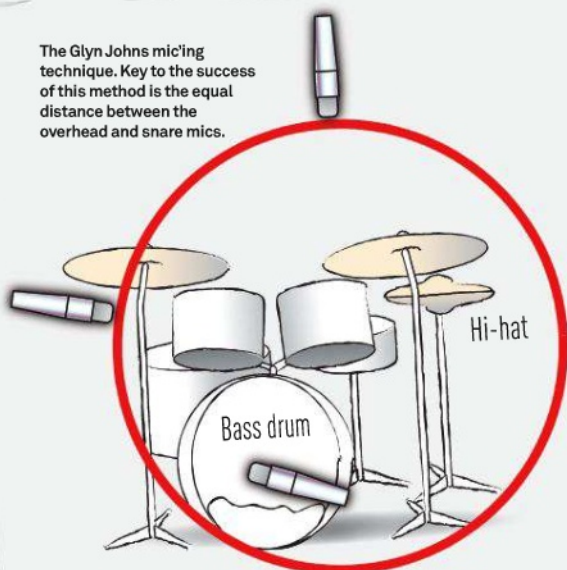
Probably the most famous of all Abbey Road's inventions was Artificial Double Tracking

that phasing wasn't actually invented at Abbey Road. Les Paul, a key figure in the invention of multitrack recording, had discovered the effect as far back as 1945.

As pop recording became more experimental, with lavish productions featuring orchestral backing and all manner of exotic instrumentation, engineers required more than the standard three or four tracks. Les Paul had been running his custom-built eight-track since the 1950s, but it wasn't until the late 60s that the format became the industry standard. Apart from reducing the need to make reduction mixes – bouncing between two tape machines – the main benefit of eight-track recording was the ability to separate sounds onto their own tracks, giving more options during mixing.

The problem with twin-track and four-track recording was that it was very difficult to create a good stereo mix. Listen to those early stereo Beatles LPs and very often you find all of the main instrumental backing panned hard left, with vocals and overdubs panned hard right. Many people enjoy the wild stereo mixes of the period, but at the time they were not considered as important as the mono mixes and accordingly were not given anything like the same care and attention. And just try listening to those early stereo mixes on headphones – very disorientating!

The Glyn Johns mic'ing technique. Key to the success of this method is the equal distance between the overhead and snare mics.



Although stereo mixes were prepared for all of The Beatles' albums, almost no actual stereo recording was undertaken. For example, Ringo's drums were recorded to a single track of the eight-track tape. The whole kit may then have been panned one way or the other, but (apart from on the last track on the band's last recorded album, *Abbey Road*) the kit itself was not panned across the stereo spectrum. Stereo recording as we know it today didn't really come into its own until the introduction of 16-track at the tail-end of the 60s, by which time The Beatles had split up. Glyn Johns, who worked with the Rolling Stones, among others, pioneered a great technique to record stereo drums using just three mics.

The developments in studio production techniques that The Beatles inspired created a divide within popular music. 'Pop' acts that relied on singles for their success continued to appeal to teenyboppers (now there's a quaint old term), but the more serious artists – Pink Floyd, Jimi Hendrix, Led

Once-esoteric effects such as phasing can be achieved at the touch of a button

Zeppelin and a whole host of progressive bands – expressed their art through albums, appealing to an older, more discerning audience. The Prog Rock era was upon us. At this stage of the game, musical arrangements and production techniques were becoming ever more lavish, and with the availability of the first synthesizers, a new era of record production had arrived.

After analogue

Sixteen-track recording caused a sea change in the way individual sounds were committed to tape. Engineers no longer had to commit to a balance of various sounds at the recording stage but could pretty much allow any mic (or DI) channel to occupy its own dedicated track. This was something of a double-edged sword, though, with some engineers hastily recording substandard sounds in the misguided belief that 'we'll fix it in the mix'.

Having said that, it is generally accepted that 16-track recording to two-inch tape achieved the highest fidelity of any analogue recording format. While the 24-track machines that

MTM Pro Technique Let me take you down...

Strawberry Fields Forever was the most complex of all The Beatles' recordings. The final version is in fact an edit of two completely different versions recorded weeks apart and with entirely different instrumentation. The first minute of the track features the group's standard line-up of instruments – guitar, bass and drums – with the addition of a Mellotron. The flute sound heard at the beginning of the record is the Mellotron played on its flute setting. This is undoubtedly the most famous use of this legendary instrument ever recorded. After this version was completed, Lennon decided he wanted to record a new version using orchestral sounds and other, more exotic instruments. To this end the group taped a backing track of heavy percussive sounds, much of which was reversed. With this done, producer George Martin scored an arrangement featuring trumpets and cellos and George Harrison overdubbed a swaramandal, a sort of Indian table harp.

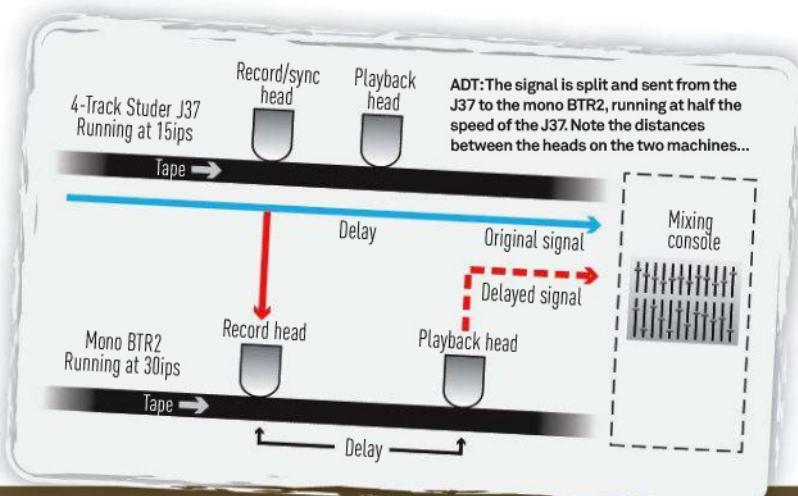
When Lennon heard the result he decided he would like to use the first, lighter version for the first part of the track then cut to the heavier orchestral version for the remainder. When George Martin pointed out the two versions were in different tempi and keys, Lennon (who had no technical knowledge whatsoever) responded, "Well, you can fix it". And fix it he did. By speeding up the first version and slowing down the second, Martin matched the two takes to create one of the most astonishing recordings committed to tape. The edit appears one minute into the track during the first line of the second chorus on the word 'going'. But beware, once you've spotted it, you'll never hear it the same way again!



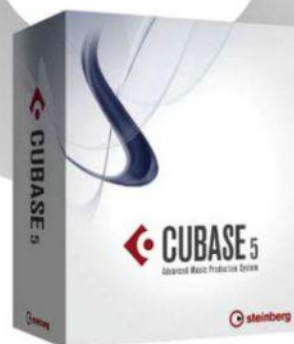
appeared a few years later offered even greater flexibility in terms of overdubbing options, the extra eight tracks still had to be squeezed on to two-inch tape, reducing fidelity.

Now that we are firmly in the digital age, our options are almost unlimited. No longer do we have to worry about running out of tracks, editing can be carried out without the need for a razor blade and drop-ins need not be destructive – if you accidentally erase something, hit the undo button.

Almost all of the techniques and classic sounds mentioned here can be faithfully created with today's software. Tape simulators, classic EQs and compressors are all readily available and once-esoteric effects such as phasing can be achieved at the touch of a button. Dig out those old LPs, listen and experiment to create new music with the techniques and sounds of rock and pop's Golden Age. **MTM**



25 Pro tips for Cubase 5



Cubase is one of the longest-serving DAWs out there, but even experienced users can still discover new tips and tricks. **Hollin Jones** reveals its deepest secrets...

01 CUSTOMISE THE TOOLBAR

The area at the top of Cubase's Project window can be customised to show whatever sets of controls you prefer. Right-click in an empty area and, from the resulting list, choose what is visible or hidden. To show or hide multiple elements at once, choose Setup and create a group of controls quickly as well as setting the order in which they appear. Use the disk icon at the bottom left to store presets so you can toggle between sets of controls with ease.

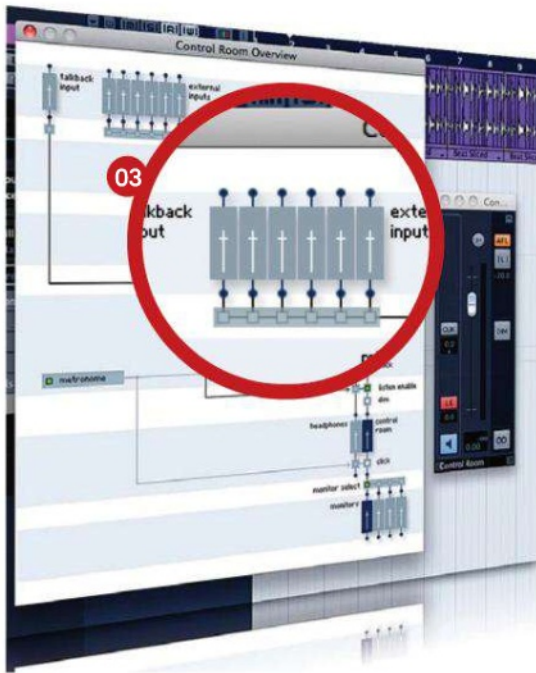
02 PLAY MIDI WITHOUT HARDWARE

Go to the Devices menu and choose Virtual Keyboard. A keyboard will appear in the Transport panel; this acts as a MIDI input for any virtual instrument selected when you click the mouse on its keys. Clicking along its base will shift the selection up or down by several octaves and you can set the velocity of the notes via a slider. Click on the tiny dot at the bottom right and you switch to computer keyboard input. Click and hold on a note, then drag the mouse up or down to affect pitch bend.

03 CONTROL ROOM

The Control Room features, accessible from the Devices menu, enable you to set up advanced monitoring and talkback setups (as long as you are using audio hardware with sufficient physical inputs and outputs, of course). You first need to go into the VST Connections window and set up your speakers and I/O busses for the control room, then go to the Control Room Overview to see how





things such as click tracks, talkback and monitor selection are assigned. Use the Control Room Mixer panel to use these features in everyday operation.

04 SHOW ALL INSPECTOR PANELS

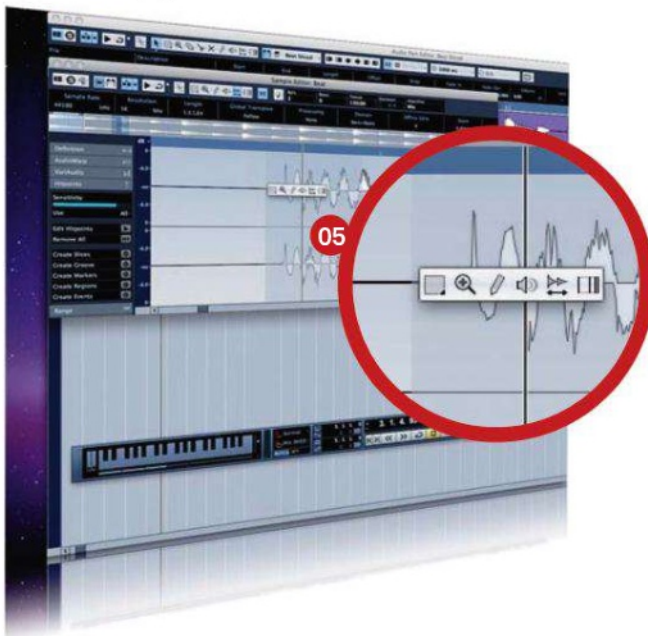
The Inspector panel to the left of the Project window has a number of tabs containing the properties and tools associated with any selected track. Clicking on the title bar of one of these sections will expand it, but if you want to expand all the sections at once, you can hold the [Alt] (PC/Mac) key and single-click on any of them. This is particularly useful if you have a large screen. To minimise them all at the same time, repeat the action.

05 SAMPLE EDITOR SHORTCUTS

In the Sample Editor, if you right-click anywhere in the waveform display you can call up a small popup toolbox that is different from the one available in the Project window. Hover the mouse over one of the tools and left-click to select it. The tools available include Range Selection, Zoom, Pen, Draw, Play, Scrub and Timewarp. These tools are also available from the Sample Editor's toolbar at the top of its window but it's quicker to access them via a right-click.

06 LINK CHANNELS

In the mixer, you can link channels of the same type so that moving one will move all linked channels by the same amount, regardless of their start position. Select the relevant audio channels, right-click on one and select Link Channels.



▨ The **Control Room Overview** shows how things such as **monitor selection** are assigned ▨

The same applies to MIDI and Instrument tracks. This is useful, for example, when you have the relative levels of several tracks all set perfectly but need them all to be quieter or louder by exactly the same amount. You can achieve the same by using Group tracks, but this way the tracks don't need to be routed to a single audio output so you retain more flexibility. They can be just as easily unlinked.

07 VST INSTRUMENT OUTPUTS

The VST Instruments Rack enables you to manage which instruments are loaded, activated or frozen. You can even choose a preset from within each instrument's section by clicking the space under its name, without having to open the instrument. Some instruments (such as LoopMash and a fair few third-party models) have more than two outputs. By default, it may be that only the first two are activated in the mixer. To enable more – or indeed all of an instrument's outputs – click on the tiny arrow to the right of the 'e' button in the VST Instruments window. You will then see a list of available outputs and be able to choose which to activate.

08 CREATE BLANK PARTS

On any audio or MIDI track in a project you can instantly draw in an empty part by holding down the [Alt] (PC/Mac) key to temporarily toggle the Pointer tool to the Pen tool, then click and drag for the required length of the part on the desired track. The part that is created will obey the current snap settings. In the case of MIDI this is useful as you can double-click on the part and, using the Key Editor, manually draw in MIDI notes. On an audio track it's actually an audio part that is created rather than an audio file, but you can drag other audio files into the new part.

09 ZOOM IN AND OUT QUICKLY

Most users know that you can use the zoom sliders to zoom in/out in the Project window, but you can also multiple-select tracks, hover the mouse over the border between two of the tracks and drag up or down to zoom. Interestingly, this works for all selected tracks, so even if you select one track then another elsewhere in the project (but not the tracks between) only the selected tracks will be zoomed, leaving all others at their existing zoom level. This is useful for getting to specific tracks without having to do too much scrolling. →



10 USE MOUSE WHEEL FOR SCROLLING

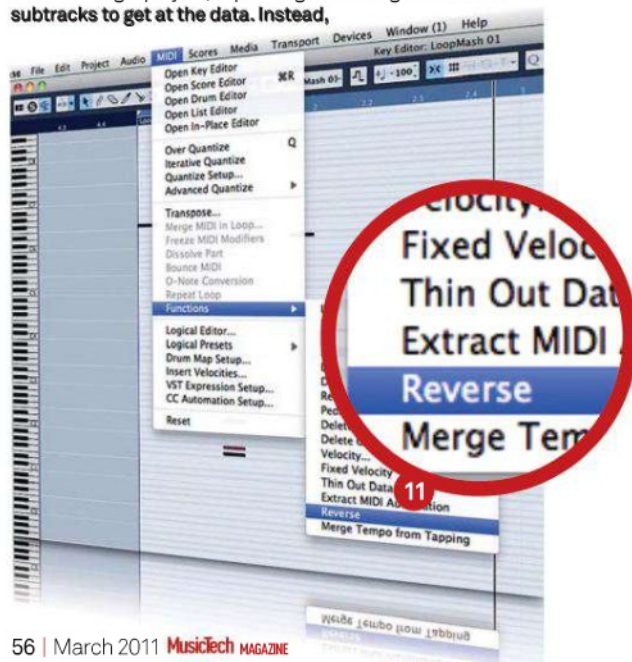
In the Preferences window, go to the Editing>Audio section. Here you can activate the option to enable the mouse wheel (if your mouse has one) to be used for setting the volume of Events in the timeline as well as for setting the volume of fades. This offers a very quick way to set the volume of an Event independently of the volume of the track itself – and without having to click and drag the envelope handles inside the clip itself. It works in set divisions of volume, so each click of the wheel represents a specific change in volume.

11 MIDI FUNCTIONS

If you open a MIDI part in the Key Editor and choose some MIDI notes or select an entire MIDI clip in the Project window, you can go to the MIDI>Functions menu to find some interesting tools that can be applied. These range from simple things such as reversing a MIDI part to adding or removing a relative amount of velocity from all selected items, deleting specific notes that match certain criteria or restricting the polyphony to a certain number of voices.

12 MANAGE AUTOMATION

Automation can get quite unwieldy if you use it a lot across a single project, expanding and hiding automation subtracks to get at the data. Instead,



bring up the global Automation Panel using the Project menu. From here you can perform multiple actions that apply to all automation data in a project, including suspending read and write of specific types of automation globally, showing or hiding the same types of data en masse, or filling a selected area with a certain automation parameter, which is quicker than drawing it in by hand.

13 PROCESS TEMPO

You can use a Tempo track to alter the speed and time signature of a project as it plays back. Cubase also has a feature called Process Tempo, which can be used to define a specific length or end time for a set range; the Tempo track automatically sets a tempo that fits the range in the specified time. Using this tool you can select a period of time in bars or time values and have Cubase calculate the exact duration and speed necessary to fit the existing time to the new time. This saves you having to do it manually by trial and error.

14 PROCESS AUDIO WITH A PLUG-IN

If you want to process an audio event through a plug-in but leave the events to either side of it on the same track untouched, you could add an effect as an insert to the track then bounce the audio to a new track. A better way, though, is to open the Sample Editor by double-clicking on the clip and choosing Process>Select Plug-in then choosing an effect. If the effect has a tail, say a reverb or delay, click More and add some tail to the processed file so the effect is not truncated. Hit Process and the file is rendered.

15 DISSOLVE MIDI PARTS

If you have a MIDI event that is complex and you want to separate its contents for reassignment to new sources or simply to delete some groups of notes, you could do it manually. A much quicker way, however, is to choose MIDI>Dissolve part with the event selected. Each note can be split off to a separate event or split by channel. An example of how to use this might be to extract the hi-hat or kick drum part from a MIDI drum clip then drag it to a new MIDI track to be played by a different instrument.

16 TRACK PRESETS

For any given track, click on the Track Presets button in the Inspector and you'll see a window appear. From here you can choose a preset by searching using attributes such as Category or Style. If you click on the button marked 'Logical', however, you can use specific search terms to find items, such as whether a file type includes or omits a word or was recorded in a specific date range. This works whenever you use this browser, though some search terms apply only to certain file types.

17 VST CONNECTIONS

The VST Connections window is from where you manage all your audio I/O as it relates to the different sections of Cubase that you are using. You may be familiar





Every channel in the Project window has an associated Quick Controls section

with audio inputs and outputs, perhaps even Group/FX channels. But there is also the option to set up busses for external effects and instruments, routing hardware in and out of Cubase and associating a MIDI device with it. These can be added to projects just like plug-ins – so you could make your beloved outboard reverb unit, compressor or synth an integral part of your Cubase setup.

18 METRONOME SETUP

The click track is a vital tool for getting your timing right. If you go into Transport>Metronome Setup you can alter the way it works. As well as specifying if it is present during recording, playback or both, you can set the note and velocity used by the MIDI click or specify audio files to be used as the metronome sounds. This is handy if you prefer, say, a wood block noise to the default beeps.

19 VIDEO PLAYBACK

Cubase supports a video track and you can import video files and compose music along to them. The Tempo track comes in very handy here, as it enables you to mix and match multiple tempos within a single project. The video display window can be freely resized, and if you right-click on it you can select preset sizes, a specific aspect ratio and toggle video playback quality down slightly so that compressed formats play back more smoothly and leave more CPU power for audio processing.

20 INFO LINE

The Info Line can be really helpful in everyday workflow and can be brought up by clicking on the Set Up Window Layout button at the top left of the Project window. For any event in the project you can manually enter values to set things such as name, fades, volume, transpose, fine-tune and other characteristics. You can also easily lock a clip based on its size and position to prevent accidental editing. The Info Line is a quick way to set things such as Root Key and Global Transpose values for one or more events at the same time.

21 SKIP BETWEEN TRACKS

If you open the VST Audio Channel Settings window for an audio track you will see an overview of its inserts, EQs and sends as well as a fader and channel strip. Locate the arrow directly beneath the display of the track's name and you will be able to click and choose any other track in your project.

Using this trick you can quickly move between multiple tracks and see their settings without having to keep returning to the Project window.

22 GROUP CHANNELS

By adding a Group channel to a project and routing two or more other audio outputs from other tracks through it you can gain control over the volumes of multiple channels from a single channel. A good example of this might be to group strings, horns or backing vocals together and submix them before they are fed to the Group channel. Then you could automate the Group channel fader to being them all up or down at once, saving you a lot of work.

23 USE QUICK CONTROLS

Every channel in the Project window has an associated Quick Controls section, located at the bottom of the list of tabs in the Inspector panel. For each type of track you can assign parameters to each of the eight slots and these can 'reach into' a project – perhaps altering the cutoff on a synth or the wet/dry amount on an effect – without you having to open the plug-ins. These can be used to instantly control almost any parameter within Cubase.

24 DRAG AND DROP EFFECTS

In the Mixer window you can drag and drop effects between insert slots with ease. Drag an effect from any slot to any slot regardless of the channel and it will be moved. Hold down the [Alt] key while doing so and the effect will be duplicated rather than moved. This is a great way to apply an effect complete with identical settings to different channels very quickly.

25 MANAGE PLUG-INS

If a plug-in is causing you problems – slowing you down or, worse, crashing your project – you could try moving it out of the VST folder to temporarily disable it. Another method is to go to Devices>Plug-In Information and uncheck any plug-in that is being difficult and may be causing crashes. This window will also show you the location of every plug-in on your system, its version number and whether it is sidechain-compatible. **MTM**



10 Minute Master No194

Sampled string articulations

Sampled string libraries generally offer a good range of articulations, but what exactly are the differences between them? **Mark Cousins** has the lowdown.

Sampled strings have come on in leaps and bounds over the last few years, with the size of a typical library growing at an almost exponential rate. In just the last year we've seen several defining libraries released, including EastWest's Hollywood Strings, AudioBro's LASS and Project SAM's Symphobia 2, all of which bring new levels of realism to software-based sampling. However, the range of different articulations offered as well as the variety of technologies used to trigger them can often seem overwhelming to a first-time user. So, what are the differences between a round-robin *col legno* and a *divisi legato* (among others) and how can they be put to best use?

Getting a samples-based instrument to produce a realistic output requires different articulations. Put simply, an articulation is a style of playing – staccato notes, for example, as opposed to sustained notes or techniques such as aggressive tremolo or pizzicato. As symphonic strings form such an expressive part of the orchestral palette, there's always wealth of different articulations to play with, and each articulation exploits the power of software sampling in some shape or form.

Strung out

The 'bread and butter' of any string samples library will always be the principal sustain sound, also referred to as the legato articulation. Even something as simple as a

Tech Terms

- **SAMPLE SCRIPTING**
A sample script is a conditional text-based instruction in respect to how samples are triggered. Modern libraries make extensive use of scripting in order to be as expressive and realistic as possible.
- **CONTINUOUS CONTROLLER**
Continuous Controllers (or MIDI CC, for short) are a branch of the MIDI specification used to control sound, usually via MIDI faders or the modulation wheel.
- **INTERNAL DYNAMIC**
A note with an internal dynamic has some change in volume over its duration (like a crescendo or diminuendo at the end of the note). A short articulation, like a pizz, has no internal dynamic.



AudioBro's LASS employs a highly authentic solution for true divisi writing.

sustained legato will come in a variety of different forms based on the particular strategy or approach adopted by the library. A standard sustained legato, for example, is usually a series of long notes chromatically mapped across the keyboard. Some variations on this basic sustain might also be provided, usually covering different levels of vibrato, and occasionally with and without mute – called *con sordino* – whereby a softer tone is created by the addition of a mute attached the bridge of the violin.

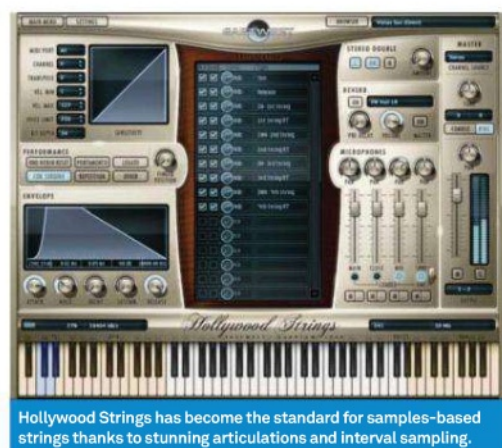
The use of different playing dynamics – moving between a loud fortissimo and a soft legato – is also interesting in that a number of libraries now tend to ignore MIDI velocity as a means of controlling the relative dynamics of a sustained string line. Instead, an alternative way of moving between dynamic layers is to use the modulation wheel or another suitable MIDI continuous controller. Usefully, this enables each note to be dynamically shaped, as well as allowing you to create crescendos or diminuendos (a dramatic rise or fall in volume, respectively) by hand.

Performance legato

Although a typical sustained string articulation sounds fine for string chords, the effect is rather less convincing when you start using it for melodic lines. Of course, in the real world, the beauty of a string line is as much the movement between the note intervals (as the hand slides up or down the fingerboard to the next note) as the notes themselves. To re-create this, a number of leading libraries now use a technique called True Legato, Performance Legato or Legato Interval Sampling to add realistic moment between notes as well as the sustained notes themselves.

As you'd expect, a good True Legato patch takes some ingenious sample scripting for it to work correctly. Working with a live performance, the software sampler needs to analyse your playing, identify the appropriate interval and then insert the accompanying interval sample – all without breaking into a sweat!

Different scripts also allow you to vary the speed of legato in various ways, either using MIDI controllers, velocity or simply by looking at the speed of your playing, allowing you to make the important distinction between a fast-moving legato, for example, and a slower and noticeable portamento effect that deliberately slides between notes.



Hollywood Strings has become the standard for samples-based strings thanks to stunning articulations and interval sampling.

As well as the bread-and-butter sustained/legato articulations, there are also other long articulations based on sustained notes. Tremolo, for example, is created by rapidly pulling the tip of the bow back and forth over the strings, effectively creating a rapid reiteration of the note that has a 'trembling' quality to it. A variation of this basic tremolo – called *sul ponticello* – plays the tremolo near the bridge, creating a thinner, more edgy sound than the standard tremolo articulation. Both articulations are great for adding tension or apprehension to a score and are staple components of horror movie soundtracks.

Perfect harmony

Another interesting long articulation is a harmonic, played by lightly touching the string with the finger rather than pushing it down against the fingerboard. Given that harmonics are based on integer divisions of the string, they have a natural propensity towards a higher pitch (and, indeed, are sometimes used to extend the musical range of the given instrument). Harmonics also have a distinctive glassy quality to them that marks them out as sounding distinctly different from conventional sustained string sounds.

Sampled trills are recordings of the string player rapidly moving between two adjacent notes – either a semitone apart (for minor trills) or a tone apart (for major trills). The exact choice of trill will vary depending on the



The sheer range of dynamics, articulations and playing styles available to the orchestral string player makes re-creating the sounds in software an exacting business.

The bread and butter of any string samples library will always be the principal sustain sound

key or mode you're playing in. In C major, for example, a trill on G would be a major trill, whereas a trill on B would be a minor trill.

Short articulations

Alongside the various long articulations you'll also find a number of short articulations that don't feature any sustain as such. The classic short articulation that even the General MIDI standard includes is pizzicato – created by the player plucking the string rather than bowing it. Because there's no internal dynamic to the note, dynamic

levels are controlled using MIDI velocity, and to avoid any notable 'machine gun' retriggering effects, a round-robin switching system is utilised whereby different alternate samples are triggered when a note is hit more than once.

Other notable short articulations include staccato notes and spiccato – the bow almost bounces on the string, creating a lightness of movement that can't be achieved with traditional staccato samples (a good audio example of this is John Williams' *Duel Of Fates* from the *Star Wars* soundtrack). On a more experimental basis, *col legno* is also interesting – produced by striking the strings using the wooden side of the bow – and is used to great effect at the beginning of Gustav Holst's *The Planets* as an ominous precedent for the onset of war.

An interesting development has been in the implementation of different *divisi* section sizes, which mimic the 'divide-down' effect that occurs when a string section moves between melodic lines and chords. A lead line on first violins, for example, would have around 22 players performing each note, creating a lush, expansive sound. However, if the section played a two-note chord, the number of performers on each note would halve, creating a different timbre and feel. Of course, the majority of sampled strings are recorded with a full section – a solution that sounds great on single notes, but when used for chords can produce a virtual string section of 80-plus players!

Orchestral manoeuvres

The development of samples-based string libraries shows no sign of slowing down, so there are undoubtedly countless innovations and new possibilities just waiting around the corner. Although we've outlined the principal articulations in use today, there are also plenty of additional features to be found within each library, so it's well worth exploring what each has to offer and getting to grips with the various approaches that define the sound and performance of a library. **MTM**

FURTHER INFO

- For more information on the use of sample strings in music production, see: www.musictechmag.co.uk/mtm/features/arranging-with-sampled-strings
- For more information on sample mapping, visit: www.musictechmag.co.uk/mtm/features/sample-mapping



Sonar X1 Step-by-Step

Sonar X1 The GUI and more...

The latest version of Sonar has undergone a radical makeover, but there's much more to it than just a new look. **Hollin Jones** digs deep.

The latest incarnation of Sonar completes a transition that has been under way for some time, according to the developers. While versions 8 and 8.5 saw a lot of under-the-hood work – work that was perhaps not immediately obvious to users – Sonar X completely overhauls the user interface, addressing what had been our only real issue with this advanced DAW – its complexity. Not that it isn't still quite complex – any program this capable is bound to have something of a learning curve – but it is now much easier to use and navigate thanks to clearer and more flexible windowing, design and layout.

This falls under the heading of what Cakewalk calls 'Skylight', a system in which most parts of the interface can be freely arranged, dragged, dropped, docked or floated as you see fit. Screensets can be easily saved and loaded, so, for example, if you are programming MIDI you would probably want the Synth Rack, Piano Roll Editor and maybe the Step Sequencer to be visible.

Switching to the task of mixing, you would want the mixer window to have priority. For any task that you can think of, it's easy to arrange the windows and then save a screenset.

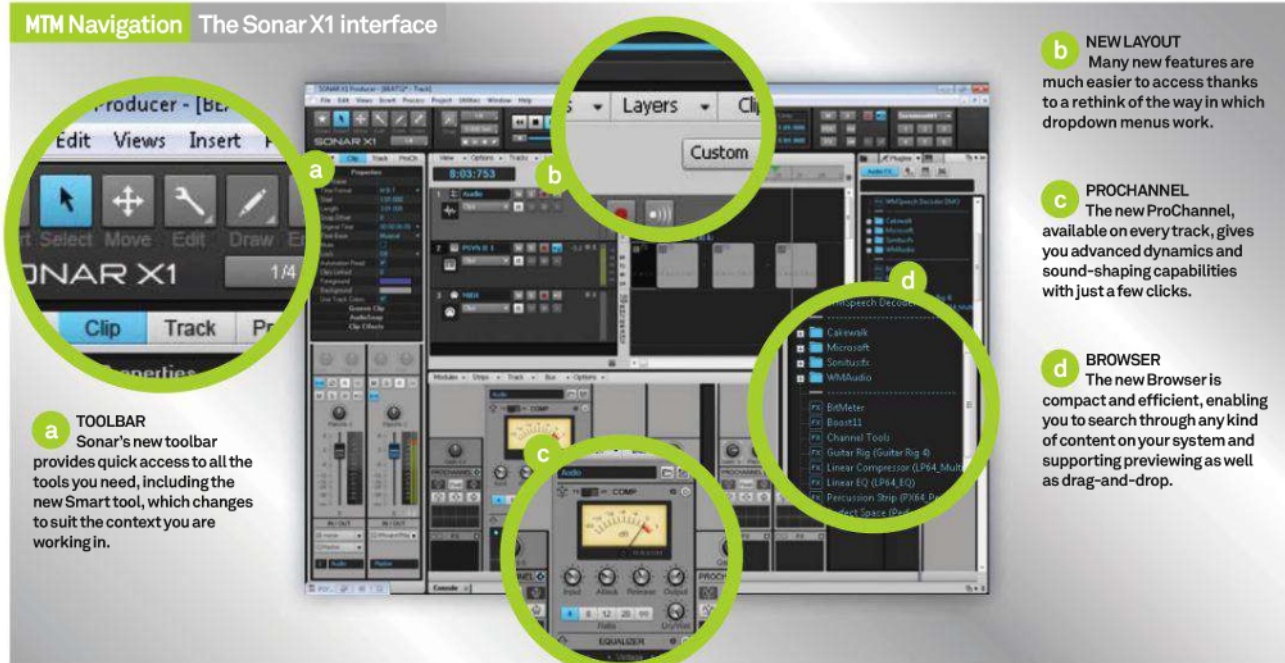
Size matters

Since things can get fairly window-heavy, there's an option to place windows into Sonar's MultiDock, which is essentially a tabbed system running along the base of the window that enables you to quickly access

For any task you can think of, it's easy to arrange the windows and then **save a screenset**

anything that's stored in it. Items stored there are still usable when selected and, true to form, the section of the window used by the MultiDock can also be resized as required by your project, so you could, for example, use a whole Step Sequencer while docked with little or no scrolling necessary (if you have a sufficiently large monitor, of course). In another example, you might

MTM Navigation The Sonar X1 interface



a TOOLBAR
Sonar's new toolbar provides quick access to all the tools you need, including the new Smart tool, which changes to suit the context you are working in.

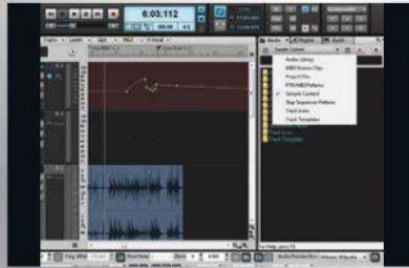
b NEW LAYOUT
Many new features are much easier to access thanks to a rethink of the way in which dropdown menus work.

c PROCHANNEL
The new ProChannel, available on every track, gives you advanced dynamics and sound-shaping capabilities with just a few clicks.

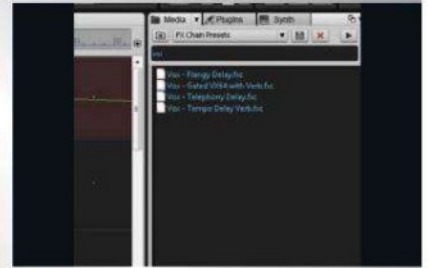
d BROWSER
The new Browser is compact and efficient, enabling you to search through any kind of content on your system and supporting previewing as well as drag-and-drop.

MTM Step-by-Step Using the Browser

01 Open a project; if the Browser is not already visible, go to the Views menu and select it. Alternatively, press the [B] key on your computer keyboard. Depending on the layout, it may appear to the left or right of the screen or even docked in the MultiDock at the bottom.



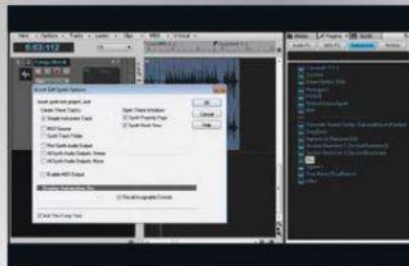
02 The first tab is called Media. If you click on the Content Location dropdown menu you will be able to toggle between the different kinds of content available to you. Choose one and you will see the content inside it divided into folders. Double-click on a folder to open it.



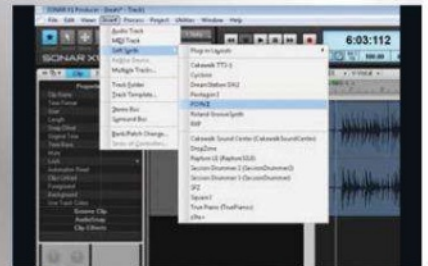
03 To quickly filter a list of items, enter text in the field at the top of the Browser window. This works across all parts of the Browser. Drag and drop a preset into the project – where you can drop it will depend on the type of preset or file it is. An audio file must go to an audio track, for example.



04 Move on to the Plugins tab and you will see it split into further sub-sections. Under Audio FX, drag and drop an effect or an FX chain onto an audio clip, an audio track or into a channel in the mixer. Double-click the resulting effect in the Bin to open it.



05 Drag and drop an instrument from the Instruments section directly into a project. If your setup is configured to do so, Sonar will ask you to set various options before the synth appears. If you uncheck the 'ask' box, you can dispense with this window for all subsequent tasks.



06 If you prefer the old way of getting tracks into a project you are free, of course, to use the Insert menu or right-click to achieve the same ends. The good thing about the Browser is that it groups everything together and has a text search field, so it can be much quicker in everyday use.

want to dock a synth and then tweak its controls while it's docked, but without having to restore the whole thing as a floating window.

Just browsing

The way that Sonar provides access to your data has also been radically improved and there's a new Browser system that enables drag-and-drop of virtually any kind of file, effect or template straight into a project. There are other neat touches, too, such as the facility to select an audio preview buss for any given sound so that you can hear it through any effects that might be applied to specific tracks.

MIDI files are just as well catered for and you can select a Synth Preview Output channel so that any MIDI files are previewed through whichever virtual synth you like. This saves you having to load the MIDI clip or loop onto a synth's MIDI track only to discover that it doesn't sound right and then have to change it.

For both types of file you can make Sonar preview the file at the same tempo as the current project is running at, so you get an idea of how it will sound – again, without having to import it until you are sure.

PRO TIP

When using the Step Sequencer you can expand every row to access a number of other controls, including Velocity, Time Offset and Step Play Probability, which can be used to introduce an element of randomisation into patterns. From here you also control swing and flam, crucial for programming parts that have groove.



Sonar has always shipped with a superb selection of plug-ins but in Sonar X you've got a much more efficient way of managing and applying them. Under the Plugins tab in the new Browser there are four sub-sections, each denoted by a button. Under Audio Effects you will see all of the audio plug-ins installed on the system; these are helpfully grouped by type or manufacturer, depending on exactly what you have installed on your system. At the bottom there's the option to use an external effect (providing that you have set up the relevant audio busses, of course) as well as a folder full of FX Chain presets. These are self-contained groups of audio effects comprising plug-ins plus their settings and can be quickly loaded onto any audio track as required.

Into the Bin

Let's assume that you have spent a while tailoring the perfect guitar sound using a number of effects and have got it just right. You can right-click on the FX bin, convert the Bin to an FX Chain and save it. Next time you need that same sound, just load up the Chain from the Browser. Other sections in the Plugins Browser include MIDI FX such as real-time transposition or chord →

WHAT DOES YOUR BUSINESS NEED MORE?



TE GO ASON **LEASING COMPUTERS FROM HARDSOFT**

- 01 Have the equipment you need in 2-3 days without paying the full cost price
- 02 Offset costs against your tax bill
- 03 Up to 22% cheaper than some of our competitors
- 04 Own equipment at the end of the lease for just £39 plus VAT
- 05 Inclusive of 3 years support & warranty

- 06 We say yes to credit when others say no
- 07 Established for over 25 years
- 08 We can install & project manage your new system
- 09 Option to renew after 18 months getting all new IT and keeping the original
- 10 Authorised Reseller for Apple, Sony, HP, Toshiba, Adobe and many more

13" MACBOOK PRO



**ONLY
£9.20
PER WEEK**

MAC PRO



**ONLY
£17.80
PER WEEK**

5x MAC NETWORK & SERVER



**ONLY
£66.00
PER WEEK**

Subject to Status. Business users only. Prices based on 3 years lease with direct debit payments taken monthly or quarterly. Prices exclude VAT.

**CALL NOW FOR A QUOTE
0844 330 8693
OR VISIT OUR WEBSITE
WWW.HARDSOFT.CO.UK**

HARDSOFT
COMPUTERS



Authorised
Reseller

→ analysis of MIDI tracks (for processing MIDI parts before they are heard through an instrument) and the all-important Instruments tab. From here you can drag and drop an instance of any instrument installed on your system straight into a project to be able to play it in just a few seconds. To configure it differently from the default settings, double-click on it and make settings before it is placed into a project.

Finally, there's a ReWire tab for managing any connected ReWire sources (such as Reason). Each tab of the Browser has a text field into which you can enter search terms, meaning it's quick and easy to zip through what can be long lists of plug-ins or files to find exactly what you need.

ProChannel is a remarkable dynamics strip for high-end sound-shaping and processing

PRO TIP

You can apply audio effects directly to audio clips with a right-click. This means that the clip is processed through the effect but the effect is not used as an insert, so other clips on the same track remain unaffected. It's a good trick for saving track counts and processing overhead.



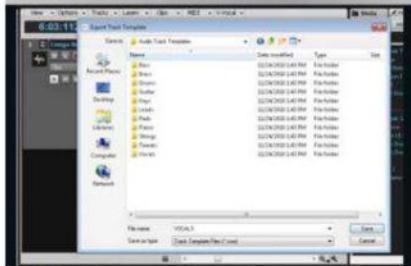
Pro sound

Audio output tracks – that's any track that carries an audio signal (including audio channels and the outputs from MIDI-triggered instruments) – have also now gained the ability to use the new ProChannel effect, which can be accessed either from the main mixer or from the Inspector panel for any given track via its own dedicated tab.

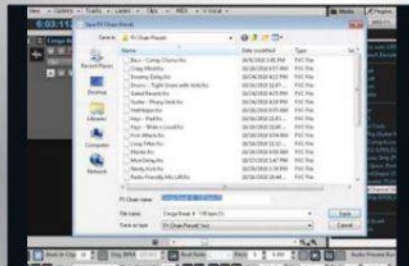
This is a remarkable dynamics strip that provides high-end sound-shaping and processing to every audio channel and can be used to really sweeten and tighten up your mixes. There are, of course, some great presets, including setups for the recording or mixing of drums, guitars, bass, pianos or master buss compression. An EQ on each channel can be set to Vintage or Modern for a different feel, plus there are comprehensive EQ controls to help you shape the sound. In addition to the compressor there's a Tube Saturation section that can be configured to give recordings more drive and warmth. In the Routing section at the base of the ProChannel you can drag the three component sections to alter the order in which the signal is processed.

Sonar supports automation of course, and the way Envelopes are handled has also been improved. By clicking on the Edit Filter dropdown menu on a track →

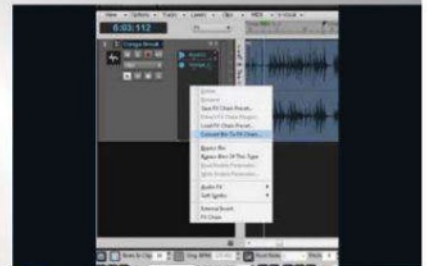
MTM Step-by-Step Working with templates



01 Let's say that you have a track that you have been adding effects to and also setting up EQ, compression and other parameters to get the sound just right. Right-click on it and choose Save Track Template. In the resulting window choose a name and a destination for the file.



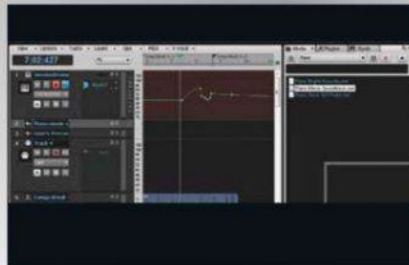
02 Imagine that you want to save just the FX chain associated with a particular track rather than the channel settings, which are stored with a Track Template. Reveal the FX Bin associated with any given track and right-click on it, choosing Save FX Chain Preset. Again, choose a name and destination for the file.



03 To convert a Bin of effects to a Chain without saving it first, right-click on the FX Bin and choose Convert Bin to FX Chain. The effects are combined together in a single Chain but not saved out separately (though it will be saved with your project, of course).



04 In the mixer window you can view the FX Bin associated with any track and drag and drop effects or whole Chains between tracks to quickly move them. Right-click on a Bin and choose Audio FX to add more individual effects or FX Chain to add a Chain of effects.



05 In the Browser, go to the Media tab and locate the Track Templates section from the Content Type dropdown menu. Drag and drop the preset to its associated track type – MIDI or audio – or into an area of blank space to create a whole new track.



06 Again, the old way of doing things still remains, so you can go to the Insert menu and choose Track Template to achieve the same thing. This can be helpful if your file is perhaps located on another drive and you don't want to navigate to it in the Browser.

PRO-AUDIO supplier

2006
Spring - Summer

IT'S LAIN REID

The single source PRO-AUDIO supplier

Studiospares

2011

- Over 1200 products
- Hundreds of price reductions
- New extensions



• **Compact layout**
saving 18 tonnes of paper!

• **1000 popular**
new products

• **Over 1000**
price reductions

www.Studiospares.com | Tel: 0844 375 5000

2007

The Lowest Prices... The Fastest Delivery... The Biggest Catalogue...

1000 new products, over 1000 price reductions!

www.studiospares.com

Tel: 0844 375 5000

Studiospares



→ you can now easily access certain types of envelope data. There's a subset of commands for track automation and another for clip automation. The Track Automation menu will also give you access to automatable parameters associated with any effects that have been inserted on the track or any MIDI instruments that are connected to it. Using these tools you can easily program automation for a given track.

When you're programming or editing automation data on a track, selecting the new Smart tool will mean that when you mouse over different areas of a clip, the tool will change to perform whatever function is

From **better browsing** to track templates, it's a great step forward for this **accomplished DAW**



necessary for that data. For automation, then, it will be a Move or Draw tool. It's particularly useful when you're making edits in Track view and you might have all kinds of different tracks visible, perhaps with automation or other data shown on various tracks. With the Smart tool you can simply mouse between them and the tool will update itself so you can work more effectively.

Preferential treatment

Last but definitely not least among the changes in Sonar X is the fact that the Preferences section has been simplified, making it much easier to understand and manage. Basic mode should be fine for most users, but the Advanced mode lets you access some more esoteric things. Previously, it was hard to see through the complex stuff and get to the basic settings.

We have touched on some of the new features that Sonar X brings to the party and when you get hands-on with it it's certainly more intuitive to use than before. From better browsing to track templates, dockable windows and improved automation editing, it's a great step forward for this accomplished DAW. Try the new features for yourself and see where they take you...**MTM**

MTM Step-by-Step Programming a MIDI part using the Step Sequencer



01 Insert an instance of an instrument into a project using one of the methods open to you, such as selecting it from the new Browser. Here we have chosen to create an instance of PSYN II. You could, of course, play it by hand, but we're going to use the Step Sequencer, which lets you achieve different kinds of parts especially suited for electronic music.



02 Choose a preset on the synth and minimise it to the MultiDock for the moment. Choose View>Step Sequencer (if it is docked by default you may want to undock it to make it a little easier to work with). It should automatically route itself to the synth.



03 Try clicking in a Step box to add a note at any point you like. Use the Play button on the Step Sequencer to trigger the sequence and see how it sounds. If you're not seeing as many rows of steps as you need notes, right-click in empty space and choose Insert Row.



04 Click on a Row's note name to hear it played back in Preview mode. To change the note associated with a row, use the number box to shift the note up or down. The notes don't necessarily have to run in sequence, you can arrange them however you like.



05 If you have come up with a pattern that you like, click on the Load/Save button at the top left and choose to store it. From here you can also access other presets that can be called up in just a couple of clicks and applied to any virtual instrument.



06 For a quick fix, right-click on any Row in the Step Sequencer and choose Fill Every and then a numerical value. This will place a hit every set number of steps. From here you can also shift all of the hits in a row backwards or forwards. Rows can even be physically re-ordered to create your own custom layout.

All offers are subject to availability! We do not take any responsibility for any misprints or misinterpreted information!

All prices include 20% UK Vat and Tax paid is clearly shown on all invoices. For VAT registered companies this can be deducted at source. Please note that all our invoices will be in euros.

All transactions are carried out in euros and as such the GBP price can vary dependent on the current day's rate of exchange. Thomann are not liable for any surcharges added by your bank or card issuer.

The prices below are based on the published day's rate of exchange:
1 EUR = 0.865 GBP, 1 GBP = 1.156 EUR

thomann
MUSIC IS OUR PASSION

Musikhaus Thomann
Treppendorf 30
D-96138 Burgebrach
Germany
T 0203.5141643 (UK)
T +49 9546.9223-0 (Germany)
F +49 9546.9223-24
E international@thomann.de
I www.thomann.de

HOT DEALS

www.thomann.de | International Hotline: 0203 5141643 (UK) | Fax: +49 9546 9223-24

Zoom H1 Bundle

Mobile digital audio recorder

24bit/96kHz linear PCM, real X-Y mic arrangement, built-in monitor speaker, auto recording level, lo-cut filter, timestamp, track mark function, A/D and D/A conversion, 128 times oversampling, recording media: micro SD memory card and micro SDHC memory card (up to 16GB), USB 2.0, incl. 2GB micro SD card. Bundle incl. the t.bone HP-66 headphone and 2m USB cable.

€ 88.- € 85.-

order code 253718

Tascam DR-07

Mobile digital audio recorder

Record and play mp3 (up to 320kbps) and WAV files (up to 24bit), 44.1/48kHz, built-in stereo mic, analogue automatic level input control, analog limiter, stereo in for external mic, stereo line input, headphone/line out (stereo mini-jack), USB 2.0, powered via AA alkaline or NiMH batteries, includes 2GB SD Card and windshield.

€ 138.- € 115.-

order code 223287

Zoom H2 4GB Bundle

Mobile recorder

24bit/96kHz, USB interface, record 360° sound as 2-channel data or 4-channel data simultaneously, mic/line input, headphone output, perfect for interviews, podcasts, meetings and live recording. incl. USB cable, stand, power supply, windscreen and 1GB SD card. Bundle includes additional 4GB SD card.

€ 159.- € 138.-

order code 203048

Zoom Q3 HD

Handy video audio recorder

Built-in stereo condenser mics with true X/Y configuration, 2.4" LCD display, video resolution up to full HD 1080p, MPEG-4 AVC / H.264(MOV), Mini-HDMI and NTSC/PAL TV out, 44.1/48kHz 16/24bit Linear PCM or AAC, accepts up to 32GB SDHC cards, auto record level, uses 2 standard AA batteries or NiMH rechargeable batteries, USB 2.0 with built-in cable, headphone out, Windows and Mac OS compatible, incl. 2GB SD card.

€ 244.- € 211.-

order code 254939

Olympus LS-11

Digital recorder

24bit/96kHz, 2 built-in mics, internal 8GB HDD, expandable to 32GB with SDHC Card, up to 23 hours record time, edit functions, PCM/WAV/WMA/mp3 record & playback, built-in stereo speaker, backlit display, SD/SDHC slot, USB, headphone out, silver metal housing. Weight: 165g (including batteries), connection for external power supply, includes wireless remote and Steinberg Cubase 4 LE.

€ 275.- € 238.-

order code 234496

Edirol R-09 HR 4GB SD Card Bundle

24bit/96kHz mp3/WAV recorder

Up to 320kbps mp3 playback and recording, recording on SD or SDHC card (up to 8GB), integrated stereo condenser mic, OLED display, built-in preview speaker, incl. wireless remote control with split function, USB 2.0, stereo mic, in stereo line in, incl. power supply, 512MB SD card, USB cable, Cakewalk Pyro AudioCreator LE, wireless remote controller and small table mounting plate. Bundle incl. 4GB SD card.

€ 295.- € 255.-

o. code 207377

Zoom H4 N

Wizoo Bundle

24bit/96kHz digital recorder

Perfect for interviews, podcasts, meetings and live recordings. 2 built-in stereo microphones, provides 24V or 48V phantom power, USB port, includes windscreen, USB cable, cover and Cubase LE4. Bundle includes 4GB SD card, Superlux HD681 stereo headphones and Wizoo Publishing, Mobile Recording! Thomann Special Edition by Kai Schwirke.

€ 338.- € 293.-

o. code 232016

Zoom R16 Bundle

USB audio interface and DAW controller

16-track playback and 8-tracks recording, 24bit/48kHz PCM recording, internal stereo condenser mic, 8 mic ins, 2 outs, 8 balanced XLR / 1/4" TRS connections, internal effects, Mackie Control emulation via USB, works as USB storage, support for Win XP/Vista and Mac OS, incl. Steinberg Cubase LE4 and 1GB SD card. Bundle incl. the t.bone MSL56 stereo headphones and 4GB SD card.

€ 349.- € 302.-

order code 245233

Boss BR-800 Bundle

24bit/96kHz digital recorder

4-track recording at the same time on SD/SDHC card possible, 8-track playback + stereo drum track, usable as USB audio interface and effect engine, HiFi (MT2) Roland/Boss format and 16bit stereo WAV format, LCD display, headphone out, USB for audio I/O, MIDI I/O, incl. SD card, power supply, USB cable and Cakewalk Sonar 8.5 LE, weight: 872g. Bundle incl. the t.bone MB85 Beta dynamic microphone and Superlux HD681 headphone.

€ 449.- € 388.-

o. code 254835

Edirol R-44

24bit/192kHz 4-track field recorder

4x XLR/1/4" TRS inputs with 48V phantom power, 4x RCA outs, digital I/O, internal stereo mic, integrated speaker, SD Card slot (supports SDHC cards), pre-record function, USB 2.0 connection, OLED display, May be powered via battery, camera battery or power supply.

€ 777.- € 672.-

order code 205740

Hercules DJ Control MP3 e2

Portable USB DJ controller

2x jogwheels, 1x crossfader and 2x volume faders, 6x level equalizer, 2 buttons to load tracks, automatic loops, USB bus-powered, incl. cover and Virtual DJ DJC Edition for PC and Mac.

€ 79.- € 68.-

order code 237201

Behringer VMX300 Pro

DJ mixer

3 dual-input stereo channels with gain and auto-talkover and depth control, intelligent dual auto BPM counter, crossfader, PFL function. Dim. HWD: 8.8 x 24.1 x 33.2cm. Weight: 3.5kg.

€ 95.- € 82.-

order code 153735

Behringer B-Control

Deejay BDC2000

4-channel USB audio interface

24bit digital converter, incl. Behringer B-DJ software, 2 scratch pads, pitchbend and cue function integrated audio mixer with mic preamp, 3-band kill EQ per channel, talkover function, 2x high-end phono preamps, cue section with PFL mix/split function.

€ 88.- € 85.-

order code 181179

Pioneer CDJ-2000

Professional multi-format single CD player

Plays Audio CD, CD-R, CD-RW, USB, SD, DVD-R, DVD-RW, USB sources and SD cards, includes Rekordbox software, quantized beat lock, compatible with mp3, AAC, WAV, AIFF and Titanium Pacemaker data, 24bit/48kHz soundcard, HID and MIDI controllable from USB, frequency range: 4Hz - 20kHz. Dimensions: 32 x 40.6 x 10.7cm. Weight: 3.9kg.

€ 1777.- € 1537.-

order code 238585

Pioneer DJM 2000

4-channel DJ performance mixer

6 INST FX functions on each channel with potentiometer, 15cm multitouch colour display, linkable to CDJ-900/2000 and 2 rekordbox laptops pro DJ Link, beat effects, live sampler, internal USB audio MIDI interface, isolator EQ on each channel, talkover function, peak level meter on each channel, cross fader assign, weight: 8.5kg.

€ 2190.- € 1894.-

order code 249223

Behringer UB1202

12-channel mixer

2/2 bus, 4x stereo line ins, 4x mic ins with low cut, +48V, 1 post fader FX send, peak LEDs on all mono channels, 1x aux (post), 2-track I/O, control room out, external power supply.

€ 84.- € 55.-

order code 158998

Phonic AM 440

Mixer

4x mono mic/line channels with 3-band EQ and low cut, 48V phantom power, 4x stereo channels, 1x aux (pre-fader), 2-track I/O, RCA jack, ctrl room out, headphone out, includes power supply.

€ 66.- € 57.-

order code 196369

Phonic AM 442D

4x mono mic/line ch.

order code 196389

€ 149.- € 129.-

Alesis Multimix 4 USB

4-channel mixer with digital output

16bit, 44.1kHz signal on USB, 4x line level ins, 2x XLR ins with gain and switchable 48V phantom power, high impedance guitar input, 2-channel EQ on mic ins, multicolour LED metering, main and headphone outs with independent level controls, incl. power supply. Dimensions: 15.2 x 19.6 x 5cm. Weight: 0.6kg.

€ 85.- € 82.-

order code 235244

Behringer Xenyx X1832 USB

18-channel mixer

6 mic inputs with 48V phantom power and 75Hz lowcut, internal 24bit FX with 16 presets, built-in USB soundcard, 4-band master EQ, 4 stereo inputs, 3-band EQ with parametric mids, 3 aux, Peak LED, mute on each channel, 2-track I/O, XLR main out, internal power supply, weight: 4.6kg, incl. 19" rackkit, EnergyXT2.5 compact music production software for Windows XP/Vista (32bit), Mac OS X, Linux.

€ 229.- € 198.-

o. code 243142

Soundcraft EFX 8

8-channel mixing desk

8x mono inputs, 2x stereo inputs, inserts on all channels, 1x FX send, 1x aux send (pre/post), 48V phantom power, solo/mute switch, integrated Lexicon FX with 32 presets, peak LEDs on all channels, integrated power supply. Dimensions: 33 x 9.1 x 36.2cm. Weight: 4.6kg. Optional rackmount available.

€ 289.- € 250.-

order code 118879

Mackie Onyx 1620i

Mixer

8x mic/line inputs, 2x instrument inputs (DI), 4x stereo inputs, 8x inserts, 4-band EQ, 2x parametric, 4x aux pre/post switchable, phantom power switchable per channel, control room out, internal talkback microphone, FireWire option, ProTools.

€ 818.- € 708.-

order code 236559

Mackie Onyx 24.4

Live console

20x mono ins, 4-band EQ with full parametric mids and fixed lo/hi, 2x stereo ins, 4x subgroups, 3x outs, 48V phantom power per channel, 3045 pad, phase reverse and low cut, 6x aux sends in pair pre/post and stereo switchable, inserts per channel, 6x2 matrix, 4 mute scenes, LED per channel, talkback, phones out, main insert, 1x BNC lamp connection, internal power supply.

€ 868.- € 836.-

order code 193356

Mackie Onyx 1640i

Compact 16-channel mixer

16x mic/line ins, inserts and direct outs on each channel, 4-band EQ, 2 parametric EQs, 6 pre/post auxes (switchable), switchable phantom power per channel, 4 sub groups, control room out, internal talkback mic, ProTools M-powered compatible (officially licensed), integrated FireWire access point, incl. rackmount. Dimensions: 61.7 x 44.2 x 19.1cm. Weight: 13.5kg.

€ 1389.- € 1201.-

order code 236561

Presonus Studioline 24.4.2

Digital mixer with integr. audio interface

32x26 FireWire audio interface, 44.1/48kHz, 24 mic ins, 24 line ins, tape in (2x RCA), 2x FX return (stereo), analogue inserts, 10 aux mixers, 2 FX sends, 4 sub groups, class A preamps, dimensions WDH: 63.9 x 54.1 x 17.8cm, weight: 10.4kg.

€ 3299.- € 2854.-

order code 245038

Mackie DXB200

Refurbished Bundle

Digital open architecture mixing desk 72ch/96kHz (36ch/192kHz), 8 buses, 2 touch screens, 25 motorised faders, 4-band EQ, compressors and gates, VST plug-in compatible, 2 PCI slots, flexible I/O, 9 slots for optional I/O cards (not included in basic config), Mackie Control Universal mode for DAW control. Bundle incl. Xbus AES card, Xbus digital card and 2x Xbus line card. B-Stock with full warranty!

€ 3759.- € 3252.-

order code 251867

www.thomann.de

Telephone Hotline: 0203 5141643 (UK)

Fax: +49 9546 9223-24

The Thomann services

- 30-day money back guarantee
- free shipping to the UK and Ireland on orders above £159

Behringer BCF 2000 WH

DAW controller
8 motorized faders, 16 + 4 illuminated switches, footswitch connection, 32 user presets, MIDI I/O (usable as MIDI interface), LED display, generic USB MIDI supported (Win XP and Mac OS X). Finish: white.



€ 125.-
£ 108.-

order code 119851

Akai MPKmini

USB/MIDI controller keyboard
25 velocity-sensitive mini keys, 8 MPC-style pads (2 banks, 16 total), 8 assignable Q-link knobs, built-in arpeggiator (resolution, range and patterns, tap-tempo button), dedicated octave up/down and sustain buttons, program recall button to restore up to 4 separate global settings, USB powered, incl. software editor and sample player software.



€ 99.-
£ 86.-

a. code 254954

M-Audio Oxygen 49 (3rd Gen)

MIDI USB Keyboard
49 velocity sensitive full size keys, 8 controller knobs, 9 fully assignable sliders, assignable buttons including 6 transport buttons, Windows XP/Vista 32bit and Mac OS X.



order code 236606
€ 159.-
£ 138.-

Oxygen 61 (3rd Gen)
61 keys.
€ 199.-
£ 172.-
order code 236607

Novation XioSynth49

Synthesizer and controller keyboard
49 keys with Novation quality synthesizer, USB audio interface and the "Xpression" pad and pitch/mod joystick, ultra-low latency 2-channel I/O audio interface, X-Gator patch programmer, 60 sounds programmed by internationally acclaimed artists and producers, powered via USB bus-power, AA batteries (not included) or PSU. No drivers required for Win XP and Mac OS X (plug-and-play).



€ 238.-
£ 206.-
order code 196672

Moog Little Phatty Stage II Thomann Ed.

Analogue synthesizer with 37 keys
MIDI over USB, direct USB to computer connection allows the use of the Little Phatty editor, arpeggio and tap tempo function, 2 oscillators, 1 low-pass filter (classic Moog Ladder), 4-stage analogue Envelope generators, real analog control, 100 user presets, Thomann Edition (red back, red display, pitch wheel and mod-wheel, black sidecovers).



€ 1111.-
£ 961.-
order code 251804

M-Audio Fast Track USB

USB audio interface
24bit/48kHz, 1x analog input, 2x analog output, input jack or XLR, headphone output, direct monitoring, for Win and Mac OS X, incl. ProTools M-Powered Essential Software.



€ 89.-
£ 60.-

order code 246876

Tascam US-122MK2

24bit USB 2.0 audio MIDI interface
Supports 2 ins and outs, 2x XLR mic ins with 48V phantom power, enhanced high grade mic preamps, 2x analog line ins (1x switchable to Hi-Z), 24bit/96kHz, latency-free monitoring with switchable mono function, USB 2.0, USB bus powered, aluminium side panels, incl. Cubase LE4.



€ 139.-
£ 115.-
order code 235648

Presonus AudioBox USB

Compact 2x2 USB audio interface
24bit/48kHz, 2x mic/instrument inputs (48V phantom power), 2x balanced jack outputs, MIDI I/O, clip LED (on each channel), headphone output, includes USB cable and Steinberg Cubase LE 4.



€ 149.-
£ 128.-
order code 217037

ESI ESPI 010e

24bit/96kHz PCIe express audio interface
PCIe card with external 19" interface, 8x analog ins (2x with mic preamp and 2 Hi-Z instrument), -48V phantom power, up to 8x analog ins and outs, coaxial S/PDIF I/O, 2x headphone outs, 2x MIDI I/Os, support for DirectWire 3.0, ESDM driver: MME, DirectSound, ASIO 2.0 support. Windows 7/Vista/XP compatible, power supply optional, incl. Steinberg Cubase LE 4.



€ 155.-
£ 134.-
order code 230632

Focusrite Saffire 6 USB

USB audio interface
2 preamps with 48V phantom power, Hi-Z instrument input with -10dB pad, 24bit/48kHz, MIDI I/O, headphone output, 105dB noise (mic in): THD+N = 0.0025%, 2x combo ins for mic/line/instrument, 4x analogue outs, includes Focusrite plug-in suite, Xcite+ bundle and USB cable, for Mac OS X or Windows. Weight: 1kg.



€ 188.-
£ 145.-
order code 236371

M-Audio Fast Track Pro

USB audio interface
4x4 24bit/44.1kHz, stereo in up to 24bit/96kHz, USB powered, 2x mic/instrument preamps with switchable phantom power, 2x inserts, 2x balanced line outs, 4x additional RCA outs, S/PDIF coaxial I/O, S/PDIF out (AC-3/DTS surround sound compatible), MIDI I/O, compatible with both Mac and PC.



€ 179.-
£ 155.-
order code 184360

Apogee Duet Bundle

FireWire audio interface
24bit/96kHz, 2 channels, Firewire 400 I/O, breakout cable with 2 XLR mic ins, 2x 1/4" jack instrument ins, 2x 1/4" jack monitor outs, multi-segment LED display input and output levels, multi-function controller knob, headphone out, Maestro software for advanced control and low latency mixing, compatible with any Core Audio compliant audio application, compatible with Mac OS X Core Audio. Bundle incl. original Apogee carry case and 2GB USB stick.



€ 429.-
£ 368.-
a. code 209773

MOTU Ultralite MKIII Hybrid

FireWire and USB audio interface
24bit/192kHz, 2x mic/instrument ins, 6x bal. ins and 10x outs (1/4" TRS), 48V phantom power, S/PDIF I/O, headphone out, CueMix FX, internal DSP LCD display, suitable for use as a standalone mixer, compatible with Windows and Mac, supports WDM, ASIO and Core Audio, incl. AudioDesk software for Mac.



€ 489.-
£ 423.-
order code 239141

Focusrite Liquid Saffire 56

FireWire audio interface
24bit/192kHz with Liquid Presets, 28x I/O, 8x XLR mic ins, 2x ADAT I/O, coax S/PDIF I/O, 8x analog ins (4x balanced jack), 10x analog outs (4x balanced jack), WordClock, MIDI I/O, includes Focusrite VST/AU plug-ins. Dimensions: 35 x 9 x 23.5cm (19"/2U). Weight: 5kg.



€ 698.-
£ 604.-
order code 228525

RME Fireface UFX

USB/FireWire interface
Up to 192kHz, 30 I/O channels, 12 analog inputs, 4x mic/instrument preamp (48V phantom power), 12 analog outputs, AES/EBU I/O, 2x ADAT I/O, Wordclock I/O, 2x MIDI I/O, FireWire 400, USB 2.0, TotalMix FX Software, built-in monitor controller, SteadyClock, DIGICheck, stand-alone operation with setup recall, 19"/1U, for Win XP SP2/Vista/Win7 and Mac OS X 10.5.



€ 1959.-
£ 1695.-
order code 255180

Rode M3

Condenser microphone
Cardioid pattern, ideal for recording strings, choir and acoustic guitars, 40Hz-20kHz, 130dB max SPL, 21dBa background noise, 2000 impedance, 48V phantom power or 9V battery, status LED, high pass filter, includes windshield and stand mount. Dimensions: 225 x 33mm (length x diameter). Weight: 360g.



€ 89.-
£ 85.-
order code 114494

Shure SM57 Bundle

Bundle containing:
Shure SM57LC - dynamic mic for snare, toms or electric guitar, an allrounder with a good frequency response for clean instrumental reproduction, cardioid polar pattern. Includes clip, carrying bag, the sssnake SM108K mic cable (XLR female - XLR male, 10m, colour: Black).



€ 99.-
£ 86.-
order code 194570

Shure SM58 Bundle

Bundle containing:
Shure SM58 LC (dynamic vocal microphone, cardioid polar pattern, 50Hz-15kHz, includes clip and bag, the sssnake SM68K microphone cable (XLR female - XLR male, 6m, finish: black), Millennium MS-2005 boom mic stand. Finish: Black.



€ 111.-
£ 96.-
order code 169587

Behringer UL 2000 M

UHF wireless system with handheld mic
True diversity, 320 adjustable frequencies (798.850-805.800MHz), IRC compander, handheld transmitter with Panasonic condenser capsule, cardioid, works with 2x 9V battery for up to 12 hours (not included), mute switch and low battery indicator on transmitter, scan function, pilot tone, 3 presets with 8 channels, 1 user preset with 8 channels, lock function, internal power supply, dimensions: 9.5" x 1U.



€ 109.-
£ 94.-
order code 107376

Behringer UL 2000 B

UHF wireless system with headset
True diversity, 320 adjustable frequencies (798.850-805.800MHz), IRC compander, headset transmitter with Panasonic condenser capsule, cardioid, works with 1x 9V battery for up to 6 hours (not included), mute switch and low battery indicator on transmitter, scan function, pilot tone, 3 presets with 8 channels, 1 user preset with 8 channels, lock function, internal power supply, dimensions: 9.5" x 1U.



€ 109.-
£ 94.-
order code 139250

AKG Perception 220

Large diaphragm condenser mic
1" diaphragm, metal housing, cardioid polar pattern, 20Hz-20kHz, switchable 300Hz low-cut filter, switchable -20dB pad, 135/155dB max SPL, includes elastic holder and carrying case. Dimensions: 225 x 165mm (diameter x length). Weight: 525g.



€ 149.-
£ 129.-
order code 208310

Rode T-1000 Thomann Edition

Large diaphragm condenser microphone
Identical as Rode NT-1000, transformerless SMT circuitry, 1" HFZ capsule with gold-plated diaphragm, incorporating internal shock mounting, 134dB dynamic range, 140dBa SPL capabilities, frequency response 20Hz - 20kHz. Cardioid polar pattern, Thomann Edition in durable satin black finish including shockmount SM6, cable and bag.



€ 219.-
£ 186.-
order code 247421

Rode NT2-A Studio Solution Set

Prof. 1" large diaphragm microphone
Switchable between omni, figure of eight and cardioid patterns, variable high-pass filter - flat, 40Hz or 80Hz/PAD, 0dB, -5dB or -10dB HPF and PAD, frequency response: 20Hz - 20kHz, max SPL: 147dB, 48V phantom power required, weight: 860g. Bundle incl. deluxe shockmount SM6, 6m cable and tutorial DVD.



€ 289.-
£ 250.-
order code 256707

Shure SM 7 B

Studio microphone
Dynamic studio microphone with cardioid polar pattern, 50Hz-20kHz, bass rolloff switch, mid-boost switch, 150P, shielded against broadband interference, fixed stand adapter, XLR connector, includes windscreen.



€ 379.-
£ 328.-
order code 129929

Neumann TLM 102

Large diaphragm condenser microphone
Cardioid pattern, 20Hz-20kHz, 500 impedance, 128dB A equivalent noise level, 144dB max SPL, for THD 0.5%, includes SG2 stand mount swivel. Weight: 260g.



Finish: Nickel
a. code 237768
Finish: Black
a. code 237769
€ 569.-
£ 492.-

tc Helicon VoiceTone Correct

Vocal performer
Combines pitch correction with tone and dynamic shaping that puts a recorded gloss on live vocals, pitch correction, adjustable auto-smooth compression, multi-band auto-shape EQ, silencing smoothing de-ess algorithm, accurate input pitch and correction display, clean, studio quality mic pre-amp with phantom power, dimensions: WDH: 13 x 13.2 x 4.1cm, weight: 0.72kg.



€ 133.-
£ 115.-
order code 117111

Boss VE-20

Vocal Performer
Vocal FX, dynamic compressor/de-esser, enhancer, delay, reverb, 2x harmoniser and pitch correction, LCD display, mono looper (38 sec), 30 preset + 50 user sounds, requires Boss PSA-230 optional power supply (order code 102842, not included).



€ 225.-
£ 195.-
order code 235812

tc electronic Voice Live 2

Vocal multi FX pedal
Up to 8 voices or 4 doubled harmonies, reverb, tap delay, megaphone and distortion, compressor, de-esser and EQ, MIDI or mp3, LCD display, XLR, line in, aux in, headphone output, coax S/PDIF I/O, backup and audio streaming, incl. power supply. Dimensions: 35 x 7.6 x 21.6cm. Weight: 2.3kg.



€ 715.-
£ 618.-
order code 225557

SPL GoldMike 9844

2-channel valve preamp
Discrete Class A solid state, 48V phantom power, phase reverse, pad function, fair presence enhancement, very clear and warm sound. Dimensions: 19"/2U.



€ 433.-
£ 375.-
order code 123370

Universal Audio LA-610 MKII UAD-2 Duo Bundle

Classic tube recording channel
Based on the legendary Bill Putnam 610 tube mic pre and EQ, Authentic Teletronix LA-2A style 100% compressor, complete vintage channel strip, mic pre with gain and level controls, tube bypass, large metering and improved signal output. Bundle incl. Universal Audio UAD-2 Duo PCIe DSP Card.



a. code 252465
€ 1525.-
£ 1319.-

KRK RP5 Rokit G2

Active studio monitor
45W, 5" + 1" speakers, 53Hz-20kHz, magnetically shielded. Dimensions: 27.6 x 18.5 x 25cm. Weight: 8kg. Unit price!



€ 144.-
£ 125.-

order code 213024
KRK RP8 Rokit G2
8" + 1", 140W.
€ 295.-
£ 203.-
order code 213090

ESI nEar05

Active 5" studio monitors
Magnetically shielded, 33Hz-22kHz, bi-amped, 42W bass + 33W treble, balanced XLR & 1/4" jack inputs. Dimensions: 25 x 16.6 x 20cm. Pair price!



€ 175.-
£ 151.-
order code 160180

Yamaha HS50M Stativ-Set

Active 2-way studio monitor
70W bi-amped bass reflex system, 5" woofer, 3/4" tweeter, 55Hz-20kHz, XLR & TRS ins, adjustable input level, mid EQ, room control, high trim, switchable low cut, fully magnetically shielded. Bundle with 2x HS50M and 1 pair Millennium BS-500 adjustable nearfield monitor stands.



€ 338.-
£ 292.-
order code 244787

Adam A7X

2-way active bassreflex nearfield monitor
7" carbon/rohcac/glass woofer with 100W, X-A.R.T. tweeter with 35W, shelving filter tweeter: >5kHz - >6dB, shelving filter woofer: <300Hz - >6dB, frequency range: 42Hz - 50kHz, crossover frequency: 2.5kHz, SPL max / pair 1m: 114dB, gain: +14dB / -8dB, gain tweeter: >4dB, THD 90dB/1m > 100Hz: <0.5%, inputs XLR and RCA, input impedance: 30kΩ, dimensions: 20.1 x 33.7 x 28cm, weight: 9.3kg. Unit price.



€ 438.-
£ 380.-
a. code 245513

Yamaha HS80M stand bundle

Active 2-way studio monitor package
120W bi-amped bass reflex speaker, 8" woofer, 1" tweeter, 42Hz-20kHz, XLR & 1/4" input, mid EQ, room control, high trim, switchable low cut, magnetically shielded. Bundle includes 2x HS80M and 1 pair of Millennium BS-500 nearfield stands.



€ 538.-
£ 465.-
a. code 227555

ALL NEW FOR LOGIC PRO USERS

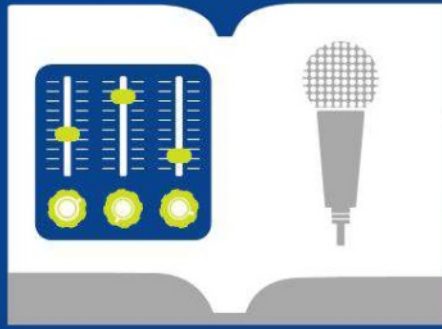


On sale 3 February, £8.99 with free DVD.
Available at WHSmith (UK), Borders and Barnes & Noble (USA) and
all good bookstores in Australia, Canada, Germany and Sweden.
Or order online at www.musictechmag.co.uk/mtm/focus

WHSmith

BARNES & NOBLE
BOOKSELLERS

BORDERS®



Education EXPLAINED

Enrolling on a music course could be your first step to a career in the industry, but with so many to choose from, which one is right for you? **Dave Gibson** is your guide.

These days music technology can be found everywhere, and access to the medium has never been better. The days of audio engineers scurrying around in white lab coats, operating room-sized synthesizers seem a distant memory of an almost impossibly ancient past. Things have certainly moved on! Technology that was once the sole preserve of scientists and mathematicians at academic institutions and research laboratories is now available to anyone who has access to a computer.

Without a doubt, today's technology has truly brought music-creation to the masses. However, the underlying theory and practical techniques remain as complex as ever. Across all skill levels, technology can aid the music-making process, but it is vital to remember that it is only an aid, not a replacement for technical understanding and musical talent. For this reason, you mustn't underestimate the importance of a good education if you are to progress.

With accessibility to music technology at an all-time high, students are flocking to educational establishments to learn more about the subject. As a result, courses are appearing all over the country. These courses come in all shapes and sizes, short to long and beginner to advanced. Each course also favours certain elements of study, including science-based and art-based courses, technical and creative courses, academic and vocational courses and so on. The number of different educational options can seem daunting, leaving you with many unanswered questions: 'What will I gain from this course?'; 'How do I distinguish between courses?'; 'What benefits does one course offer over another?' And, of course, what will be expected of me? In this feature we will explore the range of options available and determine the right course for you. →

→ Questions and answers

Your first consideration, in any case, should be: 'What would I like to gain from a course?' On the surface, this may seem a fairly simple question to answer. Most people approach a music technology course with the goal of developing their production abilities and/or learning more about specific topics, such as synthesis, mastering techniques, music business and so on. While these are all excellent reasons for wanting to join a course, you should try to see the bigger picture – what will be your next step after finishing the course? Do you aspire to a career in the music industry? Which specific career paths interest you? Will you go to university? How will you put your new skills to use?

Thinking this far ahead may seem like jumping the gun, but in reality, determining your goals at an early stage will enable you to distinguish between courses more easily, based on what you are trying to achieve.

MTM Interview SAE Institute London

What qualifications and/or experience do prospective students need?

Completion of a minimum of two A-Levels (CC or 160+ UCAS Tariff Points or equivalent). SAE Institute shall seek to admit all mature students over 21 years of age on receipt of suitable evidence who are considered to have a reasonable chance of success in the programme.

What can students expect to experience once on a course?

Students should expect an intensive experience in audio, where all aspects of production are explored and discussed inside and outside the classroom, where knowledge is gained through interaction and exposure to industry exponents.

What equipment do students get the chance to work with and how do you keep up to date with new technologies?

Graduates of our courses are able to operate a wide range of industry-standard equipment, including studio effects processors, analogue and digital consoles, HD cameras, lights as well as a wide variety of software.

Is there scope within the course to get hands-on placement experience?

Our students are encouraged to seek work placement opportunities that will allow them to engage with professional practice first-hand. We have numerous contacts within the industry and receive regular offers for internships which we forward to students.

What kind of help and career path do you provide to ensure students get to work in the industry?

We have an active Alumni Association through which students can get in touch with industry partners and where we post job offers on a regular basis.

What notable achievements have former students gone on to enjoy?

There are numerous examples of former SAE students who moved on to forge impressive careers, from chart-topping producers and engineers to film industry professionals.

Visit www.sae.edu/en-us/content/1638/Testimonials for a few success stories.

020 7923 9159

www.sae.edu

Education demands a lot of your time and can be expensive, so it's worth identifying exactly how your education will enable you to achieve your goals.

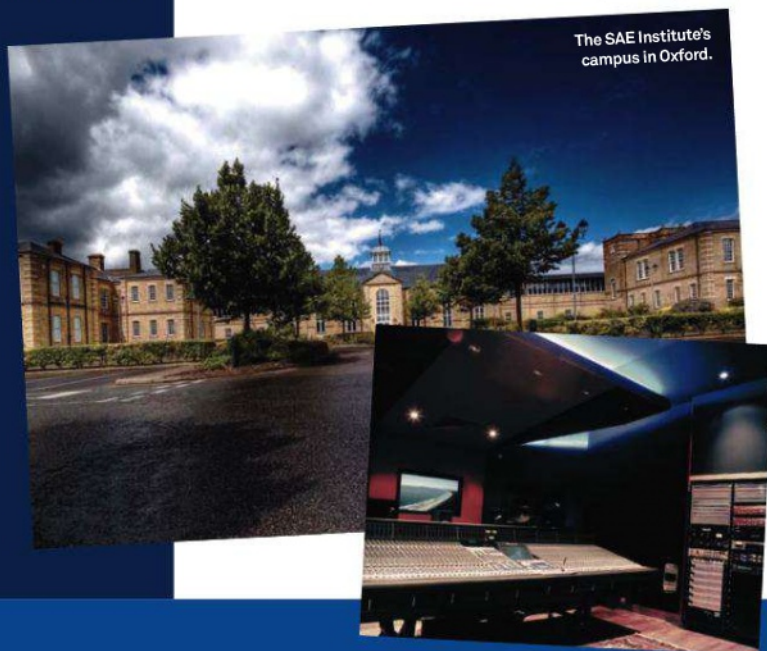
Once you have determined your goals you can then decide what experience you will need to gain throughout the course. While nearly all courses cover the basics over a variety of modules, you will find that the actual content varies from course to course considerably. For example, a student who aspires to work in a studio as a sound engineer would benefit

Determining your goals will enable you to distinguish between courses more easily

from a course that provides lots of opportunities to record and mix bands. Often, studio time is limited, so it is worth finding out exactly how much studio time will be available. Alternatively, a student who has an interest in writing music for film or television would benefit from interaction and collaborative projects with students studying media. Do media courses run at the same site? And are there opportunities to work collaboratively with the media students? These are questions that can be addressed when attending the initial interview before beginning the course. In nearly all cases, teachers from the course hold these interviews and will be more than willing to answer any questions you may have.

The first steps

Choosing your level of study will largely depend on your previous experience and the time and funds you have available to you. If you are in full-time employment or simply cannot commit to a full-time course (or you're a beginner looking for an introductory course), then you should have a look into the various part-time short courses that are available. Many of these courses are run at colleges and other educational establishments on weekday evenings and,



The SAE Institute's campus in Oxford.

in some cases, at weekends. These are the most accessible courses, often requiring no previous experience or specific qualifications to gain entry.

Part-time short courses provide an overview of music technology practice, offering a taste of the different areas of study without the academic demands of a full-time course. The courses are usually highly vocational and offer the chance to progress at your own pace, so there is no fear of being left behind should you find certain subjects more difficult than others. While you cannot expect the depth of study of a full-time course, you will gain a recognised qualification on completion of the course.

There are also full-time introductory courses available, the most common being the BTEC First Diploma (or Level 2). These courses usually last one academic year and are the equivalent of GCSE grades A*-C. Unlike Level 3 courses, Level 2 courses carry minimal entry requirements, which makes them much more accessible. Indeed, Level 2 courses often act as a stepping stone to Level 3. Similar to the part-time short courses, students can expect a highly vocational learning experience with lots of time for creative work and experimentation. Level 2 moves at a steady pace, allowing you

to find your feet and learn what works for you. While there is a slightly increased academic expectation, the curriculum is focused on practical assignments and learning by doing.

Further your education

The next step up is Level 3 – most courses studied at college fall in to this category. At this level things start to become a little more complicated as there are many different types of courses available. Entry requirements also become more stringent. Typically, Level 3 courses will require four GCSEs (grades A*-C)

Students in rehearsal at Point Blank, London. The college caters for students of all abilities.



MTM Interview Point Blank London

What qualifications and/or experience do prospective students need to enrol?

None, actually! Whether students enrol at our college in Hoxton or on an online course we focus on practical and hands-on experience. This means we can teach anyone from complete beginners to people who are already successful, like top producer Claude VonStroke and Fabric resident Tayo – unless you are enrolling on our HNC degree level course, in which case you will need some A-Levels or equivalents.

What can students expect to experience once on a course?

Every tutor is an experienced music industry pro, so students get first-hand training from people who understand what it takes to succeed in the business. Online students receive a personalised e-learning experience that includes weekly online masterclasses, course notes, video tutorials and DVR, our unique system of 1-2-1 feedback on your music.

What equipment do students get the chance to work with and how do you keep up to date with new technologies?

Every classroom provides students with their own Apple Mac equipped with the latest software including Logic Studio, Ableton Live, Pro Tools LE, Komplete & UAD cards. Advanced courses also integrate classic hardware equipment such as the ORAM BEQ 24, TLA VTC mixing desks, UREI 1176 and Summit compressors. In addition, students can also book two dedicated studios to run their own sessions.

Is there scope within the course to get hands-on placement experience?

We have unique links into the music industry so students can gain real industry experience while they study. We are often approached by labels and

studios who advertise job opportunities to our students and have excellent links with the O2 Academy and the Barfly, where students on our Live Sound Engineering Course have gone on to get paid work engineering gigs.

What kind of help and career path do you provide to ensure students get to work in the industry?

We sign the best student tracks to our own publishing company, Point Blank Music, with a distribution network that includes iTunes, Amazon, Junodownload and Beatport, while our partner labels, Island, Universal, Anjunabeats, Freerange, Cr2, and Plastic City also hear the best student tracks. Plus, artists such as Pete Tong, Paul Epworth and Basement Jaxx visit the studios for Q&A sessions with the students.

What notable achievements have former students gone on to enjoy?

Nicole Moudaber was championed by Carl Cox as 'the most underrated DJ of 2009'. Gareth Wyn has released official remixes of Beyonce and Leona Lewis as well as securing a residency at Space Ibiza. Lucy 'Monki' Monkman now has a residency at Annie Mac Presents and a weekly slot on Rinse FM. Ben Scarr went on to become A&R Manager at Island Records signing the likes of Tinchy Stryder. We're proud that the likes of Claude VonStroke, Tayo and Detboi chose to study with us too, but we can't claim too much credit for their success as they were already killing it!



Artist producer and DJ Mark Ronson (left) with Point Blank CEO Rob Cowan.

For more information about Point Blank courses in London visit

www.pointblanklondon.com and online

www.pointblankonline.net

020 7729 4884

→ and, in most cases, demonstrable experience in music/music technology. However, as we will discuss later, formal qualifications are not always necessary.

On the Level

The traditional route to university is via the study of A-Levels. There are two components to any A-Level: the AS-Level studied in year one and the A2 in year two. You can study the AS-Level as either a free-standing qualification or it can be the first half of the full A-Level.

If choosing this route, music technology will usually be studied alongside other courses – this is a good way to keep your options open throughout your further education. A-Level curriculum is very much focused on academic achievement, with objective assessment and examination playing a key role in the design of the coursework. So, for example, rather than being asked to compose a track in a certain style, you may be asked to re-create a track as accurately as possible. Theory also tends to play a greater role and, as a result, experience or qualifications are often a requirement on entry.

More info

- SSR
www.s-s-r.com
0161 276 2100
0208 482 7076
- Garnish School of Sound
www.garnishschool.com
0207 682 1082
- Access to Music
www.accesstomusic.co.uk
0800 281842
- The Recording Workshop
www.recordingworkshopuk.com
0800 980 7454
- Student superstore.com
www.studentsuperstore.com

It is often said that A-Level courses are a better preparation for university due to their academic specification and design. However, this is not to say that there are no opportunities for creative development. While the BTEC courses tend to favour the vocational, practical work also plays a substantial role in the A-Level curriculum. So, in summary, if you find that you excel in the academic approach to study, you have the relevant qualifications and you intend on progressing to university, A-Level study could be appropriate for you. The other type of course you are likely to encounter at Level 3 is the BTEC Level 3 Extended Diploma. This is a full-time course studied over two years, which is the equivalent to three A-Levels.

The vocational route

By contrast to A-Level study, the BTEC Extended Diploma is a vocational course, which means that the curriculum is mostly based around practical work or 'learning by doing'. Much of the learning and coursework will involve the creative application of new techniques that you have been studying. For example, you may study certain synthesis techniques in

MTM Interview Academy of Contemporary Music, Guildford

What qualifications and/or experience do prospective students need to enrol?

At ACM we run a range of courses covering all abilities, ranging from complete beginners on part-time courses (aged ten and upwards) to a full BA Hons Degree programme (run over two years) in either standard Music Production or Creative Sound Design for New Media. For full-time education our courses start at Diploma level (one year) for students aged 16 and over, where we expect them to have a basic understanding of using production software. At Higher Diploma (one year) students would have to show a higher level of ability and knowledge. At Degree level students have to show an advanced knowledge of production techniques as well as having two A-level qualifications at C-grade or higher.

What can students expect to experience once on a course?

ACM is all about music industry education. Everything you learn on the course is relevant in the current music industry as all the tutors are current music industry professionals. The course content is updated every term so we are never out of date.

What equipment do students get the chance to work with and how do you keep up to date with new technologies?

The ACM campus is spread over three buildings in Guildford and contains three large recording studios with live rooms, four smaller pre-production studios, plus two music IT suites. All the studios and IT suites are based around Apple Macs running the latest versions of Pro Tools, Logic,

Ableton Live, Reason, ReCycle etc. Plus we have multimedia software such as Final Cut and Photoshop available for the students on the Creative Sound Design degree course.

Is there scope to get hands-on placement experience?

Absolutely. ACM's industry contacts are constantly coming to us looking for keen producers, sound engineers, sound designers, programmers and tea-makers.

What kind of help and career path do you provide to ensure students get to work in the industry?

The BDC (Business and Artist Development Centre) at ACM are tasked with making music industry connections and giving full-time students access to the opportunities available. The music and sound industries now see ACM as a valuable resource in finding the best new talent all in one place. All of our students are given opportunities to attend networking events where they can meet industry professionals face-to-face.

What notable achievements have former students gone on to enjoy?

Past Music Production and Creative Sound Design students have gone on to work for Strongroom Studios, Red Light Mastering, Metropolis Studios, Sarm Studios, Mayfair Studios, Warner, Electronic Arts, Sky TV and more. Plus we have many students who have gone on to chart success as writers and producers for artists such as The Saturdays, Pink, Jamiroquai, Last Japan, D-Code & DeXterous, and Subscape among many others!

01483 500800
www.acm.ac.uk



the morning then work these techniques into a full track in the afternoon. This kind of activity-based approach to learning forms a large part of the curriculum.

However, it is important to note that theoretical and academic studies also play a role in the BTEC Extended Diploma curriculum, just as practical work plays a role in the A-Level curriculum. The upshot of this is that the wide range of skills that you will develop will broaden your higher education opportunities as well as your job prospects. To summarise the BTEC Extended Diploma, if you prefer a highly practical approach to study, you have the qualifications and you may want to progress to university or go in to employment, then the BTEC Extended Diploma may be the course for you.

But what if you do not have the formal academic qualifications to get onto a Level 3 course? Well, all is not lost, as there are some providers that favour experience and enthusiasm over academic achievement. For example, Access To Music provides Level 3 courses that do not specify formal academic qualifications to gain entry, instead focusing

■ If you find that you excel in the **academic approach** to study, A-Level study could be **appropriate for you** ■

on musical talent, experience and technical ability. These courses tend to be very similar to the BTEC Extended Diploma, offering a practical and creative approach to study. Best of all, these courses will also offer you a pathway to higher education.

Aiming higher

Higher education is the collective name for the range of academic degrees and professional certificates offered by academies, universities and colleges. Typically, the music technology courses found at this level are the HNC, HND and Bachelor's degree.

To enrol on a higher education course you will need qualifications. Your eligibility for a particular course will depend on the qualifications you have gained previously. The →

MTM Interview **Alchemea, London**

What qualifications and/or experience do prospective students need?

Ideally candidates must have achieved a grade C or above in maths and a science at GCSE level or its international equivalent. Exceptions may be made for candidates with suitable practical or work experience and/or exceptional aptitude. Students coming from outside the EU will require a recognised English Language qualification.

What can students expect to experience once on a course?

We feel that keeping class sizes small and monitoring feedback is key to providing a high standard of education. Students taking a full-time programme at Alchemea are guaranteed a massive amount of individual hands-on practical time in our state-of-the-art studios. We stress, however, that our facilities are not gear showrooms or for commercial use, they are real, working studio environments solely for student use.

What equipment do students get the chance to work with and how do you keep up to date with new technologies?

Students have the opportunity to work with industry-standard equipment in a 'real-world' studio environment. We have SSL, Euphonix and Soundcraft analogue desks as well as a state-of-the-art synth programming room and a Avid ICON D-Control 5.1 Cinema. We are one of the world-leading Pro Tools training schools and an Apple Authorised Training Centre, so we have a commitment to make sure we are teaching the latest versions of industry-standard audio software.

Is there scope within the course to get hands-on placement experience?

Yes. During their course our Live Sound students are given the opportunity to work on gigs in our own venue in Brixton. We also have good relations with other local venues and clubs, where students will gain work experience. This hands-on experience is key to building a student's confidence and also helps with networking. Our Studio Sound Diploma is not set up to integrate work placements. We have all the real-world equipment at the college and feel it is more productive for our students to intensively work on their projects and bring in industry active professionals to tutor on their course.

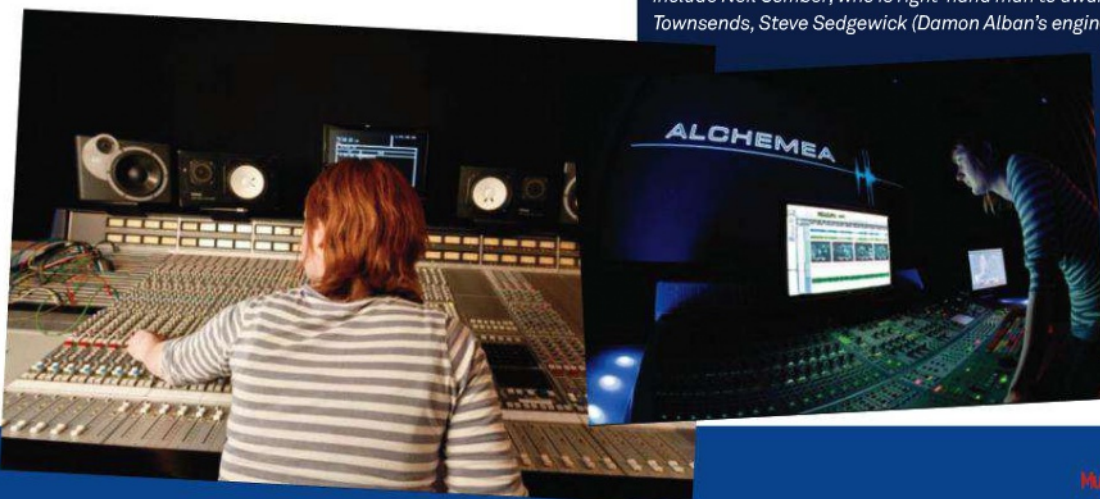
What kind of help and career path do you provide to ensure students get to work in the industry?

One of our main responsibilities is to manage students expectations by being realistic about opportunities in the industry. The reason we look at differing areas of audio is to give our graduates a wide skill base which will increase their opportunities in the job market. We also encourage and support our students to become Certified Pro Tools & Logic users.

What achievements have former students gone on to enjoy?

We have graduates at work in many of the music recording studios and post-production houses. Many have gone on to teach, work in TV sound, corporate AV or have successful careers as artists. Notable success stories include Neil Comber, who is right-hand man to award-winning producer Cenzo Townsends, Steve Sedgewick (Damon Alban's engineer), Richard Cooper (head engineer at award-winning British Grove Studios) and Mark Appleby, who is a leading ADR Mixer at Goldcrest Post. There are many, many others so please visit our hall of fame to find out more.

020 7359 3986
www.alchemea.com



→ specific entry requirements for any HE (Higher Education) course are usually specified in terms of UCAS points.

UCAS is an acronym for University and Colleges Admissions Service. Most applications made to universities and other HE institutions are made through UCAS. Completing an FE (Further Education) course such as a BTEC Extended Diploma or an A-Level will award you with a number of UCAS points. The actual number of points you gain will depend on the type of course you are studying and the grades you achieve. Tallying up your UCAS points can become confusing, but, generally, completing three A-Levels or a BTEC Extended Diploma with high grades will entitle you entry to most Higher Education courses (providing that at least one of your qualifications is related to the course you are applying for).

The HNC (Higher National Certificate) and HND (Higher National Diploma) are BTEC qualifications, and as such they share many of the qualities of the BTEC qualifications already discussed. These courses retain



Students training at the Academy of Contemporary Music.

the vocational approach of BTEC First and Extended Diplomas, providing practical, activity-based learning while gradually advancing towards the greater academic demands of a Bachelor's degree. There are many parallels between these programmes and the Bachelor's degree; the HND is considered equivalent to the first year of a Bachelor's degree course (the HNC roughly equivalent to half of the first year). For many, the HNC and HND act as an intermediary course between Level 3 and Bachelor's degree programmes as they do not have as stringent entry requirements as a Bachelor's degree.

In terms of Bachelor's degree programmes, there are two main routes for undergraduate study in music technology: Bachelor of Arts (BA) and Bachelor of Science (BSc). While all undergraduate Music Technology courses differ considerably, the type of award indicates the approach to study that will be taken. BA programmes approach study with an artistic outlook, focusing on innovative composition techniques, covering topics such as sonic art, sound design and performance technology. BSc programmes take a scientific approach, focusing on developing technical knowledge and understanding in how we perceive sound, covering topics such as electronics, acoustics and audio programming.

Regardless of the type of programme you study, a Bachelor's degree will explore the subject at a much deeper level, technically and/or creatively. Theoretical and critical enquiry also play a major role in degree programmes, driving the student to develop higher-level thinking. In addition to more traditional topics such as composition, most degree courses now offer modules in subjects such as music for TV/film. As a result you will be much better equipped to work in a range of careers.

Choosing a course

Once you understand the different options on offer, you should first determine which courses are available to you, based on your previous experience and the time and funds you have available. When selecting a course, consider your goals and identify what experience you will need to gain. It is vital that you understand what you want to achieve and whether a course is able to facilitate your progression. And if something is not clear from the course notes, ask questions! Doing this will ensure that you are able to gain the most from your education and that you are not spending too much time on subjects that, while interesting, are of little use to your future progression. **MTM**

MTM Quick Guide Online courses

Distance learning is an area of music education that has seen rapid growth in recent years. The course is delivered online and each student can participate in their own time, which makes it a particularly attractive prospect for those who are not able to commit to a traditional course due to work or other commitments. The courses generally consist of streaming or downloadable video/audio content and, in some cases, online lesson material, discussion groups, assignments and contact with a tutor.

There are now many online courses and each course delivers the content in a different way. Some courses are similar to 'traditional' courses, covering a range of topics and setting assignments with specific deadlines, while others are designed as a straightforward tutorial, focusing on one specific topic. For this reason it is worth researching what courses are available and considering what style of learning would work best for you. With this in mind, let's take a look at a few popular courses and discuss the specifics of each.

First up is Berklee College of Music, a leader in music education that offers 130 online courses, which can be studied as 12-week individual courses or multi-course certificate programmes. Studying with Berklee offers a highly interactive experience; each course consists of audio and video presentations, course activities and quizzes, discussion boards, assignments, online chats and feedback on student work. The Berklee style of distance learning has many similarities with traditional courses, so while the work can take place at any time, there is still a requirement that you keep up with coursework and assignments (www.berkleeemusic.com).

If this style of distance learning sounds right for you, you may also want to look at www.live-courses.com and www.quantizecourses.com

If you are looking for a course that places less requirements on your time, you may want to check out the courses

provided by Sonic Academy. Got to www.sonicacademy.com and you will find video tutorials covering topics such as sequencing and synthesis as well as specific 'How To Make' courses that describe production techniques relating to specific genres. If the video tutorial route appeals to you, also have a look at www.audiotechknowledge.com

Berklee Music runs a series of online courses that may better suit those with limited time.



Industry Products. Education Prices.



for pricing visit:

www.academia-music.co.uk or call 08458 726 928

academia

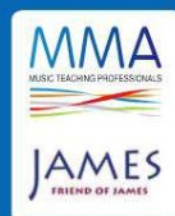
IT solutions for the next generation

Proof of educational status is required.

musictech@academia.co.uk | 08458 726 928

 **student**
superstore.com

Students must present a valid student ID.



propellerhead



Ableton Live 8 Workshop



Drum sounds and devices

Understanding Drum Racks is a must for all Live users, but there are certain elements that get better results, faster. **Liam O'Mullane** shares some tricks.

Before getting too technical with Drum Racks, it's a good idea to explore the various kit and hit presets from the Live library (and any you may have installed from third-party Live Packs). These can be a great starting point for drum work. You can view these by expanding the Drum Rack folder in the Live Device Browser. ¹

Drum Rack presets themselves can be quite complex. They often offer multiple layers of samples for different velocities as well as carefully selected Macro controls for easy tweaking of the sound of the kit or hit. Load any preset from the Kit folder and then click all of the buttons on the left-hand side to expand each Drum Rack section. It's easiest to understand which button opens each section by clicking them on and off a few times to visualise and remember them. ²

The first is underneath the Device Activator button on the top left-hand side, which reveals the eight Macro dials. Below this is the Chain List button, which shows horizontal Drum Rack audio channels for each drum pad. The next button shows you the actual Devices for



PRO TIP

Fast drum layering can be achieved by highlighting numerous audio files in the Browser to then drag into the Drum Pads Chain List (not the main Rack). This may create too many competing layers, which will overload the output. So expand the Drum Rack mixer in Session View, highlight all channels, pull their volume fully down and then blend to your own taste.

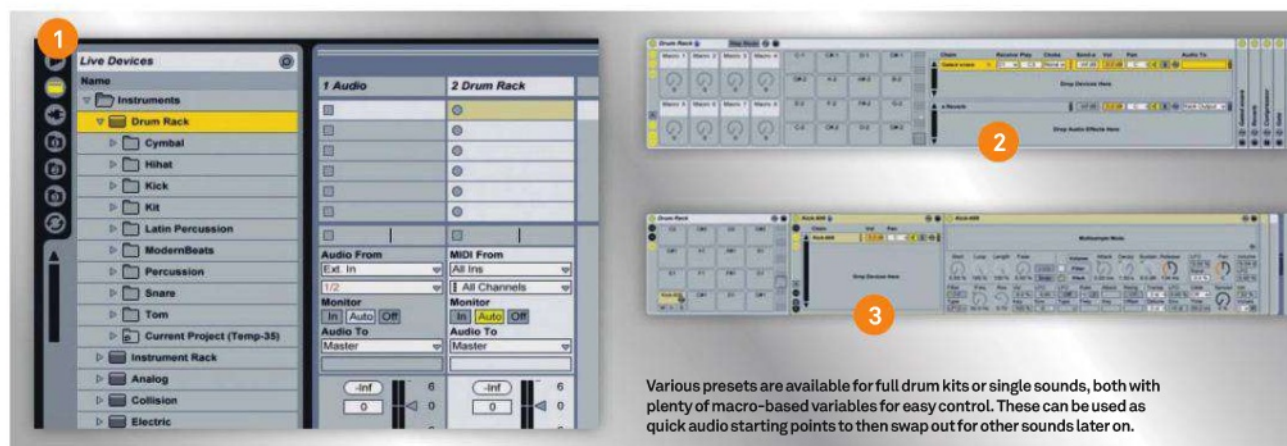
each chain. When the Chain List is open, four more buttons appear below. The A button works with Devices view, auto-updating to the last drum pad triggered.

Click on the S symbol and you will be able to see individual sends on the Chain view, while the R symbol opens a new return view below this. These returns are within the Drum Rack itself and are combined with the original drum sound at its output, which can then be processed together as a whole. This is useful for glueing a drum sound together with the effects using compression. Up to six Drum Rack Return channels can be created and you can send any chain element to them – for instance, adding reverb to just the snare drum.

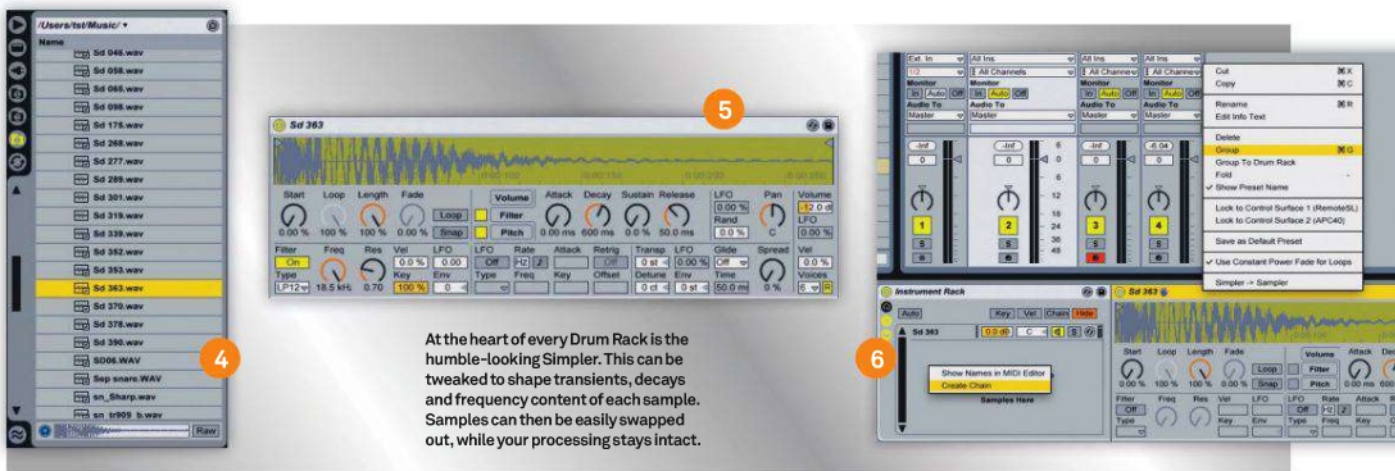
Should you wish to send a single drum element from a Rack to one of the main mixer returns, you can create a blank Return Chain within the Rack. Right-click (PC)/[Ctrl]-click (Mac) in the blank area of the Rack's return section, then chose Create Return Chain from the popup menu. Now select the name of the main return channel you wish to use from the Audio To menu (set to Rack Output by default). This send now leaves the drum Rack and goes straight to main return, while the dry drum pad sound leaves as normal through the Rack's output. A good reason for employing this setup is to use a single reverb unit, ensuring that your whole mix has a unified ambience.

Finally, the IO button shows MIDI note in and out options and its most useful tools, which are the 16 choke groups. These are typically used for making closed and open hi-hat samples override each other when the other plays, like a real hi-hat does. They are also excellent tools for avoiding overlap between elements such as bass drums and snares in any

Up to six **Drum Rack return** channels can be created and you can send **any element** to them



Various presets are available for full drum kits or single sounds, both with plenty of macro-based variables for easy control. These can be used as quick audio starting points to then swap out for other sounds later on.



At the heart of every Drum Rack is the humble-looking Simplifier. This can be tweaked to shape transients, decays and frequency content of each sample. Samples can then be easily swapped out, while your processing stays intact.

/// The **release stage** on the volume ADSR usually needs increasing so each sound has **a natural decay** ///

non-four-to-the-floor-based genre. By setting sounds to the same group, any tails will be muted when programming fills or builds, which means you reduce audio clutter and any slight increases in volume.

Swap shop

The Hot-Swap button appears in various different places within a Drum Rack. It looks like a recycling sign, with two arrows rotating in one direction. 3

Reading from left to right, the first Hot-Swap button is on the drum pad itself; this can load single sound presets or raw audio files while creating a default Simplifier device to play it. The next is on the Drum Rack title bar; this replaces the entire Rack with other presets, so it's useful only when starting drum work and searching for a kit to get started with. You can always use the other available Hot-Swaps to swap out sounds after you've programmed a beat later on.

If you've loaded a preset kit or sound, the Simplifier device may be surrounded by an Instrument Rack for its own macro controls. Its Hot-Swap (on kick-606) only lets you change for more presets, not audio files. If you are working on drum layers (which involves numerous chains on one pad), you can Hot-Swap one layer at a time using the Hot-Swap on each chain to the right of the solo button. The final two are on the Simplifier itself, which is the default instrument holding the audio file. Using the Simplifier's title bar option will leave any MIDI or audio effects in the current chain intact but change the Simplifier, whereas the Hot-Swap button on the bottom-right of the waveform display changes only the sample and leaves all settings such as filter, pitch and ADSR controls as they are. This is handy if you want to try different sample sources while keeping any sound-shaping you have already created.

When using sample-based hot-swapping from the drum pad or the waveform display, be sure to disengage auto-audition by clicking the small headphone symbol at the bottom of the file browser. If you don't do this,

you'll hear the triggered MIDI parts and another trigger each time you click on or move through your library, which you won't want. 4

Simpler sounds

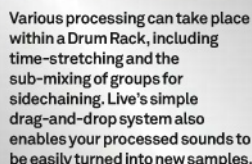
Whether you load in presets to start with or work from a blank canvas by loading in raw audio, the best control can be done at source and this process, by default, starts with a Simplifier. The purest way to start is when audio has been dragged to a pad or a chain. This way the Simplifier will be initialised for you to then shape the sound as you prefer.

The release stage on the volume ADSR usually needs increasing so each sound has a natural decay. But the R symbol in the lower right has a choke-like behaviour and prevents overlaps on fast repeats of the sound. Before thinking of compression, lower the sustain level and shape the initial transient with the Attack and Decay stages, then raise the Sustain as appropriate. →

PRO TIP

A fast way to interact with any potential new audio file is by manually using the audition option in the File Browser. Set the Quantization menu to None, then switch off auto-audition by clicking the headphone symbol below the browser. Now you can tap out rhythms with the right arrow key and preview any potential new sounds on the spot.





(N

1

WANT MORE?

Music Tech Focus: Ableton Live 8 is now available in stores and online. Find out more at www.musictechmag.co.uk/mtmf/focus

MusicTech Focus  **FREE REVIEW**

Ableton Live 8

The in-depth guide for the creative musician

67 **NEW** **ABLETON LIVE 8** **TIPS**

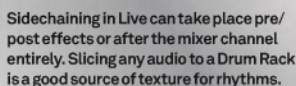
132 PAGES OF PURE LIVE!

FEATURING:

- A brand new guide to the new 64-bit version of Ableton Live
- A brand new guide to the new 64-bit version of Ableton Live
- An interview with Ableton Live 8's creator, Allen Heber
- An interview with Ableton Live 8's creator, Allen Heber
- An interview with Ableton Live 8's creator, Allen Heber

© 2008 Ableton Inc. All rights reserved. Ableton Live 8 is a registered trademark of Ableton Inc. in the USA and other countries.

Written and compiled by David B. Thompson, a MusicTech Focus expert





New for September 2011
→ Radio Broadcasting
Higher Diploma

"ACM brings technology
and musicians together
in a unique way"

Adrian Hall
- Producer/Engineer/Mixer

RELEASE
YOUR
PRODUCTION
POTENTIAL....

...with a music
production
qualification

- State-of-the-art production facilities.
- World class production faculty.
- Intensive full and part time programmes.

FULL AND PART TIME COURSES:

GUITAR, BASS, DRUM, VOCAL, KEYBOARD, MUSIC PRODUCTION,
CREATIVE SOUND DESIGN FOR NEW MEDIA, MUSIC BUSINESS,
TOUR PRODUCTION AND MANAGEMENT.

ACM

THE ACADEMY
OF CONTEMPORARY
MUSIC

WORLD LEADERS
IN MUSIC INDUSTRY
EDUCATION

enquiries@acm.ac.uk | www.acm.ac.uk | 01483 500 800



MTM Sound Advice

Our team of **MTM experts** await your questions! Whether it's setting up your studio, buying new kit or improving your skills, you'll find the answers here...



HOLLIN JONES

Hollin Jones is a hip hop producer and writer, as well as a Mac specialist and an occasional university lecturer.



MARK COUSINS

Mark Cousins is a composer for BMG Zomba. His work has been used on BBC, ITV, Channel 4 and Five.



MO VOLANS

Mo Volans is a freelance producer and remixer. He has written original material and remixes for film and television.



HUW PRICE

Huw Price is a studio engineer and producer with specialist knowledge in all areas of music technology.

MIDI PAD

I recently bought an iPad and I must say it's pretty darn cool. I've been enjoying playing with some of the music apps on it, everything from synths and mini sequencers to a four-track recording program. What I'm wondering is how well my iPad will integrate into the rest of my studio? I'd love to be able to trigger some of my hardware synths with it but at the moment the only way I can find to do this is to export a MIDI file, transfer it to my computer and then load it into Logic. Is there a way of using the iPad to directly control external MIDI devices?

Kay Smith *London*

MTM Providing you have the latest software update, then indeed there is. With virtually no fanfare, iOS 4.2 introduced a core MIDI framework similar to that used in the full Mac OSX. This new capability allows you to use MIDI in two ways on your iPad, iPhone or iPod Touch.

Firstly, you can send MIDI wirelessly to your Mac or other Apple device, for triggering soft synths or possibly, with the correct routing, external MIDI gear. Secondly, using the USB camera connection kit you can now send MIDI down a cable straight into an interface or USB-equipped synth. The one caveat here is that the iPad's USB port doesn't carry much power, so you may need to power any external devices separately. But using

An increasing number of devices are appearing that enable iOS devices to access conventional MIDI kit.



GOT A QUESTION?

Send an email to our team at editorial@anthem-publishing.com with Q&A in the subject line or write to: Music Tech Studio Answers, Suite 6, Piccadilly House, London Road, Bath BA1 6PL. Please include your name, address and a contact number, even if emailing your question.

From MTM StudioNet

MAKING CONTACT

After reading the feature on 'found sounds' I was inspired to go out and record some of my own stuff. The results are pretty good, but I find that the mic I'm using tends to pick up a kind of rustling sound when I hold it. To be honest, it's not really a specialised location mic, it's an old studio one I had lying around. How can I get rid of the interference?

Simon

MTM Studio mics aren't really designed to be held during recording. Even an SM58 might pick up the movement of your hand on the body and transfer it to the recording, so you need to separate yourself from the mic. This usually means mounting it on some sort of stand, perhaps a gun attachment or even on a boom of some sort. As long as you're not physically touching the mic you shouldn't get any interference. Another factor is wind, of course – use a wind shield to prevent gusts of air from distorting the recording. If your budget stretches to it, though, invest in a proper field recording mic – they are much better suited to applications like this.

Hollin Jones
www.mtmstudio.net

these methods you could hook up your iPad to a computer or a synth and then either play them live, or trigger pre-recorded MIDI sequences. The technology is still in its infancy, relatively speaking, and so what you can do might depend to an extent on how the app you are using has been written. As things progress, however, it's likely that we'll see more and more of this kind of thing.

There are already some interesting products beginning to emerge that tap into this potential. The iConnectMIDI device (www.icconnectmidi.com) takes data from your handheld and sends it to conventional MIDI ports – for hardware – and USB ports for computers or newer synths. The MIDI Mobilizer by Line6 is another nifty interface that plugs into your iOS device and enables you to record MIDI into it, hooking up to MIDI hardware through DIN plugs to play back the patterns. There is some excitement

surrounding Apple's next version of the iPad, which looks likely to feature faster processing as well as some kind of card-based storage, so the future looks bright for anyone making music on the move.

Hollin Jones

DRUM MIC'ING

I am a bit new to recording drums but am lucky in that I have access to some decent mics. However I am not sure how many to use to record an indie rock drummer that is coming to do a session in a month's time. Is it really necessary to mic up every single drum, or can you get away with using overheads to pick up all the cymbals, the hi-hats, etc? I think he is a loud player, so this may make a difference. Is it worth using room mics to add some space to the sound, or is that just overkill?

I know a lot of people say that you should just try different things and see what works, but we will be on a really short timescale so won't have time to mess about too much, and I'd like to get it right first time if I can. As far as I know it will be kick, hi-hat, snare, two toms, one ride and one crash cymbal. I'm hoping you can suggest a couple of example setups that will offer a good sound without using more tracks than I need to.

David Cummings *Berkshire*

MTM In my experience, people who use the phrase "just try different things and see what works" often do so in the hope that they'll appear to be wise, knowledgeable and experienced when in fact they just haven't got a useful answer. A degree of experimentation when you're recording is a positive thing because it's the best way to find out what works for you, but an over-reliance on random experimentation at the expense of the tried and tested is a guaranteed way to waste money, time and the goodwill of musicians. So if you're new to recording drums I'd suggest covering the basics with techniques that invariably work, then throwing up some wacky mics as well to see if anything cool occurs.

The simplest and easiest way to record drums is the 'Glyn Johns' method – it's virtually foolproof. There are various interpretations of this technique but try starting with one microphone near a (right-handed) drummer's right shoulder, firing across the floor tom towards the

snare. Then add a second microphone firing towards the snare through the gap between the hats and the first rack tom. A couple of condenser or ribbon mics are your best bet (and don't get too hung up about matched pairs). However, the preamp gains should be matched so the snare is the same volume on both channels.

Pan both mics dead centre, slowly pan them left and right until the snare just starts to lose solidity, then toe them back in slightly. Alternatively, try putting the second microphone directly above the snare and always ensure that the distance between the overhead/kit mics and the snare is identical. You can use a spare cable to measure this quickly.

Once your Glyn Johns pair is set up, you'll need a kick drum microphone too, and I'd always recommend putting a mic on the snare – even if you don't end up using it. Check the phase of the snare mic because it will usually need to flip to sound its best when it's mixed in with the kit mics. With just these three or four microphones you can get a fantastically realistic and beefy drum sound.

Micing up the toms and the hats is always advisable, assuming you have enough microphones and preamps. Just think of it as insurance! Also remember that just because you've recorded something doesn't mean you're obliged to use it in the mix. The Glyn Johns method captures a more balanced sound than conventional coincident or spaced overheads, where the cymbals tend to dominate the toms and there's very little kick drum.

Following the advice above will definitely cover you sufficiently to indulge in a bit of experimentation. Room ambience can really bring a drum sound to life and it's particularly desirable for rock and indie styles. As a rule of thumb you should walk around the room and find out →

MTM Hot Topic Mash it up

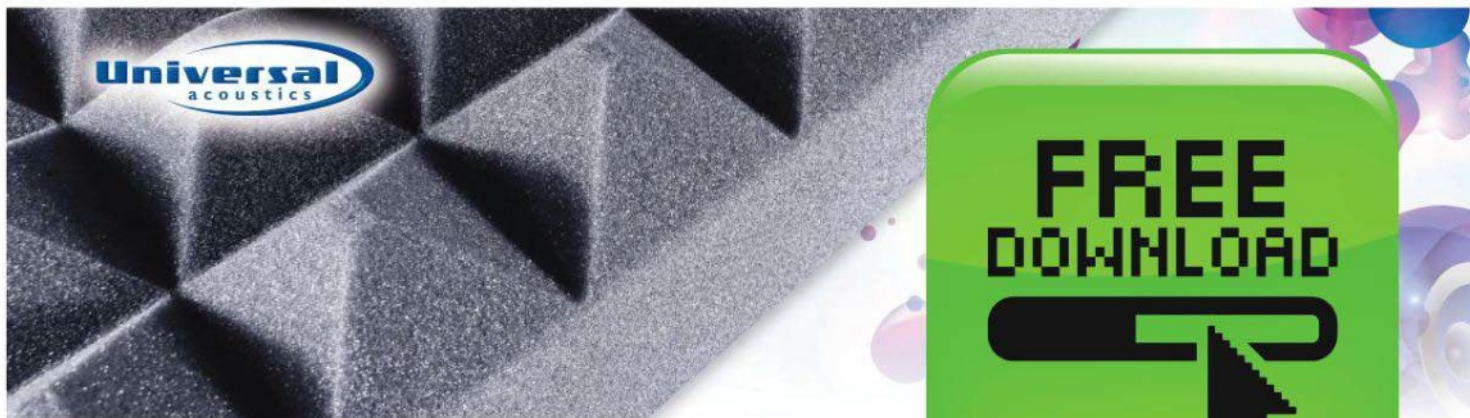
I am looking for some good 'mash-up' plug-ins to take the hassle out of creating special effects. Basically, I want to be able to get crazy effects like a lot of dance producers seem to be able to do – cutting up beats, doing stutters and stops and so on – but without having to program an endless chain of complex things and spend ages learning how they work. I know this might sound a bit lazy to some people, but is there anything out there that can do it?

Barry Davies *Via email*

MTM There is indeed an increasing amount of stuff like this available. Sugar Bytes' Effectrix is a great example. It works on a grid system, and with it you can point in complex-sounding and advanced effects with a couple of clicks. It's sort of cheating, maybe, but it's a bit like having Squarepusher in a box! You can get a similar kind of sound from iZotope's new Stutter Edit, developed in collaboration with electronic bigwig BT. The demonstration video on the website might make your head explode but it shows that you can do some amazing stuff without having to get into the nuts and bolts of exactly what's going on. Both plug-ins offer finely detailed control, of course, but you can also just have fun with them if you like.

Hollin Jones

iZotope's new Stutter Edit plug-in can achieve remarkable mash-up effects with just a few clicks of the mouse.



Acoustic Room Treatment Guide

Your FREE 16 page book is available to download (or from your dealer) now.

This handy Acoustic Room Treatment Guide (available to download, or from your local dealer), explains how some simple, low-cost acoustic room treatment can dramatically improve the sound of your room / studio by controlling the sound reflections.

Download your FREE Acoustic Room Treatment Guide from www.scvlondon.co.uk today.



Find your nearest dealer at: www.scvlondon.co.uk

Get your FREE Acoustic Treatment Guide at: www.scvlondon.co.uk



→ where the drums sound good – then stick a mic where your head is. Placing omni mics on the floor often yields good results and you can beef up the low end by putting mics in corners. You could also try compressing the bejezus out of the ambience when you're mixing. Huw Price

MASTERING THE ART

What is the best way to prepare my tracks for mastering? Should I export them all as a single stereo file or should I export different stems, or maybe even individual tracks? I am using Cubase SX3 and it does not have a batch export feature, so the idea of exporting a stereo file appeals just because it would be so much



You can capture great drum sounds using simple but effective techniques, such as the 'Glyn Johns' method.

From MTMStudioNet
MASCHINED BEATS
I am using Maschine with my PC and a copy of Cubase and it's really cool. However, I can't seem to figure out how to route the sound channels out separately so I can process them in Cubase's mixer. Can anyone help?
JT

Go to Cubase's VST Instruments window and click on the arrow by Maschine's name. Then, in the resulting dropdown menu, activate up to eight stereo outputs. In Maschine, go to the Master, Group or Sound settings for any patch you are using and, using the dropdown menu by each one, you will be able to assign it to any of the eight channels you activated in Cubase. You should then find that the audio streams out separately, making it easy to treat or record it as separate tracks. Hollin Jones

www.mtmstudio.net.com

quicker. However, would I be sacrificing flexibility at the mastering stage? I have not mastered in a proper studio before and I have heard different things from different people, so I would appreciate some definitive advice!
Philip Geary Ireland

MTM In theory, a mastering engineer should be able to adapt themselves to whatever you hand over, so don't worry too much about a wrong or right way of doing things. If the mix is generally well balanced, then a stereo file – exported at 24-bit, using the same sample frequency as your session – will give the mastering engineer all they need to get good results, using two-channel compression, EQ and so on to bring out the true musicality of the track.

That said, stems are useful when a mix presents a few unresolved issues that might benefit from an objective set of fresh ears (those of the mastering engineer, in other words). You don't have to stem the entirety of the mix, just the areas that need some extra control in the mastering studio. More often than not, this might involve a stem of the low-end of the mix (with maybe the bass guitar separated from the main track), or in other crucial levelling issues like the balance of the main vocal. Separated in this way, the mastering engineer won't have to use heavy-handed tools like multi-band compression to re-balance the mix and can instead correct any level issues using a simple fader.

Be wary, though, of giving the mastering engineer too many options. A mastering engineer isn't another mix engineer, so giving them too much to do will simply distract them from their main task and could result in an inferior product. Despite what some people may tell you, stems are not the answer to all our audio woes – they're just another way of holding musical data – and unless used appropriately, they don't actually make any difference to the quality or effectiveness of the end result.

Mark Cousins

MTM Hot Topic Human feel

What is the best way to make variations on a drum pattern using Reason and Live? I make a lot of electronic music and while I am happy enough playing beats in by hand from my keyboard, I often wish I could get a bit more variation and make my tracks a bit more interesting. But as I don't really have the patience to go through and manually change the beats a few notes at a time, I'd really like some ideas on how I might spice things up a bit – without it taking hours.

Mark Via email

MTM The answer to this is simple... grooves! You need to introduce groove and shuffle into your beats to give them the human feel you are after. This would indeed take hours if you were to attempt to program the variations manually, but luckily, Reason has an excellent system for introducing this swing. The ReGroove mixer is one of the best systems on the market for introducing complex grooves into your music and due to its simplicity there is no need to worry about steep learning curves! The ReGroove cannot only apply grooves to each part, you can actually mix many different grooves within each Reason project. These independent groove templates can be added and removed in real time for live comparisons.

Ableton Live also has an excellent groove engine that can achieve similar results, making your music much more interesting. And to make life even easier, both applications include an extensive library of groove templates to get you started.

Mo Volans



Reason's ReGroove mixer is great for adding a human feel to your MIDI beats, without having to go through and tweak each individual repeat of a pattern by hand.

SOUND SEPARATION

I am used to recording live bands and have some experience with drums, guitars and so on. But I've just got a gig recording a live singer who plays piano. He wants to do all the recording simultaneously – playing piano and singing at the same time – because this is how he feels most comfortable performing.

I'm worried about bleed from one microphone to the other, which I can imagine being a real problem. Are there any practical steps I can take to minimise the amount of vocal that goes into the piano mic, and vice



Unless there's a particular problem, a single stereo file is usually more than adequate for most mastering applications.



A combination of acoustic screening and close-mic'ing should help to minimise bleed between the vocal and the piano.

versa? And as a fall-back option, are there any plug-ins that might help me deal with any bleed that does get captured during recording?

Colin Laws *Manchester*

MTM Having recorded several orchestral projects, where bleed is next to impossible to control, I can safely say that separation is an over-rated phenomenon! Crucially, if you can capture a good performance, then the combined approach – with both the vocal and the piano being recorded at once – has to be the best solution to take. However, if the vocal needs lots of refinement (using heavy-handed pitch correction tools like Melodyne, for example) then you might need to consider various methods to reduce – but never entirely remove – the amount of bleed between the two mics.

Separation can be improved either by using some improvised screening or by making the most of the mic's directional characteristics. Screening between a piano and the singer is difficult given the relative proximity, but some strategically placed heavy cloth (hung between the singer and the 'action end' of the piano), or even something like the SE Reflexion Filter, can reduce bleed between the two sources. A cardioid pickup on the vocal mic should offer some rejection of the piano, but it's difficult to achieve the same results from the piano end, as the piano mics will often be directed at both the singer and the piano. In this case, use a close-mic position on the piano to attenuate the relative level of the vocal.

I'd be wary of relying on plug-in technology to reduce the bleed in the mix, as the cure may well be worse than the original ailment! Instead, the best approach to use is some sensitive level control – reducing the level of the vocal mic when the performer is not singing, for example, and vice versa. Ultimately, though, it's always a fine balance between a recording that's sonically optimised and one that favours a good performance over all else!

Mark Cousins

BASS IN YOUR FACE

What's the best plug-in synth for making bass lines in Logic Express? I have tried Logic's own synths but nothing really sounds fat enough. My budget isn't huge but I could stretch to about £200. Thanks!

Harry Keedwell *Manchester*

MTM A more expensive or 'better' synth won't automatically give you amazing results – sometimes it pays to polish up on your synthesis knowledge and programming technique.

MTM Hot Topic Drive rescue

My trusty MacBook Pro – one of the first models, so a few years old now – is starting to creak and groan a bit, and I am worried about its hard drive dying on me. It's been dropped once or twice and though there was no external damage, I wonder if it may have scuppered something internally. The problem is that I'm in the middle of a load of projects in Logic and Reason, and I'm terrified of trying to move to a new Mac at the moment – and until I've finished these projects and been paid, I can't afford one anyway! I've been backing up regularly but I wondered if it was possible to replace the hard drive in this one, and get it to soldier on for a little longer? What's the best way to do this without risking my data?

Barry Davies *Via email*

MTM You're doing the right thing by backing up regularly – I'll assume you've been using Time Machine to do this. The good news is that there are a couple of ways around your problem, and none of them is overly technical if you are relatively comfortable with technology, though if in doubt you could get a specialist to do it. The hard drives in early MacBook Pros are user-replaceable, so by following the instructions on Apple's support site you should find it quite easy to remove. Before you do this, make sure that it is backed up with Time Machine and, if possible, do a files and folders copy of your Home folder, Apps folder and anything else important to an external hard drive.

Get a new hard drive from a reputable supplier – we've found dabs.com to be very reliable, though, of course, there are others – and check that it is going to fit. This should mean a 2.5-inch SATA drive. Get the highest capacity you can afford: even large drives are quite inexpensive and you should end up with a more capacious drive than your original one. Swap the hard drives out and with the new one fitted, start your Mac from the Mac OS X install DVD, with the Time Machine Backup drive connected. Follow the instructions onscreen to restore the system from the Time Machine backup and, once this completes, you should have a full working clone of your old system. You might find that the odd software authorisation needs to be renewed, but this is usually not too tricky. You will of course still have your old drive, complete with files, and you can put this into an external USB enclosure so it can be accessed in case of problems or, once you are confident in your new drive, wiped and used for storage.

If you've used something else for backup, like SuperDuper or Carbon Copy Cloner, refer to the instructions for the program. They're not quite as well integrated into OS X as Time Machine, so there's a little more fiddling to do when cloning systems, but even so, you should be safe provided you always keep backups.

Hollin Jones

Replacing or upgrading the hard drives in Mac laptops isn't too difficult, though you must make sure you are fully backed-up before you start.



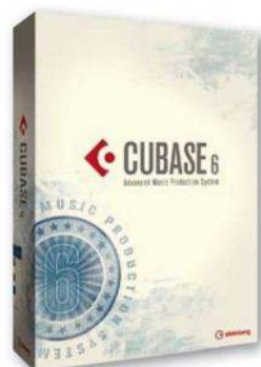
If you feel you've done this and you still aren't happy with your sound, you could try a dedicated bass instrument from a third-party company.

There are two instruments that spring immediately to mind here. The first is Spectrasonics' excellent Trilian instrument. This houses an awesome collection of bass sounds for just about every genre you could imagine, and also sports an extremely impressive synthesis engine. You get all this for around £180 all in, so it fits nicely into your budget. Another great bass instrument is Rob Papen's SubBoomBass, and although this is perhaps not as fully featured as Trilian, it still does an excellent job of delivering monstrous low end parts, and for a lot less cash. You should find this one for about £80.

Mo Volans

MTM Reviews

Hardware ■ Software ■ Mobile Technology ■ Samples



Steinberg

Cubase 6

For PC & Mac



Cubase is one of the longest-serving DAWs, but Steinberg never rests on its laurels... **Hollin Jones** finds out what's new in version 6.

Cubase 6

Manufacturer **Steinberg**

Price **Cubase 6 €599. Cubase Artist 6 €299 (upgrade pricing also applies)**

Contact **Steinberg +49 40 42 236 115**

Web **www.steinberg.net**

Minimum system requirements

PC Dual-core processor, Windows 7, 2GB RAM

Mac Intel Core Duo, Mac OSX 10.6, 2GB RAM

- **Key Features**
- 64-bit under Mac OSX and Windows
- Unlimited track counts
- Full surround sound features
- VST 3.5
- Multitrack editing
- VST Expression 2
- Batch export
- Advanced tempo detection
- VST Amp Rack
- Significantly streamlined interface
- MediaBay and VST Sound

Cubase has gone through quite a few revamps in its long history, which is not at all surprising when you consider that it was one of the first DAWs ever created and pioneered the development of the VST format, the ASIO protocol and many other innovations that we now take for granted. Cubase is still hugely popular the world over, and while Steinberg has diversified into areas such as post-production (with Nuendo) and hardware (thanks to its association with Yamaha), it's still for Cubase that the company is best known.

Updating DAWs can be as much about keeping pace with the latest operating systems and processors as adding new features. The challenge is to keep everything manageable and usable while under the hood it gets ever more complex. Luckily, Steinberg has always had a knack for this, so it was with great excitement that we fired up the latest member of the family.

Under the hood

Legacy support for older operating systems has finally gone: you'll need Mac OSX 10.6 or Windows 7 to run Cubase 6. Owners of older machines will grumble, but these systems offer far better performance than their predecessors and the change will allow Steinberg to focus on the future rather than the past. On the Mac side of things, dropping PowerPC support long after we expected it would go has allowed Cubase 6 to become the first 64-bit native version of Cubase for the Mac platform. It can be made to work in 32- or 64-bit mode under Windows or on the Mac and the VST Bridge technology should handle 32-bit

plug-ins – of which there are still many – running in a 64-bit environment. 64-bit, which Windows users have been able to enjoy for some time with compatible hardware and software, enables a program to access huge amounts of physical RAM, which is great for working with high track counts and large, samples-based instruments. 32-bit plug-ins are displayed slightly differently when running in 64-bit mode: shown in miniature in a window, they must be clicked on to be brought to full size for editing. It's possible to run only one 32-bit plug-in at once on the Mac, although you can always freeze or bounce the tracks. This limitation doesn't apply under Windows.

An interesting new feature is that VSTs can now be viewed using their generic controls – a set of sliders instead of a GUI. This takes up much less space and is a nice option to have on smaller screens.

One of the first things you notice about Cubase 6 is that it's had a graphical makeover. Although it's still possible to customise various colour elements of the interface, the general feel is now a more muted grey, which we felt gave it a more serious appearance. Despite the wealth of controls on offer, the interface actually seems to have been simplified somewhat, thanks in part to some clever and efficient design, favouring clarity and separation over flashy graphics. It looks and feels more unified than Cubase 5 did and it's definitely quicker and easier to find your way around.

This is perhaps most evident in the Inspector panel, your first port of call for working with tracks in a project. Every type of control is grouped neatly into a tabbed section and the tabs are clearly arranged, snapping open instantly on your click. Throughout Cubase 6 the interface and controls are consistent and well thought-out and we'd even venture to suggest that this is the most mature it has ever looked.

Multi-talented

One of the major new developments in Cubase 6 relates to the way in which you work with multitracked material. This is a longstanding issue, but has happily been resolved with some excellent new tools. Previously, editing things like multitracked drums was very time-consuming and prone to errors. Now there's a new Track Edit Groups function that lets you group tracks together in the Project window so that any edit you make to one track is made at exactly the same point in others. So, drums, multitracked guitars or anything else can be cut up or moved together without sync problems.

For recording, there's a new Lane Track feature that automatically creates new lanes while recording in cycle mode. When you're done, audition the takes and swipe across the best parts of each one to have Cubase create a master take containing the selected parts. Although you could achieve something similar with Stacked takes, the workflow is hugely improved here and the data much easier to work with.

Live drums also get more new tools in Cubase 6, with an entirely new transient- and tempo-detection

system, phase-stable audio quantization and drum replacement functions. The detection tools are very accurate, and once transients have been detected they are merged across multiple tracks by taking the user-defined priority of individual tracks into account. Audio is sliced across multiple tracks and can be quantized based on your choice of drum, so you could use the kick as a guide and snap the other drum parts to it. Since slices are all moved at once, you shouldn't get phasing problems. Quantizing live, multitracked drums used to be

One of the **major new developments** in Cubase 6 relates to the way you work with **multitracked material**

incredibly tedious, but with these new tools it's significantly faster and easier to achieve.

There's also a new tempo-detection algorithm that can be used to create tempo maps based on material that has not been recorded to a click, but crucially, do it automatically. A further benefit of this is that you get a new Hitpoint-to-MIDI tool that enables you to create a MIDI track based on a live drum part, making drum replacement or reinforcement a breeze.

Express yourself

Away from the audio side of things, Cubase 6 introduces VST Expression 2, an update to the tools that enable you to precisely control MIDI articulations from the Key editor. This uses the new

Measuring Up

The competition is pretty hot, although sometimes it means picking a platform. Logic Studio is Mac-only but competitively priced at £417 and includes a wealth of plug-ins and effects, MainStage for live performance, Soundtrack Pro and WaveBurner to cover sound-to-picture and mastering. Logic definitely has its fans, but to non-users its interface can seem clinical and arcane. Avid's Pro Tools 9 no longer ties you to specific audio hardware and is dual-platform, enjoying a reputation as the post-production industry's favourite tool. At £505, it comes with a range of plug-ins and is particularly adept at audio recording and editing, even if some feel its MIDI side is a little lacking. Cakewalk's Sonar X1 Producer (\$399) is Windows-only and comes with more plug-ins than you can shake a stick at. Its interface has recently had a major overhaul, making it much easier to use, although there's still a lot going on onscreen.



VST 3.5 standard and as such is initially restricted to Cubase's own plug-ins, but it's a very powerful new feature all the same. Essentially, it means that controller values can be drawn and edited on a per-note basis by clicking on any note in the Key editor.

Any available parameters can be used, so you could, for example, draw pitch bend or pan into one note in a chord but not the others. If you move the note, the expression data moves with it. The latest HALion plug-ins support the technology and it should prove useful for programming any kind of MIDI, especially orchestral parts. It also opens new doors for the audio-to-MIDI features of the VariAudio analysis tool, enabling the capture of pitch and variation as MIDI data. The VST

Method Spot

Our review is of the full version of Cubase 6, but there is a mid-level version called Cubase Artist 6 at a much lower price. This has fewer features, but does share all of the underlying technology with its bigger brother, including the audio engine and multitrack capabilities. Your audio, MIDI and instrument tracks are limited to 64, 128 and 32 respectively and there are fewer instrument slots. You don't get external instrument capabilities, batch export, surround sound, Track Edit Groups, VariAudio or some of the plug-ins. Perhaps more than ever, there is a real difference between the two programs. But for many, what you get in Artist 6 will be more than enough to multitrack audio and MIDI and create tracks. There's a comparison chart on the website that's well worth checking out.



The interface offers greater clarity in the Inspector as well as new MIDI and audio tools.



As well as being able to link tracks for seamless editing, you can now quantize multiple audio tracks using the new Quantize Panel, which offers an array of different options.

→ Expression set is also extended, with dynamics programming now available from both the Key editor and the Score editor. Note that Expression can be used by non-VST 3.5 plug-ins as well – just not polyphonically.

For those who prefer to play rather than program, Cubase 6 has a number of new plug-ins in its arsenal. First up is the VST Amp Rack, which uses convolution technology to model seven amps, 16 stompboxes and six speaker cabs. It's customisable, so you can control mic placement as well as all the tone and other knobs and dials. The sound is great and there are lots of presets to get you up and running, although by including a suite of guitar effects Cubase is only catching up with some of the competition.

Also included is HALion Sonic SE, a cut-down version of the flagship all-purpose workstation. There are 900 sounds and instruments supplied and it's compatible with VST 3.5. LoopMash also gets a facelift, with over 20 new MIDI-controllable live and slice-based effects such as scratches, stutters and stops that make it a much more playable and performance-oriented tool. There's better drag-and-drop functionality and it's great for generating beats or remixes.

Plug-ins are also enhanced by the new and improved Quick Controls panel, which is able to quickly get assignments from a selected plug-in. You can also right-click on a parameter on some plug-ins to assign it straight to a Quick Control slot, which is handy for tweaking settings. This works for all Cubase's own plug-ins, for some third-party ones when viewed in Generic Controller mode, and for others not at all. It does, however, seem likely that plug-in manufacturers will add this functionality via updates in future.

There are numerous other enhancements to be found, such as a greater selection of time-stretching algorithms, better compatibility between full and cut-down versions of Cubase, updated existing plug-ins, a moveable MediaBay that can use USB storage – and all of this on top of an already exhaustive feature set.

The joy of 6

In Cubase 6, Steinberg has addressed some longstanding weaknesses – primarily in the area of multitrack editing – and the new tools are a lifesaver for anyone working with multiple audio tracks at once. The new tempo-detection and drum quantization



A new suite of virtual guitar effects and amps helps you create great tones, although to an extent this is Steinberg playing catch-up.

importance – and the same could be said for the other updated plug-ins. Still, we're very glad that Steinberg has

For those who **prefer to play** rather than program, Cubase 6 has a number of **new plug-ins** in its arsenal

tools are very welcome, turning the prospect of editing live drums from a daunting to a manageable one. Track comping is much easier, and the refined interface makes Cubase 6 quicker to navigate and easier to understand.

At the risk of sounding controversial, other developers might want to consider this level of clarity and functionality a standard to be met or bettered in future. Note Expression, though currently limited to VST 3.5 instruments, is a major step forward in MIDI programming and gives you quick, comprehensive access to articulations with just a couple of clicks. Combined with VariAudio, it further blurs the lines between what you can do with audio and MIDI. The guitar suite is great – though perhaps not on a par with the other new features in terms of

focused its efforts on refinement and addressing the areas it has, instead of just giving us yet more plug-ins.

This is the most accomplished and powerful version of Cubase to date, offering a remarkable combination of features and usability and taking advantage of the latest technologies. Its place as one of the world's favourite DAWs looks secure. **MTM**

MTM Verdict

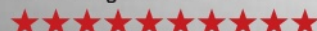
WHY BUY

- + Significantly streamlined user interface
- + Still brilliantly easy to use
- + Hugely improved multitrack editing capabilities
- + Great tempo-detection features
- + Multitrack audio quantization
- + Beefed-up plug-ins
- + Advanced MIDI programming with VST Expression 2
- + Custom guitar tones
- + Many workflow improvements
- + New Quantize panel
- + Store MediaBay database on removable drive
- + 64-bit under Mac OS X 10.6
- + More powerful Quick Controls

WALK ON BY

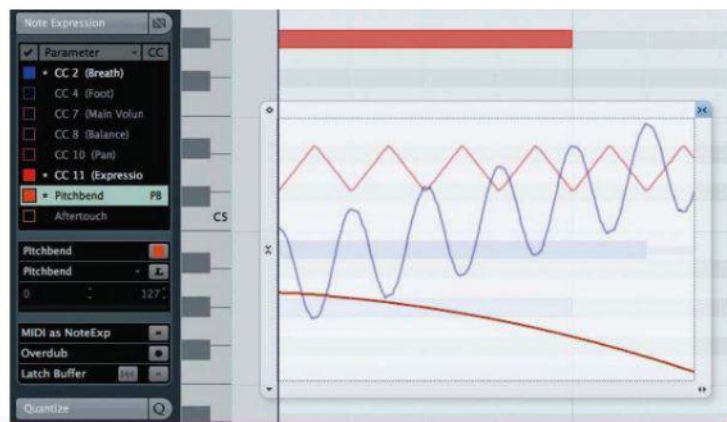
- Not everyone likes a dongle...
- Bundled instruments still not really a stellar line-up

A worthy addition to the Cubase family, bringing much-needed workflow improvements and adding power and flexibility while maintaining the ease of use.



Method Spot

One of the major steps forward in Cubase 6 is in the way it keeps multitracked audio in sync. A typical example would be drums, when you often end up with up to ten mic channels to work with. Mixing them is easy using Group channels, but editing them used to be really tedious. Now, any number of channels can be grouped together in the Project window and edited or moved together, ensuring that a drum loop, for example, can stay multitracked but be copied and pasted in perfect sync. Also, multiple channels can be analysed for hitpoints and the audio then quantized based on your choice of the importance of specific channels. This means you can time-correct drums without having to mix them down first. What's more, with the tempo-detection features you can set a tempo track from a piece of freeform audio and also extract drum parts to a MIDI file for easy drum replacement.



Virtual instruments compatible with VST3.5 are now able to take advantage of controller data drawn directly into individual MIDI notes.

Perfect take every time ...



Gil Norton

**Foo Fighters
Pixies
Gomez
Feeder
Counting Crows
Maximo Park**



"I can't remember a single session over the last 5 years on which I haven't used an SE mic"

"I've found the 4400a to be a hugely versatile mic - it's great for acoustic instruments, and I especially like it on drums and percussion. Its hyper-cardioid pattern is extremely useful on toms and snare as it controls cymbal spillage really well and delivers great punch and tone"

- 4 polar patterns
- 10 and 20dB pad
- 60/120 Bass cut
- Hand crafted capsule specialist neutral tuning for multiple instrument and vocal applications
- Multi function shock mount (patent pending)*
- Available as a stereo pair

The 4400a is specially tuned to get the most from a wide range of recording applications, including vocals, drums, guitars, piano, strings and wind. This makes it the ideal choice for project studios and professionals alike: a mic that engineers in the know can call on in any situation to get the best results, and fast!

0 8 4 5 . 5 0 0 . 2 . 5 0 0
www.sonic-distribution.com

SONIC



Sound Engineering
www.seelectronics.com



Arturia

Origin Keyboard

Arturia's long-awaited Origin Keyboard has made its debut, so does it live up to expectations? **Mike Willox** finds out.

Origin Keyboard

Manufacturer **Arturia**

Price **£2,550**

Contact **2twenty2 0845 299 4222**

Web **www.originsynthesizer.com**

It's been a full three years since Arturia unveiled its desktop synth module, the Origin. Origin combined all of Arturia's well-deserved reputation for producing comprehensive virtual models of the synths that have shaped our sonic history with a beautifully designed and ergonomic control surface.

The underlying concept behind Origin was to digitally provide all the elements of synthesis – modular

Key Features

- Powerful sequencer
- Classic synth templates
- Ribbon controller
- Arpeggiator
- True modular synthesis
- Joystick controller capable of complex X/Y configurations
- Excellent-sounding FX

components (VCOs, VCFs, ADSRs and so on), step sequencing and modulation matrices – with a wealth of real-time controllers, giving the user superb

At the heart of this excellent-sounding synth is Arturia's TAE sound engine

performance capabilities and near-instant access to all of the essential parameters of the synth.

Arturia's new Origin Keyboard sports the familiar desktop module mounted via a huge, brushed steel hinge onto a very well-constructed sheet-metal

casing that houses a 61-note, semi-weighted keyboard. The ivory-coloured case also boasts octave shift buttons and pitch and mod wheels, as well as a large ribbon controller and wood-veneer end cheeks.

Keep your cool

Due to the need to house the DSP in the keyboard, a fan is required for cooling; our review model was one of the first out of the factory and had an incredibly noisy fan, but Arturia has assured us that all subsequent models ship with a much quieter one. Another minor gripe was the external transformer – particularly given the size of the casing – but this is apparently required as both modules (Desktop and Keyboard) share the same motherboard as the original

Origin – in which there wasn't enough room in the casing to physically accommodate a transformer. These are relatively trivial issues, though, particularly when you consider the depth and quality of synthesis possible with the Origin.

The back of the keyboard is well served with ins and outs (all on 1/4-inch jacks): headphones, stereo inputs (the Origin's filters and effects can be used to process external audio signals), master outputs (left and right) and eight auxiliary outputs. All outputs default to the master outputs unless you're working in Multi mode, in which case



Around the back of the Origin Keyboard are 1/4-inch I/O sockets, headphones, stereo inputs and eight auxiliary outs.

there's the option to take the four programs possible (when in the multi-program mode) in stereo pairs from the auxiliary outputs. S/PDIF out, USB and MIDI in/out and thru are available as well as expression and footswitch inputs. The expression pedal can be assigned to all of the modular components available in Origin, while the footswitch can be used to trigger FX busses, sequencer loops, the arpeggiator or just act as a plain old sustain pedal. The polarity of the pedal input is reversible and can be set to either latch or toggle, making it a versatile tool for live work.

Sound designs

At the heart of this excellent-sounding synth is Arturia's TAE sound engine; it re-creates some of the anomalies that occur in the electronic circuitry that give the 'warmth' and 'phatness' that we associate with vintage analogue synths. Oscillators and filters from the Minimoog, ARP 2600, Yamaha CS-80 and the Roland Jupiter 8 have all been digitally modelled to component level, plus Arturia provides its own DSP-lite modules representing all aspects of modular synthesis.

Other modules include the Moog Bode Frequency Shifter (this appeared in the Moog Modular systems of the early 70s) and the CS-80's unique ILAL envelope generator. The massive number of modulation options, from a dazzling variety of sources, enable incredibly complex patches that would be difficult to reproduce with anything else on the market today.

The beta firmware update (1.3.8) that we've been using should be available by the time you're reading this review and brings several additions to the existing firmware as well as a few bug fixes. The inclusion of a Minimoog and a Jupiter 8 template allows for instant access to the full functionality of both of these classic synths; the digital domain also offers improvements on the original synths, including velocity sensitivity, polyphony and a modulation matrix for the Moog. There's also the addition of a sample-and-hold module as well as a compressor for the FX section.

The key to the Origin's versatility lies in all of the modular components being able to be patched together in a virtual modular system of your own making. You could, for example, create a couple of Minimoog oscillators, patch them through a CS-80 filter, then shape the sound with an Origin envelope before

modulating them using the unique Galaxy module. This Arturia-designed module enables you to create three LFOs assigned to different planes on the joystick; when different rates are set for the LFOs, very complex modulations can be achieved as you move between the planes by rotating the joystick. These LFOs can be assigned to any destination that's part of your patch.

Control central

The hardest thing to achieve when it comes to designing something as ambitious as the Origin is to enable access to the depths of the beast without forcing the user to endlessly scroll through sub-menus.

The superb layout of the control panel, with its central 5.2-inch TFT screen and wealth of rotary encoders, gives an immediate overview of the Origin's workflow. There are dedicated rotary controllers for the oscillators' pitch, tuning and waveform;

/// The superb layout of the control panel gives an immediate overview of the Origin's workflow ///

underneath is a controller to select which oscillator you're adjusting. Macros can be set up for this encoder to enable the editing of more than one oscillator at the same time; these can be set in the macro page by selecting every VCO you want to adjust.

This same principle applies in the filter section: three encoders adjust cutoff, resonance and filter type respectively while the Select encoder enables you to change an individual filter or a macro. Frequency and waveform can be adjusted from their own controllers in the LFO section and again, the ubiquitous Select knob allows you to see which LFOs are being used. Finally, the envelope section allows you to adjust the conventional attack, decay, sustain and release as well the pre-decay time and level – this enables the setting of an intermediate decay time.

Take it easy

The Select controller is vital to the ease of workflow: you can be on any page of the operating system, tweak the Select button of whichever section you want to edit and a boxout appears in the centre

Measuring Up

The Origin Keyboard is something of a **unique** product in the marketplace currently and although there are plenty of synths out there, none has the depth of modular synthesis that the Origin is capable of. The Access Virus TI2 Keyboard (£1,839) shares a lot of features with the Origin, including an emulation of the Moog filter. The Dave Smith Instruments' Prophet '08 (£1,498) is a modern and stable version of the original Sequential Circuits Prophet and is a great-sounding conventional poly synth.



of the screen while you scroll through the options. Pressing the encoder opens the parameter and routing options menu for the selected module.

The live performer's icing-on-the-cake is provided by the four rotary encoders located to either side of the TFT display. These eight knobs can be assigned to any of the synth's virtual parameters by cursoring to the desired field in your chosen page then pressing the encoder. This offers you an even greater depth of live control as it can be used to vary modulation amounts, FX parameters, sequencer sends and

anything else that isn't immediately available from the synth's onboard hardware controllers.

In sequence

Running along the bottom of the control panel is the hardware for the sequencer – the three (up to) 32-step sub-sequencers are represented by a single row of 16 rotary encoders, each with its own LCD backlit button underneath. Each sub-sequence is adjustable from its own page within the →



Among the many templates included with the Origin Keyboard are Minimoog, Jupiter 8 and many more.

→ sequencer menu or you can view all three at once from the All page. Any modulation destination can be set for these and once you've selected which sub-sequence you want to edit (by pressing the Edit button on the control panel) the encoders will be assigned to that sub-sequence.

This powerful sequencer includes eight banks of 16 factory sequences that can all be edited and saved to the eight user banks. The factory banks are well distributed between bass lines, TB envelope sequences, miscellaneous patterns for the program presets and drum patterns. These are all great places to start as you begin to create your own user patterns.

The internal clock can be set either from the Settings page or via the Rate knob on the fascia; the Origin will receive MIDI clock but it won't generate it, which is a bit of an omission – if you're intending to use it as your master

mode is the place to do it. It's possible to have four programs playing at once, each with their own key zone, MIDI channel and FX routing for the three effects slots available for each program. The Origin arrives with a load of multi-programs that give you an idea of the amazing soundscapes that can be created as you tweak and twiddle the various programs in real time. Of course, you can use multi-program mode to just layer up presets to create incredibly fat textures or build up rhythmic loops.

The mixer section of the control panel comes into its own in these situations. Each program has its own level encoder, backlit Edit button and an on/off button. The selected program's on/off button will flash to indicate which synth you're looking at on the screen. All of the menu pages are well laid-out without any clutter, making for easy and logical editing of all the Origin's parameters.

The effects themselves are uncomplicated but very useful and of extremely high quality

device in a live setup (where a DAW is not available) you won't be able to clock external devices to the Origin. What's more, there's no tap-tempo option, which is another essential tool for using any rhythmic device in the live environment. Perhaps these are issues that Arturia should consider in a future firmware development.

Multi-talented

One of the areas of music production that the Origin is ideally suited to is sound design, and the multi-program

Underneath the mixer section are the hardware encoders for the onboard FX; three slots are available per program, with each slot having its own return level control and backlit Edit and on/off buttons.

The effects themselves are uncomplicated but very useful and of extremely high quality; the reverb has excellent transparency while the chorus adds a real richness to the sound that you'd associate with a rackmounted chorus unit from the 80s. Similarly, the delay module has the



character of a tape echo when you dial in the damping option, while the tube distortion is warm and saturated.

Soft solutions

Although the Origin ships with Origin Connection (the librarian program and firmware update gateway), there is no dedicated editor as yet. Arturia was a little cagey when pressed on this, but the company is working on ideas to improve the librarian software, integrate VST MIDI plug-ins for DAWs and including a basic modular editor. We won't see the development of these ideas until the official release of firmware version 1.3, but the mind can wander endlessly with possible developments – could the auxiliary outputs be configured for 5.1? Will there be any other templates in addition to the Minimoog and Jupiter 8?

Whether we see these updates or not, the Origin Keyboard is certainly the next step on the path to creating one of the most versatile and high-quality synths on the market. **MTM**

MTM Verdict

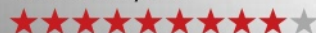
WHY BUY

- + Superb sounds
- + Easy real-time control
- + Great depth of modular synthesis possible
- + Versatile output options
- + Audio input

WALK ON BY

- No tap tempo
- No MIDI clock master option

An excellent-sounding synth with huge depths of modular synthesis possible. It would be ideal as the primary sound source for any sound design project as well as being the ultimate production tool in the studio when sync'd synth sounds are required.



Method Spot

The arpeggiator is easily programmed from the arpeggiator page in the Sequencer menu. Hit the backlit Seq button under the TFT display then press the button above the 'arpegg' tab in the Seq menu; from there you have the option to select the arp pattern (up, down, up/down and random), its range (up to five octaves), whether it syncs to the clock and what its division rate is. Hold down a chord then press the Hold button on the hardware sequencer section. Once your arpeggio is triggered you have endless tweaking options via the control surface.



Sitting above the keyboard and mounted on a sturdy metal hinge is the hardware module. The large LCD and well-positioned controls make it a breeze to get around.

Loopmasters

The Sample Boutique

LATEST RELEASE

TIMO MAAS TECH HOUSE & TECHNO

Timo Maas – Tech House & Techno is a brand new collection of sounds exclusively crafted by Timo and his studio partner Santos which collectively should inspire Producers of House, Techno, Tech House and Electro.

This pack contains 47 Deep and Subliminal Bass Loops, 139 Super Fat Drum Loops, 50 Inspirational Music Loops, 37 Bass Sounds, 100+ Single Drum Samples, 28 Super FX, and lastly 30 Amazing Textures – all Eq'd and ready for the dancefloor.



BEST SELLERS



Dark Percussive House & Techno



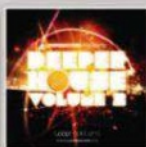
Groove Tech



The Funky Underground



Real Strings Vol 2 Cinematic Loops



Deeper House Vol 2



Ghetto House

FEATURED PRODUCTS



DJ MIXTOOLS



DJ MIXTOOLS – For forward thinking DJs and live artists. Imagine buying a track but then being able to separate that track into its key elements and having ROYALTY FREE access to remix, effect, chop and loop the parts in your own individual style to create an exciting and refreshing new mix... welcome to the world of DJ MIXTOOLS.



Loopmasters Sample Boutique

Loopmasters are proud to bring you some of the best collections of sounds and samples in multiple formats from some of the most cutting edge labels and producers on the planet. Visit our website today and experience a new way of buying royalty free sounds, samples and patches to inspire your productions!

- Earn 10% virtual cash with every purchase
- 1Gb+ free sounds and samples
- Independent reviews and user ratings
- Super fast server and downloads
- My profile including product registration
- Tech articles and industry knowledge
- Cutting edge labels
- Artist sample collections
- Search by label, genre or format



ARTIST SERIES



Sounds and inspiration from some of the world's best known music producers and artists directly to your desktop – ARTIST SERIES only from Loopmasters.

WAV : REX2 : ACID : REASON REFILLS : LIVE PRESETS : APPLE LOOPS : AKAI MULTITRACKS : HALION : MPC : EMU : EXS : RMX : SFZ : MAC / PC

www.LOOPMASTERS.com

The source for sounds

Call +44 (0) 1273 692313 or visit the website



Line 6

POD HD500

Line 6's latest floorboard brings the company's best emulation technologies together in one box. **Mike Hillier** steps on it.

POD HD500

Manufacturer **Line 6**

Price **£409**

Contact **Line 6 01327 302700**

Web **www.line6.com**

Line 6 has carved out a niche for itself with powerful guitar amp and effects modelling hardware. While Native Instruments and IK Multimedia have focused on software, relying on hardware only to connect the guitar to the computer running the software, Line 6 has realised that many guitarists simply aren't comfortable taking laptops on tour. While software might in the end offer the widest choice, dedicated hardware remains appealing thanks to its ease of use and, crucially in a live environment, greater reliability.

The new POD HD range comes in three sizes to suit a variety of needs and budgets. All three models have 16 HD amp models for guitar processing and even the smallest HD300 model has over 80 effects models, with enough DSP to run four models simultaneously. The HD400 raises this to over 90 effects models, while the flagship HD500 (which we've been sent) has over 100 effects models and additional DSP to handle up to eight effects simultaneously.

Key Features

- 16 amp models
- Over 100 effects
- 8 simultaneous effects
- Built-in looper
- FX Loop
- Comprehensive I/O options

Method Spot

Volume pedal emulations take up one of your effects slots, but the expression pedal can be assigned to any parameter. If you need to use all eight effects slots for other things, you could simply assign the expression pedal to your amp's volume control to create a virtual volume pedal without using up one of your effects slots.

In addition to the 1/4-inch guitar input, stereo balanced XLR outputs, stereo unbalanced 1/4-inch outputs, 1/4-inch headphone jack and 1/8-inch CD/mp3 audio I/O, which are common across all three models, the HD500 also has a 1/4-inch aux input, XLR mic input, Variax digital input (for use with Line 6's

further three switches, used for controlling I/O levels and the XLR ground lift.

Not owning a Variax guitar or DT50 amplifier, we plugged our Strat into the HD500's guitar input and connected the output directly into a line input on our console. In standard operation mode the two leftmost footswitches scroll through preset banks. Each bank has four presets, which can be loaded by stomping on one of the four bottom-row footswitches, labelled A-D. In this mode you can switch between 64 presets (16 banks of four), but by using the smaller rotary dials and soft switches it is possible to switch between eight different Set Lists, each containing 64 presets, in 16 banks of four.

Working through the presets will give you a feel for the sounds that are possible with the HD500, but to get a better impression we dialled in some

Line 6 has realised that many guitarists aren't comfortable taking a **laptop on tour**

Variax guitars), L6 Link (for use with the DT50 series amplifiers), S/PDIF output and stereo FX loop I/O. The addition of an effects loop lets you incorporate all of your existing analogue stompboxes and effects with your HD500 to create a pedalboard of epic proportions.

Sign of the times

The I/O connections are all found on the rear of the HD500, with the top panel housing 12 stomp switches, a modulation pedal, seven dedicated knobs, five rotary encoders, four soft switches, a direction pad and a monochrome LCD screen. Partially hidden by the modulation pedal are a

clean amp tones to get an idea of how the amps sound on their own. The POD HD500 has some of the best amp tones we've heard in an emulator, from bell-like clean tones to warm, bluesy overdrives, but it was the high-gain sounds in particular that surprised us. The Class A-30TB model in the HD500 came very close to the sound of our own AC-30 – it's not perfect, but it's close enough that we can't imagine anyone spotting the difference. However, the British Copper 30TB in AmpliTube 3 remains our favourite AC-30 emulation.

For high-gain rock sounds the Marshall emulations sound as close to the real things as anything we've come

across to date, but it was the Bomber Uber amp emulation, based on the Bogner Uberschall amp, which had us going back time and again. This particular amplifier sound has long been a gem in the Line 6 crown, but the definition in the latest incarnation of the sound is superb.

Pet sounds

Once we'd had enough of playing about with the presets and clean amp tones, we switched to an unused Set List – of the eight Set Lists, only four come pre-loaded with presets, leaving four more for user patches.

Dialling in your own patches from the hardware is simple enough, but it can take a little time to dial through all the various options using the direction pad, soft keys and four rotary encoders. To aid you in setting up your own parameters, Line 6 has included editor software, which enables you to configure patches on your Mac or PC, connecting to the HD500 over USB.

This is a much faster process but isn't quite as easy, since you don't get to hear your configuration in real time as you configure it. So a combination of the two methods is probably going to be the

most useful, whereby patches are started on your PC and then fine-tuned on the HD500 hardware itself.

Unlike effects settings, which are dialled in by going through the menu system and using the rotary controllers, amp settings have dedicated knobs covering Drive, Bass, Mid, Treble, Presence, Volume and a further Master output volume knob. These knobs will always control the same parameter whatever you've currently got onscreen, which means you always have control over your overall amp tone at hand. However, because switching from one preset to another can change your amp settings, it isn't always obvious simply by looking at the knob positions what position the actual setting is in.

What's more, when you change a setting it will jump from its preset position to the position of the knob. This could have been avoided by using endless rotary encoders instead of knobs. Only the Master output volume needs to be an actual knob.

Chairman of the boards

The HD500 is an excellent floorboard amp sim. The effects – taken from the M-Class stompbox modellers – are

superb, the HD-class amps are some of the best we've heard, and you still have the option of including your own existing FX pedals, not just before the floorboard but in the signal chain, by using the FX loop, which can be placed anywhere in the chain.

What's more, the HD500 comes with a great looper tool, which means that with this new box, guitarists should have all they could possibly need to get their guitar sounding huge onstage, right at their feet. **MTM**

MTM Verdict

WHY BUY

- + Quality emulations
- + Comprehensive I/O options
- + Solid build

WALK ON BY

- LEDs don't change colour to show the current effect type (as on M-Class processors)
- Creating new patches can take some time

The POD HD500 is the best POD unit we've tested to date, with excellent emulations of a huge number of amps and effects.



Measuring Up

When it comes to hardware processors, Line 6 runs rings around the competition, so the best alternatives to the POD HD500 are software amp sims like NI's Guitar Rig 4 and IK Multimedia's AmpliTube 3. AmpliTube probably has the edge in amp quality right now, but Guitar Rig will always remain popular for its many creative possibilities, which far outshine those of both the HD500 and AmpliTube.



AX-Serie: Yes we change.

The A5 and the A7 are amongst ADAM Audio's most famous models. They have won numerous awards and received dozens of glowing reviews in the leading magazines all over the world. **Never change a running system?**

ADAM Audio now proudly presents a fundamental revision of the A5 and the A7 as well as two new models of the AX-Series, the A3X and the A8X. All models feature ADAM proprietary X-ART tweeter that replaces the ART tweeter. Also, all woofers and amplifiers have been reengineered from scratch, featuring larger voice-coils and twice the power for higher linear excursions and more output. **Yes we change.**



The MTM Competition

Win a course at SSR worth £10,000!

If you're looking to build a career in the music industry, this month's incredible competition prize will give you a flying start...

Rising tuition fees coupled with cuts in government funding have seen young people so angry and frustrated of late they've been taking to the streets all across the country. So we'd suggest that a free place on an SSR audio engineering course – worth £10,000 – is a competition prize that's definitely worth winning!

Courses from private institutions such as SSR now offer a highly cost-effective alternative to the State system. Based in Manchester and London, SSR is one of the UK's most successful music training academies, producing countless graduates now employed in the music, TV, film and radio industries – past graduates have found work with the BBC, ITV, Radiohead, Coldplay, Amy Winehouse, Take That, Oasis, George Martin and Björk. And there are other advantages over academic courses. For a start, all the teaching staff are industry professionals: current SSR tutors work regularly on shows such as *The X Factor* and *Coronation Street*, and with bands like Take That, Snow Patrol and Elbow. The facilities used by the students are of a pro standard and

The course on which our winner will be enrolled is called Audio Engineering Techniques & Technology, and will be based at the all-new Camden campus, with a September 2011 start date. It covers many aspects of sound engineering and production, including recording, mixing and mastering, TV and film post production and live sound engineering. The course utilises the latest studio technology, to which students have access seven days a week, and includes lots of hands-on studio time. Reason, Logic and Pro Tools are all covered in-depth, while guest lecturers, field trips and a graduate support programme all help to ensure that our winner will leave SSR with very strong prospects for a career in music. What's more, the course has recently been accredited by the standards body NCFE at Level 5 (equivalent to an ordinary bachelors degree/foundation degree), making it an even more attractive and practical option.

So, let's just reiterate: fees for this course are normally £10,000... but our lucky winner will get a place for free! What are you waiting for?

Past graduates have found work with the BBC, Radiohead, Coldplay and Björk

there's a strong emphasis on practical, hands-on training. That's not to say there's no theory or assessment involved, but great care is taken to ensure the theory is relevant and the assessments test the skills that companies want to see. This is absolutely vital in the current climate, as employers seek out those who can fit most readily into their workplace.

Now with a second campus in north London, SSR has come a long way since opening its doors as Spirit Studios in Manchester some 31 years ago. Spirit's very first recording clients were a then-unknown local band called The Smiths; Spirit went on to become the studio in Manchester, with Happy Mondays, Stone Roses, Simply Red, 808 State and New Order all recording there. Buoyed by this success, Spirit began offering Pro Tools courses in 1996 – and the School of Sound Recording (now known simply as SSR) was born.

MTM Question How to enter...

For your chance to win, just answer the following question correctly, and make sure your answer reaches us no later than 17 March 2011

Which legendary 80s band were the first artists to record at SSR's original home, Spirit Studios?

- A) Bauhaus
- B) The Smiths
- C) Kajagoogoo

Put your answer on a postcard along with your name, address, daytime telephone number and email, and send it to:

Music Tech Magazine, SSR Competition,
Anthem Publishing, Suite 6 Piccadilly
House, London Road, Bath BA1 6PL.
Alternatively, just text the answer to 87474
(see right for further instructions).

You will need to be a UK resident aged 16 or over, and free to undertake an 18-month full-time course commencing in September 2011. For more information on the curriculum, visit www.s-s-r.com

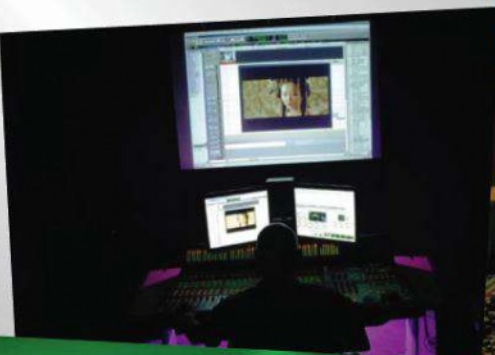
SEND YOUR ANSWER BY TEXT

Text EDUCATION and your
answer A, B or C to 87474

Text entries cost £1, plus
one message at your
standard network rate.



At SSR, the emphasis is on getting your hands dirty and doing the job for real. It's an approach that pays dividends, as graduates now working with some of the biggest names in the music and entertainment industries will happily testify.



In association with:



Terms & Conditions

By entering this competition you are agreeing to receive details of future offers and promotions from Anthem Publishing Limited and related third parties. If you do not want to receive this information please text the word 'NO INFO' at the end of your message or state 'no offers' on postal entries. Texts will be charged at the specified price plus one message at your standard network tariff rate. Winners of all competitions will be drawn at random from all entries that answer correctly after the closing date. Winners will be notified within 28 days of the draw. Only UK residents aged 16 and over may enter. No employees of Anthem Publishing Ltd or any company associated with this competition, or any member of their close family may enter. No photocopies will be accepted for postal entries. Prizes are as stated and no

alternatives, cash or otherwise are available. Anthem Publishing Ltd accepts no liability for any loss, damage or injury caused by any prizes won. Publicity may be given to any competition winners and/or entrants and their names and/or photographs printed. The editor's decision is final and no correspondence will be entered into. Where prizes are offered on behalf of an associated company these prizes are provided in their entirety by these associated companies. Anthem Publishing Ltd cannot be held responsible for any failure to provide prizes as specified and all enquiries relating to such prizes will be referred to the associated companies. All entries must be received by the closing date. No purchase necessary. Copies of competition entry forms and winners list are available by written request from Anthem Publishing, Suite 6, Piccadilly House, London Road, Bath, BA1 6PL



Vir2

Q

For PC & Mac

Q contains a wealth of cinematic samples – but has quality been sacrificed for quantity? **Keith Gemmell** sounds them out.

Q

Manufacturer **Vir2**

Price **£200**

Contact **Time+Space 01837 55200**

Web **www.vir2.com**

Minimum system requirements

PC 1.4GHz processor, Windows XP (SP2), 2GB RAM

Mac Core Duo 1.66GHz, Mac OSX 10.5, 2GB RAM

Key Features

- Almost 2,000 patches (16GB) of cinematic sample material
- Easy-to-use interface
- 1-click editing
- Drag-and-drop 24-bit one-shot effects

filters, flanging and so on. Other, more advanced functions include a special Legato mode for the monophonic instruments (melodic) and crossfade controls where multi-layered instruments are used. Sensibly, all of the one-shot hits and sound effects in

Q fits the **cinematic mould** with almost 2,000 patches and **16GB of material**

There's a trend among samples library developers at the moment to produce virtual instruments that target television, film, game and media composers. Vir2's Q fits this cinematic mould with almost 2,000 patches and 16GB of material including drums, percussion, winds, vocals, ethnic instruments and guitar alongside a host of textures, pads, trailer-ready effects and percussion loops. Powered by Kontakt as a plug-in, Q is compatible with all major sequencers and is also fit for standalone use.

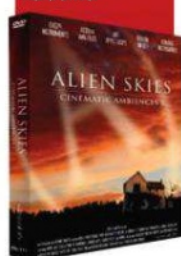
Divided into 23 category folders, the content includes 372 instruments and 1,459 construction kit instruments. While we can't list them all, folder titles such as Ambient Chordal Pads, Hong Kong Cinema, Middle Eastern, Stylistic Phrases, Pulp Surfer and Western provide an indication of what you can expect by way of content.

Cue Q

Although the Kontakt Player has built-in FX already, Q's interface provides a set of its own, including the EZRoom ('easy room') convolution reverb plus the usual delay, chorus,

Measuring Up

Camel Audio has a range of smaller, affordable cinematic libraries including Cinematic (£39), Containing Dark Skies (£72), Alien Skies (£92) and Deep Impact (£72). Zero-G's Ultimate Cinematic Bundle (£203), which contains all three, is a bargain. At the higher end of the scale there's Sample Logic's Morphestra (£407), which comes with material pre-installed on an 80GB hard drive.



the library are also available on disc as 24-bit WAV files, allowing instant drag-and-drop into a film mix.

A cut above

Working with Q is really very simple and all of the instruments and kits are intelligently labelled with descriptive names and load in a split second. This is important because, with such a huge choice, you may need to audition several patches before finding something suitable.

Ten different effects are always available irrespective of which instrument is loaded, each one clearly labelled with its own icon. Clicking on an effect's icon reveals its parameters, all of which can be assigned a MIDI CC number. Above each icon is a button, which remains illuminated if the effect is in use. It's a neat system and an at-a-glance view of which effects are being used for an individual instrument is always available. All of the effects do a splendid job but the EZRoom is a cut above, offering fast access to a range of rich-sounding ambiances.

Depending on what's loaded, three more controls are available – an Envelope tab for accessing AHDSR knobs (attack, hold, decay, sustain, release), Legato controls for horns and winds, plus Layer controls, which appear in any selected multi-layer instrument enabling access to their volume, pan, tuning and envelopes.

Sound design plays a vital role in modern soundtrack productions, but it isn't every composer's strong point. For them, Q's abundance of synth pads, drones, loops and tempo textures should provide plenty of atmospheric backdrops, although some of this is standard fare. Should you need solo instruments, these are plentiful too, particularly those of an ethnic variety. However, we should point out that many of the conventional western instruments are treated in some way. For example, the Granular Orchestra is a grainy, edgy-sounding orchestral set as opposed to anything lush.

For producers who are not necessarily musicians and need a quick phrase or two, the Stylistic Phrases

folder contains a useful crop of sax and trumpet licks, classical soprano phrases and ethnic performances.

Vir2 for you?

Q is a well thought-out library that's very easy to use. What's more, finding and editing cues is fast – an important consideration for film and game composers. While the content isn't exactly sensational – and neither does it pretend to be – it's certainly prolific and covers just about any cinematic genre working composers may find themselves in. **MTM**

MTM Verdict

WHY BUY

- + Easy to work with
- + Good effects
- + Abundance of varied content

WALK ON BY

- Some non-distinctive content

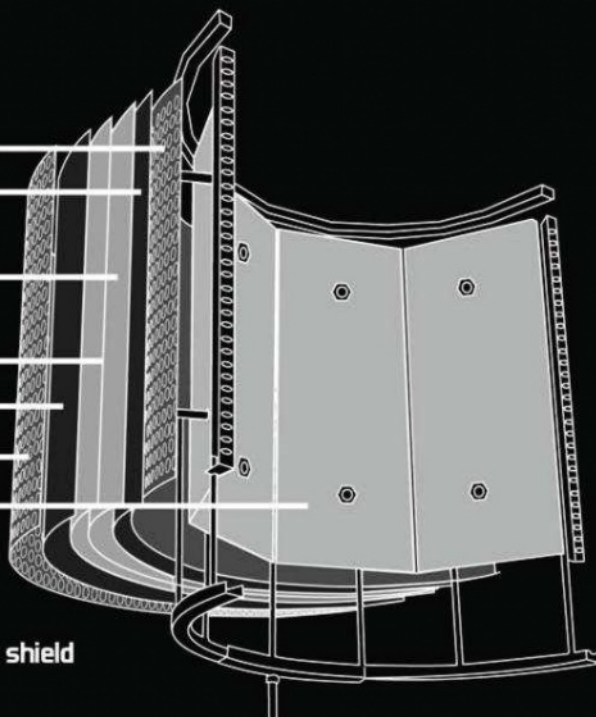
With such a large range of material suitable for so many genres, Q represents good value for money.





WHY OURS WORK & OTHERS DON'T

- Punched Aluminium diffuser
- Acoustic grade wool
- 2 layers of partially tensioned aluminium foil which help dissipate energy and break up the lower frequencies
- Separated air gap as acoustic barrier
- Acoustic grade wool
- Rear punched Aluminium diffuser
- High density acoustic fibre board



- 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

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

GIL NORTON

FOO FIGHTERS, PIXIES, GOMEZ,
FEEDER, COUNTING CROWS

The Reflexion Filter



Patent Pending

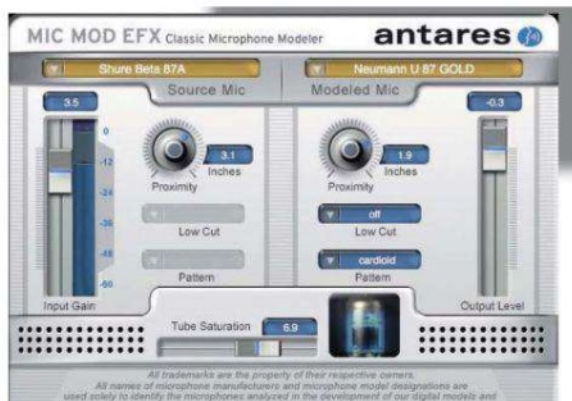
For the full story visit: <http://www.seelectronics.com/rf.html>

0 8 4 5 . 5 0 0 . 2 . 5 0 0
www.sonic-distribution.com

SONIC



Sound Engineering
www.seelectronics.com



Antares

Mic Mod EFX

For PC & Mac

With compatibility issues now addressed and the price slashed, Antares' Mic Mod makes its return. **Huw Price** goes modelling.

Mic Mod EFX

Manufacturer **Antares**

Price **£123**

Contact **Sonic8 0330 2020 160**

Web **www.antarestech.com**

Minimum system requirements

PC Windows XP, RTAS/VST host, iLok

Mac OSX 10.4.11, RTAS/VST/AU host, iLok

Digital modelling software is increasingly an option for those looking to broaden the sonic options available to them, whether in terms of amplifier modelling, vocal modelling or, in this case, mic modelling. Mic modelling isn't a new concept, but here Antares has made it firmly the focus of the package.

The software is both PC- and Mac-compatible, coming in RTAS/VST and AU guises (check Antares' website for full details). Mic Mod authorisation requires an iLok key and the ability to access the iLok website.

Mics and more

A lot of the mics modelled in Mic Mod are fairly pedestrian. For instance, the AKG C12 comes in VR guise only, which isn't the real deal at all. And if you're looking for a valve Neumann U 47, remember that over the pond they were called Telefunken.

The iconic valve U 47 is on the list, but it's the only Telefunken. You'll have to hope for updates to get some flavour of what an ELA M 250 might sound like. There are some beyerdynamics, but the classic C160 ribbon is missing. On the

Key Features

- Mic modelling software for Mac and PC
- Proximity control
- Low-cut filtering
- Pickup pattern selector
- Tube Saturation control
- Mics models from 32 manufacturers
- RTAS, VST and AU formats

AKG front there are plenty of current models but there's no D25 (or even a D12) for those 60s kick drum sounds.

Merely loading up the plug-in introduces a slight volume increase, which gives the source sound a bit of a

If you have only a couple of mics, Mic Mod is a cost-effective way of broadening your sonic palette

head start. Once you've achieved equivalent gain, the Mic Mod sounds commendably transparent.

Virtual mic cupboard

So, how close to the real things do the Antares models sound? We started with electric guitar and vocal tracks where the microphones used for the recordings – a Coles 4038 ribbon and a Shure SM7 respectively – both feature on the Mic Mod list.

We set the Source Mic and Modeled Mic to be the same in each case, balanced the volume levels then switched Mic Mod in and out of bypass. In both cases we were unable to tell, in a blind test, whether Mic Mod was bypassed or not. This confirmed that these models at least were essentially indistinguishable from the real things.

However, Antares does publish the following disclaimer: "This product is not guaranteed to produce, and will not necessarily produce, audio results that are consistent with or match audio

results that could be achieved using any of the referenced microphone models." But as far as we're concerned, this statement is perfectly reasonable.

Being realistic

After all, could you reasonably expect a £120 piece of software to make a cheap condenser sound exactly like a £10,000 classic mic? If your answer is yes, then prepare for disappointment. However, digital modellers sounding exactly like the real thing is surely less important than whether or not they are effective sound-shapers in their own right.

If you have only a couple of mics, Mic Mod is a cost-effective way of broadening your sonic palette. The models can't enhance room acoustics, improve transient response or mimic off-axis response, but how many of us have access to large mic collections to compare with the algorithms? Our tests suggested that Mic Mod was most effective in turning the sound of a high-quality microphone into a high-quality microphone model or degrading the sound quality to a low-end moving-coil model. Attempts to upgrade quality were less successful.

We enjoyed the Proximity controls for fattening the sound and the surprisingly refined Tube Saturation effect might even convince you to postpone that preamp upgrade. Too often we allow ourselves to become distracted by tone paranoia and forget that making music should be fun. Mic Mod is certainly fun and it's cheap, so try out the demo and decide for yourself. **MTM**

MTM Verdict

WHY BUY

- + Effective tone-shaping
- + Simple interface
- + Cost-effective

WALK ON BY

- Sums stereo tracks to mono
- Somewhat unexciting mic selection

As long as you don't expect miracles for just £123, the reissued Antares Mic Mod is as much fun as it ever was and runs on modern systems without a hitch.

★★★★★★★☆☆

**Sonic Charge**

μ Tonic 3

For PC
& Mac**MusicTech
Choice**

The popular drum synth, originally just a 'mini' version of a bigger package, reaches v3. **Mike Hillier** pores over the new features.

μ Tonic

Manufacturer **Sonic Charge**Price **\$99**Contact **Via website**Web **www.soniccharge.com**

Minimum system requirements

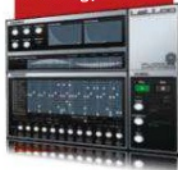
PC Windows XP, VST 2.4-compatible host**Mac** G5 processor, Mac OSX 10.4, VST**2.4- /AU 2-compatible host**

Key Features

- 8-channel percussion synth
- Host-sync'd pattern sequencer
- No samples
- Low CPU requirements

Measuring Up

Audio Damage's **Tattoo** (\$79) has recently entered the fray and provides specialised synth engines for each voice. This gives **Tattoo** a very different flavour from μ Tonic, but one that could easily be used alongside it. **Tattoo**'s other interesting feature is the controlled randomisation sliders for controlling the pattern sequencer, which can be used to send MIDI to other instruments, including μ Tonic.



Compared with the number of samples-based drum machines on the market, dedicated virtual drum synths are surprisingly thin on the ground – and of those that do exist, fewer than half a dozen offer anything more than Roland TR series emulations. Bucking this trend is μ Tonic (pronounced 'MicroTonic') from Swedish developers Sonic Charge. Now on to version 3, μ Tonic has become a staple tool for many producers and provides a unique voice for creating rhythm tracks.

Micro machine

μ Tonic is an eight-voice percussion synthesizer with a built-in pattern sequencer. Each of the eight voices has the same synthesis architecture (as opposed to dedicated engines for each voice specialised for each of the common drum sounds). This means that you can use each of μ Tonic's eight voices to create any sound, which is great if you want to layer two or more similar voices (two hi-hats, for instance) to create a thicker sound.

Each channel in μ Tonic has Mix, Oscillator, Noise and Velocity Sensitivity sections. The Oscillator provides a choice of three waveforms – sine, triangle and sawtooth – and there's a slider for setting the fundamental frequency. The frequency of the waveform is further modified by pitch-modulation parameters, which can take the form of an attack/decay envelope, a sine wave or random modulation with variable rates and depths.

The Noise section provides low-, high- and band-pass filters that are again controlled by a Frequency slider, plus modulation parameters including envelope shape, attack, decay and filter Q for controlling the filter frequency. There's also a Stereo button that creates two uncorrelated noise sources for the left and right channels, resulting in slight differences between them.

Instead of level knobs for the Oscillator and Noise, the Mix section has a crossfader, which is a more intuitive way of balancing the levels of the two sounds. In addition, the Mix section includes distortion, EQ, level and pan parameters. A new Choke button cuts off any other voices with Choke enabled when the voice fires. If two Choke-enabled voices fire at once, the lower-numbered voice will have priority and the other will not fire. This is great for cutting off open hi-hat voices when a closed hi-hat voice is triggered.

The Velocity Sensitivity section controls how the Oscillator and Noise modules respond to velocity, with options to positively or negatively affect

the level of each module in response to velocity and also to control the amount of pitch modulation in the Oscillator.

Considering the relative simplicity of these four modules, μ Tonic is capable of producing a huge variety of sounds. And learning how to get the most out of the synth is easy too, since you can quickly see the status of each drum patch and it comes with a comprehensive library of presets.

Big changes

The basic sound engine of μ Tonic hasn't changed much, so existing users will be able to dial in all their old drum patches. However, various changes improve the overall experience and make μ Tonic more powerful and even easier to use.

The most obvious of these is the new Matrix Editor. The old per-voice 16-step sequencer is still there, but a new button to its right opens up the Matrix Editor, which shows all eight channels simultaneously, enabling you to quickly see the whole rhythm pattern. This is a simple addition but it makes editing drum patterns in μ Tonic much simpler.

Another major new feature is the Morph slider. This enables you to interpolate each of the eight voices between two different positions. At the far left position, any changes made to the patch affect only the left position and vice versa in the far right, while patch changes made while the slider is in the middle will affect both left and right sides equally. This function is useful for slowly morphing between two different sounds and can even sometimes surprise you with a new sound you might not have considered.

On the beat

All in all, μ Tonic 3 isn't vastly different from previous versions, but the new features and improved UI do a good job of expanding on what was already a very useful beat-making tool. **MTM**

MTM Verdict

WHY BUY

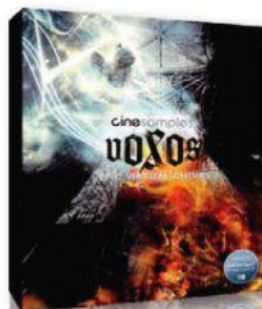
- + An instrument with its own distinct character
- + Incredibly easy to use
- + Break away from a reliance on other people's samples

WALK ON BY

- Requires a wrapper to run as an RTAS plug-in

It's small, simple and effective, which makes μ Tonic one of our favourite plug-in instruments.





For PC
& Mac

Cinesamples

Voxos Epic Choirs

Voxos matches an innovative phrase builder with some beautifully recorded voices. **Keith Gemmell** sings its praises.

Voxos Epic Choirs

Manufacturer **Cinesamples**

Price **£669**

Contact **Time+Space 01837 55200**

Web **cinesamples.com**

Minimum system requirements

PC 1.4 GHz processor, Windows XP, 1GB RAM

Mac Core Duo 1.66GHz, Mac OSX 10.5, 1GB RAM

Key Features

- **Phrase builder and 30-syllable matrix editor**
- **On-the-fly morphing between dynamics**
- **Legato sections, SATB, boys' choir, solo voices**
- **Real transition samples for all intervals**
- **Choir FX (trailer rises, whispers, clusters etc)**
- **4 mic positions plus full mix**

a range of short Latin syllables at each pitch for each section and for each dynamic. The process was repeated with long articulations as well and the combined results are presented in Voxos as a 30-syllable matrix for constructing phrases.

Syllables are arranged sequentially into 'strings' and triggered live from a keyboard. Each syllable advances to the next syllable in the string as notes are played one after another. Sustaining a syllable over several notes is achieved by striking the second note before releasing the first, a technique commonly used in other libraries for triggering legato patches. Up to 12 strings are possible and each one can store up to 20 syllables, a total of 240.

Although initially complicated, with a little practice it's easy to create highly dramatic choral phrases to accompany even the most grandiose scenes. Cinesamples told us that the words were lifted from Mozart's Requiem: 'No better source for epic choral music than that,' the company says. Of course, no one understands a word – but who's listening? The results may be grammatical nonsense but it sounds highly realistic, which is all that matters.

Divine voices

Of course, cinematic music isn't all about action – gentler scenes require a different style of singing from the highly dramatic-sounding Latin chants. The Voxos legato sections contain beautifully smooth legato performances of sopranos, altos, tenors, basses, boys' choir, solo boy, solo soprano and solo

alto. Tens of thousands of intervallic leaps within the ranges of each section were recorded and a custom legato script instantly analyses the keyboard performance and plays the appropriate interval sample.

Each section can be called up individually and played on its own or combined with more sections until a full SATB choir is under the fingertips, ready for Cinesamples' Voice Leading Engine (VLE) to take over. Play a full choir keyboard patch with independently moving lines and the VLE instantly analyses the chord structure and assigns the individual pitches to their respective sections.

Breathtaking FX

Lastly, there's a generous helping of useful effects, such as grunts, shouts, screams (they clearly enjoyed performing these), whispers, layers and risers, all suitable for modern-day soundtracks. Also classed as an effect but tonally useful is a set of eerie clusters and a female 1950s-style Sandman choir (bum bums).

To cap it all, Voxos has its own five-channel internal mixer for volume control over the soloists, genders or individual sections before reaching Kontakt's volume control. The volumes of the five microphone positions can also be controlled here for stereo or surround sound output.

This is a brilliant, well-implemented library that sets a new standard for epic choir samples. The phrase builder is a very clever idea and care has obviously been taken at every stage of development to make Voxos as easy to use as possible. MIDI continuous controllers have been kept to a minimum and because the choir was recorded in a chapel, no extra reverb treatment is necessary, which will suit the majority of composers. **MTM**

Developments in music technology and the internet have created opportunities for composers the world

over to write music for film, TV and games. Their numbers are increasing rapidly, well beyond the confines of Hollywood, and so, too, are the samples libraries they rely on to produce their work. Few would consider their toolset complete without a choir library, and for those on the hunt, the latest offering from Cinesamples, Voxos Epic Virtual Choirs, might just fit the bill.

Powered by Kontakt, it's split into three sections (phrase builder, legato sections and choir FX) and contains a full choir, boys' choir and soloists. Recorded using multiple microphone positions in 5.1 surround, it contains a whopping 35,000+ samples (35GB) and ships both in a box and as a download.

Strong words

Rather than develop a 'word builder' – which often results in robotic-sounding voices – Cinesamples decided to make a 'phrase builder' and recorded

Measuring Up

For a more classical approach using dry samples, the VSL Vienna Choir (£750) is a good choice. Requiem Pro (\$799), from Tonehammer has a similar spec to Voxos but requires the full retail version of Kontakt 4 and doesn't work with the free Player. Although a little long in the tooth, the EWQL Symphonic Choirs can now be found for less than £300 if you're willing to shop around.

MTM Verdict

WHY BUY

- + Beautifully sampled
- + Epic, cinematic sounds
- + Superb legato sections
- + Clever phrase builder

WALK ON BY

- Less suited to conventional classical styles

The best epic choir we have come across for cinematic use – dynamic sounds, beautiful choir section legatos, clever phrase builder and easy to use and play.





studio recording mixer

Classic Analogue for the Digital Age



Multi Tracker
Summing Mixer
DAW Interface
DAW Controller
Monitoring Router



Probably the best preamp and EQ circuits in our 40+ year history

24 mic/line + 2 dual stereo inputs

2 valve mic/line/instrument preamps

6 auxes, 4 subgroups, main stereo + mono bus

100mm faders – available in motorised or non motorised versions

Choice of analogue or Firewire/ADAT interface modules

Hands-on interfacing with DAWs

www.allen-heath.com/gsr24

ALLEN&HEATH
WORLD CLASS MIXING



Focusrite

VRM Box

If your headphone mixes sound odd over speakers, the VRM Box may be just what you need. **Huw Price** gets some ear candy.

VRM Box

Manufacturer **Focusrite**

Price **£80**

Contact **Focusrite 01494 462246**

Web **www.focusrite.com**

Key Features

- S/PDIF input
- D/A dynamic range: 120dB
- Stereo S/PDIF input on RCA
- Stereo headphone output on 1/4-inch TRS
- Headphone output level control
- USB 2.0

It's generally accepted that mixing on headphones is potentially hazardous, particularly when the intention is for the mix to be played back over loudspeakers. Low-frequency reproduction in headphones is often non-linear and headphone stereo imaging bears little relation to speaker imaging.

Of course, much depends on the headphones you are using, and headphone monitoring does have some advantages. You won't have to cope with dodgy room acoustics plus you can work anywhere, any time without incurring the wrath of partners, neighbours or noise-abatement officers.

Transfer market

So wouldn't it be fantastic if digital modelling technology could be used to overcome the inherent problems so your headphone mixes might stand a reasonable chance of transferring reliably to speakers? With the VRM Box, Focusrite might have the solution.

The box itself is smart and reassuringly weighty, measuring 6.75cm square. It's low-profile, sits steadily on your work surface thanks to non-slip rubber feet and features one large and silky volume control.

Measuring Up

The only other system we've seen that does the same job as the VRM Box is the 112dB Redline Monitor (£99). Since this is a software-based plug-in you can download a version then buy online. The algorithm apparently 'performs a sophisticated combination of filtering, frequency-dependent delaying, mid/side processing and room simulation to create a convincing acoustic soundstage that allows you to properly localize sound sources'.

The VRM Box connects to a PC or Mac via USB; once it's been selected as the audio output device you can plug in a set of headphones. If you'd prefer, you can connect the VRM Box to your usual audio interface via an RCA S/PDIF

Work **anywhere, any time** without incurring the wrath of **partners or neighbours**

socket, and the VRM Box's onboard digital converters handle 44.1kHz and 48kHz with a dynamic range of 108dB.

OK, your laptop and audio interface may both have headphone sockets with easily controllable volume, but this package also contains the VRM Box control panel software. The software models 15 different types of speaker, from very high-end types down to dodgy TV and computer speakers. You can also choose between three listening environments with varying degrees of ambience – Professional Studio, Bedroom and Living Room.

In your head

In a typical headphone scenario the left and right panning is exaggerated, so the panned elements in the mix seem to be sitting either in one ear or the other. Centrally panned elements actually feel like they're inside your head, and if you pan something from one side to the other it seems to move

right through your brain. Effects levels can also appear more prominent than they really are.

Activating the VRM Box monitor models dramatically changes this stereo behaviour. Left/right elements conform more closely to what you'd expect from a properly set up monitor system and the central elements appear slightly above and in front of your head. Obviously, Focusrite doesn't want to provide too many technical secrets, but if you listen to tracks in solo mode you'll hear something that sounds like room ambience to the sides of the central image, so it's a bit 'spread out' rather than solidly fixed. As you pan left and right the instrument is less precisely located in the stereo image when the VRM software is activated.

Only subjective assessments of the accuracy of the monitors models could be made because the headphones will impart some of their own sonic character. It's still fun listening to the various speaker models and pretty soon you'll find something that works for you. Although we experienced better panning correlation between speakers and VRM-treated headphones, we found ourselves pushing the volume of

central elements such as snare drums and vocals slightly too high when mixing with the headphones.

So, like any other monitoring system, the VRM Box does require a period of familiarisation. What's not in doubt is its ability to enhance the clarity and overall tone of even quite mediocre 'phones way beyond their usual standards. **MTM**

MTM Verdict

WHY BUY

- + Ultra-intuitive software
- + Big subjective quality improvements
- + Good 'speaker' selection

WALK ON BY

- Only one headphone socket
- Imaging becomes slightly vague

The VRM Box certainly improves the sound of headphones and, once you get used to it, your mixes might be improved too.





Gallo Engineering

Studio Devil Virtual Guitar Amp II

For PC & Mac

Studio Devil Virtual Guitar Amp II provides a simple, elegant solution to amp modelling. **Mike Hillier** takes it for a spin.

Studio Devil Virtual Guitar Amp II
Manufacturer **Gallo Engineering**

Price **\$79**

Contact **Gallo Engineering**
+39 09 62 665 141

Web **www.studiodevil.com**

Minimum system requirements

PC VST- or RTAS-compatible host

Mac VST-, AU- or RTAS-compatible host

Key Features

- 18 preamp models
- 20 cabinet emulations
- 2 effects engines
- Simple, clean user interface

For decades, guitarists tended to pick one amp and stick with it. These days, thanks to modelling amps and amp simulators a guitarist can have just about the entire history of amp tones at their command. The advantages of this are obvious, though a by-product is that many guitarists no longer have a signature sound, since they can switch their amp and effects for every song.

Virtual Guitar Amp II provides 18 amp models covering all the classics as well as several less common amps such as the Peavey Classic 30 and Laney VH-100R. However, rather than choosing an amp from a list, VGA II essentially functions like a single amp with lots of different parameters. Switching any parameter can either subtly or vastly change the tone, depending on which switch is toggled.

Dial it in

The VGA II interface is very simple and should be familiar to anyone who has used a traditional amplifier. The top row

has three switches that define Style, Channel and Type, as well as knobs to control gain, volume, EQ and a noise gate. Below this is a cabinet section that uses impulse responses, a tuner and two effects engines: Tremolo/Chorus and Delay/Reverb.

Because the 18 amp models aren't chosen from a list, you find yourself naturally experimenting with amps not based on preconceived notions, but simply by listening. Rather than wondering whether to switch from a Fender Twin to a Matchless Chieftain or a Vox AC30, Studio Devil VGA II leaves you thinking: do I want a more modern sound or a more crunchy sound?

Stack 'em up

As it's just a set of toggles, the GUI doesn't change to provide an image of the new amp, nor do you get any different parameters depending on the model. The EQ tone stack does change with each amp setting, along with the preamp model, and for those amps that wouldn't normally have a four-stage tone stack, Gallo has modified the tone stack to sound as close to the original as possible while retaining all four bands.

This makes it hard to compare the VGA II amps with some of the originals: our AC-30, for example, doesn't have a presence knob. But you can hear how instead of offering a direct emulation of the tone stack in the AC-30, the VGA II instead delivers something with a similar character.

To emulate speaker cabinet response, VGA II has a convolution engine and a selection of 20 impulse responses, including two from the original Studio Devil VGA and 18 more created by Red Wire Impulses. By default the software picks the cabinet most often seen with the amp you've chosen, but you can override this and select any other cabinet if you prefer. Unlike other cabinet emulations we've come across, there are no options to switch between microphones or to try different mic positions. Given how important this can be in defining the tone when working with a real amplifier, it seems a surprising oversight for VGA II.

To round out the package, Gallo has included two effects models: a modulation effect with tremolo and chorus, plus a space effect with delay and reverb. The effects are fairly simple and it's a shame not to see the tremolo built-in to the amp section. Placed before an amp section (or even built-in to an amp section as on some Fender amps), a tremolo can have a stunning effect on tonal characteristics as well as simply modulating volume.

The chorus is a usable effect, if not up to the standard of similar effects in Guitar Rig or AmpliTube. The delay and reverb effects are also very simple. They're useful if you don't have anything else, but in most cases you'll get better effects using your host's own delay or reverb plug-ins.

The verdict

The amp emulation in VGA II is very good and we like the attention to sound quality over replicating each amp with lifelike graphics. The cabinet modelling is a little simple and the effects seem to be something of an afterthought, which detracts somewhat from the overall quality of the plug-in. However, we still think we could find a place for VGA II alongside the more established amp simulators in our setup. **MTM**

MTM Verdict

WHY BUY

- + Easy to use
- + Broad selection of amp sounds

WALK ON BY

- Limited built-in effects
- Some models aren't direct clones

Studio Devil VGA II is an affordable amp sim with sounds that match many of its more expensive – and expensive – competitors.



Measuring Up

Studio Devil VGA II is a great-sounding plug-in with a strong collection of amp models. If you already have a good set of effects and want only amp emulation, VGA II is a much cheaper option than AmpliTube and Guitar Rig. If you really want to simplify things then Softube Vintage Amp Room has three excellent amp models and no other additional features, though at \$329 it's also more expensive than VGA II.



iZotope

Stutter Edit

For PC & Mac

If glitch is your thing, iZotope's Stutter Edit might lead you down all kinds of creative avenues. **Alex Holmes** checks it out.

Stutter Edit

Manufacturer **iZotope**

Price **\$249**

Contact **izotope@izotope.com**

Web **www.izotope.com**

Minimum system requirements

PC Windows XP

Mac OSX 10.5.8



Key Features

- VST, AU, RTAS formats
- Tempo-sync'd to your host
- Designed by producer BT
- Control the buffer timeline with the mod wheel

Measuring Up

There are many freeware glitch plug-ins that are worth checking out for basic stutter effects, plus several plug-ins designed for programming glitch sequences, such as Effectrix, Glitch and Sequent. However, for performance glitch your main contenders are The Finger from NI (£69) and Artillery 2 from Sugar Bytes (£149), both of which are arguably more flexible but not as fluid for live performance.

holding down keys – except in Stutter Edit each key triggers a different gesture containing multiple effects running simultaneously. Although the focus is on creating rhythmic glitch cuts by moving through a sequence of beat divisions, you also have control over the

Stutter Edit is one of the most exciting plug-ins we've tested for quite some time

gate time, panning, high-/low-pass filters, lo-fi and bitcrush effects, two stereo delay effects and output volumes. As this software is designed to be performed, you can choose different values for the input quantise so that every gesture is triggered on the grid. There is also a Generator section that gives you the choice of 34 noise risers and hits, enabling you to add excitement to your performance as you move between sections.

Shape shifting

What makes Stutter Edit stand out from other glitch plug-ins – apart from the large collection of superb presets created by Mr BT himself – is the fact that every parameter is set to an LFO. When you hit the keyboard key you set all the LFOs in motion and each parameter moves from one value to another, which means you can't actually program your own steps or shapes.

Although this initially sounds restrictive, it works wonders as it blends the movement of all the effects into one, creating complex but incredibly fluid sound-mangling. Whether you feed through beats, vocals or even instruments, you can instantly create the kind of complicated sounds that would take hours to program 'normally'. And as everything is tempo-sync'd it all stays in time and performance is very, very fun!

On top of simply hitting keys to trigger different presets you can also move the mod wheel to take control of the LFO and sample buffer timeline, enabling you to slow down the movement of your effects. There's also a global low-/high-pass filter controlled by the pitch bend wheel, although we found the Q value to be set a little too high for our tastes. Unfortunately, you can't automate any of the parameters, which will upset some. The main reason for this is that each preset is essentially automated by the LFOs from within the plug-in itself, although allowing automation would open up many more creative possibilities.

If you already own glitch plug-ins then you may not get a great deal more out of Stutter Edit. It may also seem a

Stutter Edit is a plug-in we never thought would actually see the light of day. There has been rumour and speculation surrounding the software and its sister effect, Break Tweaker, for years, with no mention of an actual release date.

Luckily, iZotope has stepped in and this glitch performance plug-in designed by virtuoso producer BT is finally with us. For those who don't know, BT is a US composer and producer responsible for a number of film scores, club hits, deep electronica albums and a few more poppy tracks that we shall not mention.

Stutter Edit was designed by BT as a way to perform live his signature sound of incredibly intricate micro edits and creative rhythmic effects. It loads into your DAW as a MIDI-controlled effect, accepting incoming audio via its sidechain input. How complicated this is to set up will depend on your software of choice, but we had no problems running it in Logic and feeding in either an audio or instrument track.

The plug-in works in much the same way as Sugar Bytes' Artillery or NI's The Finger, whereby you activate effects by

little restrictive to those who like to program complex glitch sequences as you're tied into the LFOs and working within the GUI. However, the quality of the sounds that it creates, the ease of use and the sheer amount of fun that can be had all combine to form one of the most exciting plug-ins we've tested for quite some time. **MTM**

MTM Verdict

WHY BUY

- + Superb sound-mangling tool
- + Easy to get good results
- + Fun to play

WALK ON BY

- GUI is a little dark
- Slightly restrictive programming

An incredibly fluid and fun performance effect that enables you to easily re-create BT's signature glitches and rolls.





The Freemasons' logical choice of interface

ORPHEUS

Professional FireWire
audio interface



When the Freemasons went looking for a new interface for their Logic system, it became apparent that there was only one choice.

Orpheus provides Prism Sound's world renowned performance, sound quality and state-of-the-art clock technology in a dedicated FireWire unit compatible with both Windows and MAC OS X.

Orpheus features line, microphone and instrument inputs, selectable RIAA Equalization for turntables, a built-in premium-quality monitoring mixer and concurrent ADAT and switchable S/PDIF or AES3 digital I/O plus support for outboard MIDI devices. The Microphone inputs include MS matrix processing and dual headphone outputs are provided each with their own volume control.

Contact us now to arrange *YOUR* Orpheus demo.

sales@prismsound.com www.prismsound.com
UK +44 (0)1353 648888 USA +1 973 983 9577





FabFilter Pro-L

For PC
& Mac



Every serious producer needs a good brickwall limiter in their toolbox. **Hollin Jones** finds out if Pro-L does the business.

Pro-L

Manufacturer **FabFilter**

Price **£149**

Contact **Via website**

Web **www.fabfilter.com**

Minimum system requirements

PC SSE-capable processor, Windows XP

Mac G4 processor, Mac OSX 10.4

Key Features

- 4 limiting algorithms
- Accurate gain-reduction and output metering
- Channel linking
- 4x oversampling
- Dithering
- Inter-sample peak detection

Pro-L is the latest member of a growing family of plug-ins created by Dutch developer FabFilter. It brings

professional limiting to the company's line-up. Designed for mastering and mixing, it uses advanced algorithms as well as precise metering to help you squeeze loudness out of your tracks without causing clipping or distortion.

A modest download, authorisation is via a key file that is emailed to you and platform support is excellent. Windows XP, Vista and 7 are supported in their various flavours of 32- and 64-bit and it's VST- and Pro Tools-compatible. Mac users running OSX 10.4 or 10.5 will get 32-bit operation; 64-bit operation is possible with Mac OSX 10.6. VST, AU and RTAS formats are available and, remarkably, it's still a Universal Binary, meaning it will run both on Intel and G4-/G5-based Macs.

Take it to the limit

You can use limiters during mixing, but a more common use for brickwall limiting is for mastering, either strapped across the master outputs of

your DAW or loaded into a wave editor such as WaveBurner, WaveLab, Peak or Audition to process a stereo file. Their purpose, of course, is to give you a 'radio-ready' sound (or at least provide you with as much volume as you can achieve while adding weight and body to the sound) while avoiding clipping.

Pro-L uses four different algorithms, each with its own sound and character and accessible from the Style menu. These include transparent, punchy, dynamic and 'all round'; flipping between them gives substantially different results.

It's impossible to go much further without mentioning the plug-in's interface, which, like everything from FabFilter, is simply gorgeous. Slick but muted, the layout is clean, uncluttered and friendly, providing easy access to everything you need. Features are clearly labelled and there's a tooltip system that reveals helpful information about a function when you hover over it. These interfaces are really raising the bar for other developers.

Plug it in

An Advanced menu can be expanded from the side of the plug-in that contains some essential parameters for controlling your signal processing. Lookahead, Attack and Release control the speed at which Pro-L carries out its limiting and determine the time it takes to drop off. A Channel Linking feature enables you to separate the lookahead and overall release stages. The output level can be set and a slider to the left

lets you increase the gain of the incoming signal while the plug-in limits the output. The limiting is displayed by a red gain-reduction level meter and any distortion indicated as a red signal in the otherwise blue waveform display.

Interestingly, holding down the [Alt] key while raising or lowering the Gain slider will alter the output level by the same amount in the opposite direction. By doing this you can see how the limiting is affecting your overall sound (both real-time level metering and signal display can be independently switched on or off). The display can be set to resolutions including the K System, introduced by Bob Katz in an attempt to standardise levelling practices throughout the audio industry. There are also three regular metering scales – 16, 32 and 48dB – each of which shows you a different balance of applied limiting and overall levels.

Bag of tricks

Further options include linear-phase oversampling at up to 4x to combat distortion and aliasing during limiting as well as dithering. There's also switchable noise shaping, a global bypass button and MIDI Learn. Most parameters can be assigned to a MIDI controller to give you more hands-on control. There's the facility to A/B your settings and the plug-in comes with lots of excellent presets grouped by musical genre and sonic style (naturally, you can save and load your own).

Pro-L is another triumph for FabFilter: easy to use and with valuable visual feedback to help you understand both how to use it and how your changes are affecting the signal. It's capable of transparent mastering and also colouring the sound in different ways if that's what you want. Either way, the results are solid and the CPU hit low. For all kinds of mastering, Pro-L is seriously worthy of consideration. **MTM**

MTM Verdict

WHY BUY

- + Very easy to use
- + Highly configurable
- + Powerful-sounding limiter
- + Good visual feedback
- + Accurate metering
- + Low CPU usage

WALK ON BY

- Nothing

An amazing-sounding plug-in that's easy to use but offers professional results.



Measuring Up

IK Multimedia's T-RackS (£150 for the Standard edition) contains four processors in a standalone application but these are also available for use inside your DAW. They are modelled on more conventional hardware and don't have the slick interface of Pro-L, but some people prefer that. Waves' L2 (\$250) is perhaps not much to look at, but has many fans in the pro audio and mastering worlds.

PrismSound

Portable, versatile and
unbeatable sound!
*Joshua Blair and
Mark Ronson (Sphere studios)*

The only interface for the job

When looking for a high quality I/O solution. There is only one choice.

Orpheus provides Prism Sound's world renowned performance, sound quality and state-of-the-art clock technology in a dedicated FireWire unit compatible with both Windows and MAC OS X.

Orpheus features line, microphone and instrument inputs, selectable RIAA Equalization for turntables, a built-in premium-quality monitoring mixer and concurrent ADAT and switchable S/PDIF or AES3 digital I/O plus support for outboard MIDI devices. The Microphone inputs include MS matrix processing and dual headphone outputs are provided each with their own volume control.

ORPHEUS
Professional FireWire
audio interface



Contact us now to arrange YOUR Orpheus demo.

sales@prismsound.com www.prismsound.com
UK +44 (0)1353 648888 USA +1 973 983 9577



METAAlliance™
CERTIFIED



Standard Audio

Level-Or

Level-Or blends limiting and distortion but offers little in the way of subtlety. **Mark Cousins** is on the Level...

Level-Or

Manufacturer **Standard Audio**

Price **£420**

Contact **KMR Audio 020 8445 2446**

Web **www.standard-audio.com**

As any engineer will testify, not all limiters are designed to be as sweet and transparent as some audio purists would prefer. Take Shure's Level-Loc PA compressor, for example: originally built in the 60s as a crude levelling device, it was subsequently adopted by the likes of Tchad Blake as a form of extreme drum compressor – perfect for a 'lo-fi' drum squeeze. Inspired by the Level-Loc sound, Standard Audio has developed the Level-Or, designed as part limiter, part distortion unit and certainly never intended for audiophile mastering.

The Level-Or comes in the now familiar 500-Series rack format, with its sound largely dictated by a prominent

Key Features

- Transformer-balanced input
- Electronically balanced, line-level output stage
- 2 modes of operation: Level and Crunch
- Additional release time
- 1/4-inch line input on front panel

JFET limiter. Unlike the original Level-Loc, the Level-Or is a slightly more versatile beast. Firstly, there's the balanced input and output on the API rack, coupled with a 1/4-inch line input on the front of the unit. There are also two modes of operation – Level and Crunch – as well as a variable release time in its Levelling mode, all of which didn't feature in the original 60s-designed Level-Loc compressor.

Extreme squeeze

The most familiar sound and operation comes in Level mode, whereby the Level-Or works as a form of hard-edged limiter. Set the input to around 9 o'clock and the output to match your console or DAW's inputs. The output is largely linear, although slightly nosier than you'd first expect. Push the input harder,

Level-Or is a cost-effective way of adding tone and colour few other units will produce

though, and the Level-Or becomes distinctly more interesting, producing a clear limiting effect that becomes increasingly pronounced as the input is raised – no leaky transients, just pure squash with plenty of pumping! There's also an adjustable Release setting (between slow and fast) that enables you to fine-tune the pumping to best match the input you're trying to process.

As the name suggests, Crunch mode negates the limiting effect, instead turning the Level-Or into a rather impolite distortion pedal. Again, variable input levels yield different qualities of results – from subtle(ish) soft saturation through to a more aggressive crunch distortion. Used on drums, for example, Crunch can add both bite and body, whereas on a synth, you can turn a polite bass sound into a rich and raspy sawtooth wave.

Crunch time

Of course, given its quirky design, the Level-Or isn't without its faults. As previously hinted, it produces a fair amount of noise, although given that you'd probably use it in small amounts in the mix (and that once a signal is passing through it the noise is largely unnoticeable) this isn't too much of an issue. Even if the Level-Or is more prominent, a simple noise gate on the output will keep the unit in check. Other potential issues include the lack of a

MeasuringUp

Our favourite 500-Series compressor is still Purple Audio's Action, although at £600 it's considerably more expensive than the Level-Or. The Action compressor is FET-based (like the Level-Or), although more variable in its operation.

bypass control, but again, if you're putting a signal through this box you'll probably not be that interested in the integrity or purity of the output.

Overall, the standout use of the Level-Or is as a parallel drum compressor – its ease of operation, slightly trashy sound and a clear propensity to 'pump' make it a real winner. If you're a fan of the original Level-Loc sound, the fast release mode will also be a welcome addition and certainly makes the unit proportionately

more versatile. Drive mode also works well in parallel applications, although, of course, it works just as well when used as an insert.

A new standard

For some, the Level-Or's distinctive, quirky sound makes it a perfect means of adding character to your mixes, but for others, its particular flavour might be too much of an acquired taste and shouldn't be considered as a first-choice limiter! On a positive note, the Level-Or is one of the most affordable 500-series compressor/limiters available (the Safe Sound Audio P501 arguably being its nearest rival in price) and if your API 500-Series rack needs a slot filling, it's certainly a cost-effective way of adding tone and colour that few other units will produce. **MTM**

MTM Verdict

WHY BUY

- + Packed full of character
- + Easy to set up

WALK ON BY

- Slightly noisy
- No bypass control

Part limiter, part distortion unit, the Level-Or isn't the most subtle tool in the box! It's affordable and has plenty of character, but it won't be to everyone's tastes...





"Best A/D - D/A conversion I've had yet
(and fewest compatibility problems) :)
props to Prism for their gnarly product!"
Deadmau5

Deadmau5 logical choice of interface

When Deadmau5 went looking for a high quality I/O solution, it became apparent that there was only one choice.

Orpheus provides Prism Sound's world renowned performance, sound quality and state-of-the-art clock technology in a dedicated FireWire unit compatible with both Windows and MAC OS X.

Orpheus features line, microphone and instrument inputs, selectable RIAA Equalization for turntables, a built-in premium-quality monitoring mixer and concurrent ADAT and switchable S/PDIF or AES3 digital I/O plus support for outboard MIDI devices. The Microphone inputs include MS matrix processing and dual headphone outputs are provided each with their own volume control.

ORPHEUS

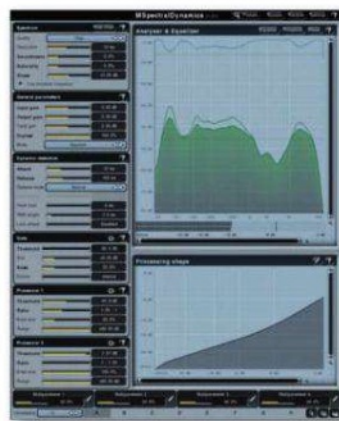
Professional FireWire
audio interface



Contact us now to arrange YOUR Orpheus demo.

sales@prismsound.com www.prismsound.com
UK +44 (0)1353 648888 USA +1 973 983 9577





Melda Production

MSpectral Dynamics

For PC & Mac



Want a finer degree of compression control? Alex Holmes checks out a new plug-in that really puts the 'multi' in 'multiband'.

MSpectral Dynamics

Manufacturer Melda Production

Price €199

Contact Via website

Web www.meldaproduction.com

Minimum system requirements

PC Windows XP, VST-compatible host

Mac Intel Core Duo, Mac OSX 10.5, VST/

AU-compatible host

Key Features

- Can perform real-time spectral compression and expansion
- High-resolution spectrum analyser
- 2 independent compressor/expander units and 1 gate unit
- Scalable GUI with superb visual feedback
- Free-draw your own threshold and processing shapes

can be fine-tuned to provide a highly detailed graph or a smoothed-out representation of the audio. You then set attack and release times, threshold and the ratio for the dynamics processors that can both compress and expand the signal. The result is that any specific part of the spectrum that passes the threshold is pushed back down again without affecting neighbouring frequencies. This is all made much easier to understand thanks to the excellent scalable graph, which shows the input spectrum, threshold level, reduction amount and resulting output.

The complete feature set of MSpectral Dynamics is too large to go into fully here, but highlights include two independent compressor/expander units, an advanced gate unit, freeform linear-phase EQ, custom threshold and processing shape, up to eight-channel surround processing, up-sampling, preset morphing, scalable GUI, MIDI Learn and an online preset exchange.

Going deeper

Although on the surface you could call this plug-in a compressor, it's actually far more creative and complex than that description suggests, and in many ways it has more in common with an EQ. Instead of having to go through and manually automate narrowband EQs to notch out sudden spikes, MSpectral Dynamics can smooth out the frequencies of a mix in real time. With careful tweaking you can get transparent results and a final mix

that's scientifically more balanced – although the final port of reference should always be your ears.

Further applications might include using a vocal input on the sidechain to duck out specific frequencies from a competing instrument or expanding those frequencies to get vocoder-like results. We also ended up with some interesting gating results that let only small parts of the spectrum through, plus some other extreme effects that are simply too esoteric to explain! Other nice features include the ability to free-draw a threshold line so you can avoid affecting certain frequencies, as well as a 'temp gain' slider that enables you to preview the sound of more or less compression by simultaneously balancing the input and output levels.

CPU usage is relatively low when you have a simplified spectrum graph, but it increases rapidly once you turn up the detail of the analyser. That's only to be expected, but we also found it slightly annoying that certain dialogue boxes for certain settings froze out DAW control until we closed them.

Lots to learn

This is an incredibly complex effect and some may find the number of options confusing, plus the GUI a little too busy for all tastes. That said, it rewards perseverance and patient tweaking, as the results are unobtainable with any other plug-in. What's for sure is that its creative potential is really limited only by your imagination.

We're told that the developers are working on an update with a range of specific-use presets and a streamlined GUI, but in the meantime, if you're looking for a new creative tool or something more flexible than your standard multi-band compressor, this is definitely worth a look. **MTM**

There are various schools of thought when it comes to using multi-band compression. Some will argue that you should be able to achieve a good mix with solid EQ, single-band compression and good levels alone, while others swear by it as a go-to tool for getting the maximum loudness out of a track or mix. Either way, it can be highly effective in the right hands – or devastating if used incorrectly.

But what if, instead of having four or five frequency bands, you used the entire spectrum, giving you hundreds or even thousands of bands?

This is the idea behind Melda Production's MSpectral Dynamics, a creative mastering tool that can be used to control and balance the frequencies in your track. The processor runs as a VST, AU or RTAS plug-in within your host DAW and you actually get both MSpectral Dynamics and the scaled-down MSpectral Dynamics Mini.

The plug-in works by analysing an incoming audio signal using a traditional spectrum analyser, which

Measuring Up

There are a couple of other plug-ins that work on the same principle, but neither offers the level of depth and control seen here. Voxengo Soniformer (\$110) has a simpler interface, but works only on 32 bands. SKnote Specter (€99) has more effects, but again is not as flexible, particularly when it comes to the threshold controls.

MTM Verdict

WHY BUY

- + Gives a huge amount of control
- + Unique creative possibilities
- + Transparent results

WALK ON BY

- Huge number of parameters and controls can be confusing
- Patience required for best results
- Quite a high CPU hit when working with detailed spectrum settings

A surprisingly deep plug-in that rewards patience with both subtle, mix-flattering results and extreme, never-before-heard effects.



**Telefunken**

AR-51

The AR-51 is a nine-pattern valve mic that Telefunken has added to its more affordable R-F-T series. **Huw Price** tests its metal.

AR-51

Manufacturer **Telefunken**

Price **£1,662**

Contact **Unity Audio 01440 785843**

Web **www.telefunken-elektroakustik.com**

To make this an affordable microphone, Telefunken has used the metalwork from an Alctron HST-11A and fitted significantly superior components. The preamp circuitry of the company's C12 and ELA M 251 has been re-created on a printed circuit board (PCB) rather than wiring the components point-to-point in true vintage style. But what a PCB it is!

Rather than the usual thin strips of copper, the traces are ultra-thick and silvery, so it's obvious from the start that this is a quality item. We know from our own modding experiences that the HST-11A's stock 12AX7 valve is best substituted for a lower-gain one (this provides more clean headroom; the usual choice is a C12/M 251-spec 6072A), but Telefunken has opted for an ECC81. This is a new old-stock valve, apparently of Mullard manufacture.

Off-and-on shore

'Off-shore' is the phrase that many US companies use rather than 'Chinese'. In this case it applies to some of the AR-51's body components. No one should have any concerns about the metalwork and we think the charcoal powder coating, the engraving and the

Key Features

- Dual-sided, gold-sputtered membrane
- Frequency range: 20Hz–20kHz
- Polar patterns: omni, cardioid, figure-8 plus 6 intermediate stages
- Impedance: 200 ohms
- SPL: 138dB

black chrome look fantastic. The outer tube is steel rather than brass and it's machined in the US.

The Chinese capsule might raise some eyebrows, particularly when competitors such as Peluso assemble their own in the US. However, Telefunken assures us that all of its capsules pass

A genuine all-rounder with plenty of detail and an extremely likeable character

Measuring Up

The Peluso P12 (£999) is another similarly upgraded microphone based on the Alctron HST-11A. However, the AR-51 is slightly more up-front and present while the Peluso sounds airier, deeper, softer and more 'vintage'. Ultimately, choosing between them would be a matter of personal taste. Another model you might consider is the Advanced Audio CM-12 (\$695). This is another upgraded HST-11A with a Peluso CEK-12 capsule, a BV11 output transformer, a 6072a valve and a 1.5mF coupling capacitor to lower the bass to 10Hz.

rigorous quality-control testing. Unlike the edge-terminated capsule you might have expected to find in a mic so closely modelled on the ELA M 251, the AR-51 has a centre-terminated capsule that looks more like a Neumann derivative.

The other 'off-shore' part is the German-made Haufe output transformer; it's identical to the one used in Telefunken's top-of-the-range C-12 and ELA M 251 E replicas. Inside the AR-51's metal flightcase you'll find a wood box, a PSU and a generic suspension mount. A generous 7.6 metres of Gotham Audio cable is also supplied. It's well-regarded sonically, but displays an annoying tendency to twist unless handled carefully.

On the floor

It's immediately noticeable that the AR-51's noise floor is very low by valve-mic standards. This suggests that

Telefunken's quality-control department is certainly diligent about valve selection. The AR-51 has an enjoyably smooth sound through the midrange and plenty of detail in the top end. It falls somewhat short of the glistening, almost magical treble of the Telefunken ELA M2 50F we reviewed in Issue 57, but so does every other microphone we've tested thus far.

Making A/B comparisons with other similarly priced and spec'd valve mics suggests that the AR-51 has a preset bass roll-off. This isn't necessarily a bad thing – especially if you need to close-mic vocals, guitars or any other instrument – because you can do so without the sound becoming boomy. However, this should be a consideration if you're looking for a large-capsule valve condenser to record instruments with lots of low-frequency content.

Pick it up

Output levels and tone quality are remarkably consistent across all nine pattern settings. Off-axis, cardioid displays only slight bass roll-off, while omni mode remains consistent all around. This is quite impressive for a large-capsule condenser, with which you might expect a bit more high-frequency attenuation at the sides.

Our tests showed the AR-51 to be a genuine all-rounder with plenty of detail, no obvious frequency colourations and an extremely likeable character. As such it should please recordists who appreciate the sonic characteristics of both vintage and modern valve microphones. **MTM**

MTM Verdict

WHY BUY

- + Bright, detailed sound
- + Low noise
- + Manageable proximity effect

WALK ON BY

- Cable tends to twist up
- Preset bass roll-off

Another very high-quality microphone that combines Chinese metalwork with US electronics and engineering expertise.



this is an advert for a show about guitars

it's called the guitar show

it's in birmingham on 26th-27th feb 2011.

- » it's at the new bingley hall
- » it costs £8.50 (advance)
or £10.00 (door) to get in
- » car parking is free
- » you can find out
more on our website



» www.ukguitarshows.co.uk

Guitar
A MUSIC MAGAZINE

KERRANG!
ROCK RADIO



cash for kids
helping you to help children

**FAIR
DEAL
MUSIC**

**CW&T**

Audioprom

The iPad is home to many experimental interfaces. **Liam O'Mullane** tries out yet another new approach.



Audioprom

Manufacturer **CW&T**

Price **£5.99** (Apple App Store)

Contact **cwandt@cwandt.com**

Web **www.cwandt.com**

Key Features

- Tap tempo
- 4 instrument layers
- Varied sample packs
- Easy editing

The first version of this app was the rather bizarre Sausage Sequencer, which responded to slices of sausage placed on the iPad screen. It never got beyond the prototype stage, but by that time the developers had already put together a pretty decent audio sequencer.

And so with silly meat-based interface concepts put aside, the next incarnation for this app was in its current form as Audioprom. This is a more sensible, finger-based version which leaves virtual objects, or sausage slices if you prefer, on the screen, which you then manipulate using grease-free, multi-touch finger commands.

Virtual slices

Audioprom is designed as a sequencer that's suitable for live performances, with all elements based around a single-screen interface. Various parameters are placed at the top and bottom of the screen, with momentary popup lists and parameter sliders to avoid any long-term clutter. The main controls are tempo, metronome, record, copy, erase, undo and scrub.

The main sequencer grid is named the Canvas, with a fixed length of four bars. But its quantize is variable, like most sequencers, for manually inputting trigger points for various samples within an instrument. These triggers are called Markers: they are the virtual equivalent of the sausage slices, and they look like clock faces.

Each Marker has its own volume and pitch parameters, because the grid doesn't work like a conventional piano roll. Instead, an instrument will consist of various sampled tones and variations on the theme of the instrument title. Whereas each row would normally represent a different note, in Audioprom it's actually for a different sample.

It's the pitch information within each individual Marker that enables you to create melodies. You could liken this to using a musical REX loop, where every MIDI note triggers a slice, which might be a different sound, or a variation on a sound playing throughout the loop. 57 sample instruments are included and cover pianos, synths, vocal stabs, guitar, drum kits and a lot of special FX.

Four instrument layers are available, and they have their own Canvas screen for editing. One neat little touch is that you're able to see the Markers from other layers in the backdrop of the Canvas that's currently in focus. They appear as little 'plus' icons, which makes syncing new parts to another part like drums really easy without flicking back and forth between them.

In terms of saving your work, there are 25 sessions available in which to store your different projects.

Marker control

Editing a marker involves one of two methods. You can hold down a finger and then use the other hand to circle around it: this changes either the pitch or volume, if you choose the outer or the inner circle (respectively). But we found the other option – a slider to the left-hand side – a lot easier to use, especially for coarse changes. The slider can also be set to either a percentage or chromatic steps,

depending on what your personal preferences are when it comes to handling pitch control.

Getting creative

For creating melodies, we found the best approach is to first line up markers and set their pitch settings to trigger one sample on a single row. Then experiment by moving the markers to different rows, so the melody changes character on certain notes.

It's a shame you can't import your own sounds as a whole instrument or load single samples in per row. Only having pitch and volume as shaping tools for the provided instruments is also rather limiting, so we'd like to see filter, effects and amp ADSR per marker at some point. The drums cover the most common electric styles, but the timing is very unpredictable on each playback pass. Also, moving from one session to another during playback can cause note bottlenecking, so this limits the app's live use, at least if you want to use more than four instruments. **MTM**

MTM Verdict

WHY BUY

- + Non-traditional interface
- + Manual and live inputting
- + Chromatic or percentage-based pitch

WALK ON BY

- No audio import/export
- Timing issues
- Fixed canvas and no zoom

The interface is great, but the timing and loading glitches need work. Import and export are under development, so we look forward to seeing how this is handled.



Ricepad

Developer **Alessandro De Nardi**

Price **£2.99 (Apple App Store)**

Contact **www.ricecode.com/contact**

Web **www.ricecode.com**

Key Features

- Multi-effects
- Resampling
- Microphone sampling
- Easy navigation

This app for iPhone, iPod Touch and iPad has one of the best layouts we've used and is simple to learn using its in-app tutorials. A rotating metronome symbol is the main navigation button, with which you move, insert and remove its various modules. The arrows to either side are used to move sideways across the signal path, which runs from left to right.

Audio playback starts from either the file player module or the sampler. The file player can load audio and then have four cue points placed within it. These are set by hand, so getting them spot-on is tricky – a graphical interface would be a useful addition.



The sampler loads four sounds, which can be one-shots, momentary loops or endless. It can also resample all sound playing in from the left-hand side. This can also be the microphone input, which offers more experimental options. Real-time sample cues can be quantized so each hit has a precise musical moment, or the brave can turn this off and perform in freeform.

A large range of stackable effects all have X-Y pads for thumb manipulation. Like the playback modules, multiple instances can be created, which means you can prepare pages of modules to move between during a live performance. If two effects are side-by-side on the screen, processors

like ring mod, reverb, bit-crushers and waveshaping give you a lot of sonic shaping tools. A dry/wet balance per effect along with X-Y hold makes the processing chain incredibly powerful to then re-sample into another sampler.

The shortcomings of the app are the lack of long audio capture to record longer musical phrases. We found we could record only just over two bars and would also need to move from the sampler view to the effect pads within this time as well, so long real-time processing can't be recorded. Custom audio can be imported, but this itself is a little limited as it's only via Intua's copy/paste or the now dated Wi-Fi option. So we hope to see iTunes file support, universal copy/paste and longer audio capture added soon – such improvements would enhance the app's appeal considerably. **MTM**

MTM Verdict

A great performance tool, but it really needs better import options and longer resampling to make more use of its excellent real-time processing capabilities.



MoDrum Rhythm Composer

Developer **Finger**

Price **£3.99 (Apple App Store)**

Contact **info@finger-pro.com**

Web **www.finger-pro.com**

Key Features

- Real-time drum synthesis
- Accent sequencer
- Tube Amplifier

Despite having one of the most basic-looking interfaces we've seen, MoDrum could be a useful tool for those who want to use and control some classic synth drum sounds

The sounds are generated by five synths, which each perform a separate duty. Bass drum, snare, ride cymbal, open and closed hi-hats are all created from scratch, with a few immediate parameters available for the user to tweak.

Pad triggers, 32-step pattern sequencer pop-ups and mute buttons are the main controls. Accenting is well implemented, using its own pattern sequencer for the easiest drum dynamics.

Tempo is limited to between 40 and 200BPM which, coupled with a fixed pattern grid of 32 steps over a bar, may



be too limited for some. The shuffle function is effective for that classic swing effect, but there aren't any other groove functions available.

The preset patterns are pretty tame, but they do at least offer a good sonic starting point.

You can control the bass drum's starting pitch, pitch decay time, attack pop and amp decay. For the snare drum you also have starting pitch, which tunes both the white noise and the melodic tones, which the Muffle control then balances into the mix with a decay used again for duration. The closed hat and ride only have a faded decay control whereas the open hi-hat has a gated sustain duration control.

The sound from the app is incredibly clean and there is a decent

amount of control on the kick and snare, giving you enough scope to customise its otherwise run-of-the-mill electronic drum sounds. But we found the cymbal controls really limited. A Tube Amplifier effect on the master output is useful, though, if you want to make the sound more aggressive. The pattern sequencer is also quite basic, with no option of loop duration and resolution, so we feel anyone who wants real drum customisation will find this app a bit light on features.

That said, those who love a classic synth drum sound may find they have enough here to create some satisfying drum sounds, which can then be exported via the Apple pasteboard, iTunes file-sharing or email. **MTM**

MTM Verdict

Classic synth drum sounds with enough features for purists or beginners. But it may not have enough control for the more experienced programmer.



loopmasters

The Sample Boutique

Royalty-free
sounds
for producers
worldwide

loopmasters ARTIST SERIES

Sounds and inspiration from some of the world's best known music producers and artists directly to your desktop.

MORE PRODUCTS AT LOOPMASTERS.COM



Dubstep Tearout



Crucial Dub



Tech House & Techno



Dark Percussive House & Techno

loopmasters

Flexible sample libraries for producers and musicians who required top quality playing from seasoned professionals to integrate into and inspire their music.

MORE PRODUCTS AT LOOPMASTERS.COM



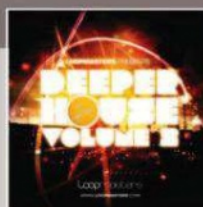
Minimal Tech Voices



Essential Dance Bases



Tech House Tools



Deeper House Vol 2

DJ MIXTOOLS

For forward thinking DJs and live artists... Royalty free access to remix, effect, chop and loop the parts in your own style... Welcome to DJ MixTools!

MORE PRODUCTS AT LOOPMASTERS.COM



Build & Breakdown FX 1



Dubstep Vol 1



Trance Vol 1



Tech House Vol 2

MUTEKKI MEDIA

professional audio sample libraries

If it's state-of-the-art Loops, Drums, FX, Bass or Synth Sounds you're looking for, we specialise in offering the sample material you need.

MORE PRODUCTS AT LOOPMASTERS.COM



Clicks & Glitches



Abstract & Weird



Pure Electro Vol 2



Minimal Techno Rev'n

ZENHISER

Small and Highly Targeted sample collections for Dance Music Producers.

MORE PRODUCTS AT LOOPMASTERS.COM



Psy Trance Beats



Ultimate Deep House Beats



Total Tech Tribal Beats 2



Deep House Construction

SPIN MEDIA

Using General Midi standard allows endless combinations of sounds & patterns with space for experimentation.

LOOPMASTERS.COM



Prog Tech Beats



Bass Line

wave alchemy

Samples and loops ideal for dance music production, film, TV and broadcasting, multi-media, games developers, DJs...

LOOPMASTERS.COM



Tech House & Minimal



Drum Machine Collection

WAV : REX2 : ACID : REASON REFILLS : LIVE PRESETS : APPLE LOOPS : AKAI MULTITRACKS : HALION : MPC : EMU : EXS : RMX : SFZ : MAC / PC

www.LOOPMASTERS.com

The source for sounds

Call +44 (0) 1273 692 313 or visit the website

eyoControl

Manufacturer **Eyosido Software**

Price **£3.99 (Apple App Store)**

Contact **info@eyosido.com**

Web **www.eyosido.com**

The eyoControl library for iPad consists of four main interfaces called Surface, Pad, Keys and mXY. Surface is a Mackie HUI/DAW-specific controller with channel faders, solos, mutes, transport controls and so on. Pad is for drum or sample triggering and can be switched between four, six, eight and 12 pads on the screen at once.

Keys is an organ-style double-tier keyboard controller and mXY is one, two, three or four square X/Y controller panels that can be separated or merged into one large screen display with multiple dots. The dots can be assigned to one (or more) or separate panels if preferred.

The app can interface with your DAW via CoreMIDI, which limits its use as both a MIDI controller and DAW interface (this setup uses only one MIDI



channel). Its own specific server for the Mac, however, allows you to easily flick between Surface and MIDI interfaces.

Like all of the control surface apps we've used, they are never instant to set up; the CoreMIDI option is easy enough to set up on the Mac and with the free rtpMIDI software it can also be done on Windows. Setting up the server is also simple, but takes a longer read-through of the instructions to avoid any rushed setup problems further down the line.

In use, the Surface is quick to respond to changes made on both the iPad or the DAW itself; changing track

names, for example, instantly updates the app. The control doesn't extend as far as other HUI-based apps do, but the price difference is also quite big and the general controls will help you navigate your project or record automation changes to levels.

The keyboard and pad have simple control for basic musical parts, but the slight lag of the setup always becomes more noticeable when dealing with rhythmic parts. The X/Y pad is excellent and has a lot of possible configurations, but we don't think this was configured by default for the most common setup, so beginners may need some assistance.

The mXY pad is the most configurable of the interfaces, with Surface having basic-to-medium DAW control depending on how well it is supported. Overall, this is great value for money and hard to beat. **MTM**

MTM Verdict

Not the most comprehensive multi-interface, but the highly configurable mXY pad may be worth the price alone.



Key Features

- CoreMIDI support
- Various interface configurations
- Custom Wi-Fi server (Mac only)

Sample Lab

Manufacturer **Fotoh LLC**

Price **£4.99 (Apple App Store)**

Contact **support@samplelabapp.com**

Web **www.samplelabapp.com**

This app caught our eye at the NAMM Show due to its slick yet simple layout dedicated to sample sequencing. It has eight stereo channels that can load one sample each from – the included library, external recordings or imported files via iTunes. An editor located at the top of the screen uses imported or recorded sounds which you can then drag as a whole or as highlighted snippets to any channels.

The included library samples are loaded directly into the channels via a slightly cumbersome roll menu. On the positive side, the app comes with a lot of musical and drum-based samples. The downside is that these are all on a single roll menu that takes a long time to navigate. What's more, there isn't a preview option, so you have to re-load to hear each sound, even if browsing the

Key Features

- 8 sample tracks
- Real-time mixdown
- Audio editor
- 10 pattern sequences

library. The audio editor also includes trim and normalize as well as copy/paste functions, which allows the app to function as a standalone audio editor to move audio to and from.

The editor itself is very well designed, using pinch zoom gestures for easy editing up-close.

The pattern sequencer is 16 steps and you can have up to ten sequences to then manually cue or set up into a loop. Each step entry can have individual settings for volume and pitch while playback length is preserved. When this is a feature we usually prefer

it as an alternative to normal vari-speed re-pitching to samples. The reason for this is the sound quality can seriously suffer if the algorithms for this process aren't great and in this instance it really shows if you go for larger pitch changes (especially on drum parts), whereas it wouldn't sound as bad using normal pitch-changing approaches.

Four global FX are available for processing the master output in real time using X/Y controllers for each. Compression, bitcrusher, low-pass filtering and phase can all be multi-touched at once, which could be an excellent feature as this app also allows real-time recording to a mixdown file. The sound quality of the effects is fairly lo-fi, so although this is a great feature, in use this app works best as a sample sequencer. Using it in this way and editing sounds from the mic is a great way to pass the time... **MTM**



MTM Verdict

A great audio editor and sequencer featuring real-time audio mixdowns. However, re-pitching and effects are quite crude-sounding.



What's in **MusicTech** Issue 97 On sale 17 March

Breathing life into SYNTHESIS

How to create your own evolving, organic synth sounds...

Software Tutorials

LOGIC PRO 9 | CUBASE 6
REASON 5 | NI FM8
PRO TOOLS 8

The Latest Reviews

MOOG VOYAGER XL
Tone2 ElectraX | TC-Helicon VoiceLive Touch | XLS-
Lab PolyKB II | API The Channel Strip | More...

Pro Technique

Building dubstep
in Ableton Live

MusicTech

MUSIC TECH MAGAZINE

www.musictechmag.co.uk
Anthem Publishing Ltd
Suite 6 Piccadilly House
London Road Bath BA1 6PL
Tel +44 (0) 1225 489984
Fax +44 (0) 1225 489980

Editorial Director Paul Pettengale
paul.pettengale@anthem-publishing.com
Editor Lewis Brangwyn
lewis.brangwyn@anthem-publishing.com

Art Editor Kai Wood
kai.wood@anthem-publishing.com
Features Editor Liam O'Mullane
liam.omullane@anthem-publishing.com
Production Editor Russell Deeks
russell.deeks@anthem-publishing.com
Multimedia Editor Alex Holmes
alex.holmes@anthem-publishing.com
Business Development Manager
Di Marsh
di.marsh@anthem-publishing.com
Deputy Ad Manager Leah Fitz-Henry
leah.fitz-henry@anthem-publishing.com

Contributors

Grant Bridgeman, Mark Cousins, Keith
Gemmell, Dave Gibson, Tim Hallas,

Mike Hillier, Hollin Jones, John Pickford,
Huw Price, Mike Willox, Mark Mitchell,
Jane Göllner

Illustrations Gillian Blease, Esther Aarts

Photography Pete Canning @ Viewpoint,
Zen Inoya

Managing Director Jon Bickley
jon.bickley@anthem-publishing.com
Advertising Director Simon Lewis
simon.lewis@anthem-publishing.com
Art Director Jenny Cook
jenny.cook@anthem-publishing.com

Subscriptions & Back Issues
Tel 0844 844 0398 (UK)
Tel +44 (0)1795 592849 (overseas)
Price (12 issues) £64.95
UK basic annual rate

Printed by Benham Goodhead Print
Tel +44 (0) 1869 363333

Distributed by Marketforce (UK) Ltd,
The Blue Fin Building, 110 Southwark
Street, London SE1 0SU
Tel +44 (0) 20 3148 3300

Licensing enquiries Bruce Sawford
+44 (0) 1280 860185
Bruce@BruceSawfordLicensing.com

Music Tech Magazine, ISSN number
1479-4187, is published monthly (12 times
per year) by Anthem Publishing c/o USACAN
Media Dist. Srv. Corp. at 26 Power Dam Way
Suite S1-S3, Plattsburgh, NY 12901 for
US\$129.99 per year. Periodicals Postage
paid at Plattsburgh, NY and at additional
mailing Offices.
POSTMASTER: Send address changes to
Music Tech Magazine c/o International
Media Services, 3330 Pacific Avenue, Suite
500, Virginia Beach, VA 23451-2983

All content copyright Anthem Publishing
Ltd 2011, all rights reserved. While we make
every effort to ensure that the factual
content of Music Tech Magazine is correct
we cannot take any responsibility nor be
held accountable for any factual errors
printed. Please make every effort to check
quoted prices and product specifications
with manufacturers prior to purchase. No
part of this publication may be reproduced,
stored in a retrieval system or resold
without the prior consent of Anthem
Publishing Ltd. Music Tech Magazine
recognises all copyrights contained within
this issue. Where possible we acknowledge
the copyright holder.



**TEXTING
MUSIC TECH TERMS
AND CONDITIONS:**
By entering Music
Tech competitions
you are agreeing to
receive details of
future promotions
from Anthem
Publishing Limited
and related third
parties. If you do not
want to receive this
information please
text 'NO INFO' at the
end of your message.
Texts will be charged
at the specified price
plus one message
at your standard
network tariff rate.

Electrolyzium

Manufacturer **Samplerbanks**

Price **£29.95**

Contact **Samplerbanks 01342 255437**

Web **www.samplerbanks.com**



Electrolyzium is the latest samples pack from Samplerbanks.com and has been written and produced by Hungarian trance producer Sunny Lax. The sound leans more towards the progressive side of electro, house and trance as opposed to dirty, heavy and glitch-laden electro.

The download pack is available in your choice of format including ACID WAV and REX, Apple Loops and REX, ReFill and Live Pack and weighs in at around 1.3GB of 24-bit content. The WAV and Apple Loops versions also come with multi-samples and one-shots with sampler patches for Kontakt, EXS24, HALion, NN-XT and SFZ. In total you get 375 loops divided into drum, bass, and synth folders that range from 128 to 134BPM. Although most of the loops are concise, rolling

Key Features

- 1.29GB of 24-bit audio
- Acid WAV, Apple Loops, ReFill, Live Pack formats
- 375 loops at 128–134BPM
- 30 multi-sampled lead & bass instruments
- 929 one-shot drum hits & FX
- Sampler patches for Kontakt, EXS24, NN-XT, HALion, SFZ

one-bar grooves, some are a little longer and contain variations or moving automation such as filters opening out or closing. This offers more options when arranging the samples into your own tracks, but unfortunately there aren't many loops that feature this.

All of the samples here are tightly produced and programmed, with subtle use of effects where appropriate. However, Lax has chosen to lay off using heavy processing to allow more space for you to add your own creative effects and compression. Most of the drum loops are fairly busy but kick-free, giving you the opportunity to add your own kick.

Although you'll find a massive collection of 240 high-quality drum grooves, we would have liked to see several variations with separate layers to make things more flexible. The bass loops are solid and effective and the synth loops have plenty of variety, from deep chord progressions to gritty,



distorted guitar grooves. You'll also find a substantial collection of drum hits, FX and noise sweeps.

This is a large library and there are a plenty of grooves, sounds and synth loops. You may, however, want to look elsewhere if you're after cutting-edge production and a mastered finish. **MTM**

MTM Verdict

A good-value and large collection of functional progressive electro loops and hits.



SM20 Electro

Manufacturer **Sample Magic**

Price **£54.90 (physical), £49.90 (digital)**

Contact **Time+Space 01837 55200**

Web **www.timespace.com**

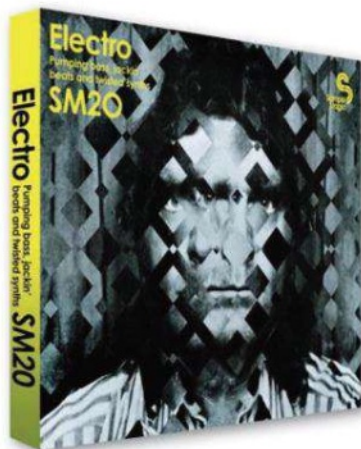


Although modern electro has been around for several years now, populating the mainstream through advertising and chart hits, the genre still continues to develop in the clubs, taking on a harder edge and more extreme production techniques. SM20 Electro, from Sample Magic, showcases the upfront sounds of techno, Dutch, jackin' and French disco with a cutting-edge library of loops and one-shot hits.

The collection is available as a download or limited-edition anniversary DVD pack (this is Sample Magic's 20th release). Not only do you get the main library, but also an extra DVD with a behind-the-scenes-at-Sample Magic short film, an extra CD with over 700MB of samples taken from other releases, plus an extended 24-page booklet with hints, tips and the Sample Magic story.

Key Features

- 740MB of 24-bit audio
- ACID WAV, Apple Loops, REX2
- Drum hits with sampler instruments
- Bonus CD with 700MB of extra samples
- Bonus DVD with short film, plus 24-page booklet



For a mere £5 more, this is a nice package and the extra samples covering funky house, minimal techno and nu-rave sounds are extremely welcome.

The main pack itself contains over 741MB of 24-bit audio in ACID WAV, Apple Loops, REX2 and Stylus RMX formats, plus one-shot drum hits with accompanying sampler patches for Kontakt, EXS24, HALion and NN-XT. Listening through the folders of glitched-out bass lines, euphoric pumping synth melodies, heavy beats and stuttering percussion grooves, it's

clear to see that the experience gained from previous Sample Magic releases has paid off. This is a stunning collection of immaculately produced hooks with detailed production and a high level of polish. Every throbbing bass has been layered to perfection and every synth line has been pushed to the edge with inventive use of reverb, filters and automation.

The overall sound is very compressed, giving each loop an in-your-face quality yet still retaining dynamics and punch. Most of the content falls into the standard 128BPM electro range, but there are also synth and music loops at 125 and 130BPM to add variation. On top of this there's a tight collection of heavy electro drum hits, FX and percussion sounds.

For anyone writing electro, jackin' house or heavy indie electro this is an essential purchase that's chock-full of inspiring and club-ready loops. **MTM**

MTM Verdict

World-class production and inventive, heavy synths and beats. Sample Magic has done it again!



Smooth Keys

Manufacturer **Prime Loops**

Price **£17.95**

Contact **info@primeloops.com**

Web **www.primeloops.com**



Richard Wilkinson.

Each file is clearly labelled with key and tempo information; styles range from leisurely 65BPM ballads through to 120BPM up-tempo funk.

What you actually get here is 51 different song chord progressions that, with a few exceptions, have been divided into three layers for a combination of chords, bass riffs and right-hand twinkles. Some of the songs contain just one or two of the aforementioned keyboard instruments, but a few actually have riffs played on all three and Prime Loops has very cleverly used their tonal differences –

such a bright Clav funk bass and bell-like Rhodes melodies – to layer up a thick sound.

Although each progression lasts only four or eight bars, the inclusion of three layers gives you a few more options at the arranging stage, allowing you to bring parts in and out for different sections of a track. That said, if you are looking to write more complex tracks you may feel a little limited. There is an authentic warmth to all of the loops here and since there is no additional processing or effects, you can easily add the parts in with your own EQ, compression or reverb.

These are expertly played loops with a strong funk groove which are at times stunningly beautiful. This could be a great source of inspiration for songwriters and producers looking to inject some smooth soul into RnB, hip hop or, indeed, just about any other genre of music. **MTM**

MTM Verdict

Classy keys, well-played funk grooves and delicately beautiful soul progressions.



The piano, despite being a beautiful-sounding instrument, may not be the first choice for some songwriters and producers as it will always have certain classical connotations. Instead, many opt to use keyboards in their tracks, such as the Wuritzer Electric Piano, Fender Rhodes and Hohner Clavinet as they can deliver a delicate, fragile sound but with a more modern edge. Smooth Keys, the latest release from Prime Loops, contains riffs played on all three of these well-loved instruments, as heard on classic tracks by Stevie Wonder, Herbie Hancock, Pink Floyd and Marvin Gaye.

The pack comes as a 450MB download in ACID WAV, Apple Loops, Live Pack, FL Studio and Roland hardware formats and contains 140 24-bit loops played by keyboard wizard

Key Features

- ACID WAV & Apple Loops formats
- 140 E-piano loops, licks, patterns and progressions
- 450MB of 24-bit audio

Pro Tools 9 101: Core Pro Tools 9

Manufacturer **macProVideo**

Price **\$49.50 HD download (\$25 for one-month subscription to whole site)**

Contact **Via website**

Web **www.macprovideo.com**

Key Features

- 86 videos
- 318 minutes
- Stream online or download in HD
- Includes new PT9 features
- In-depth section on MIDI editing

As anyone who read Mike Hillier's glowing Pro Tools 9 review in last month's issue will know, the latest version of the software now combines many of the features that were previously available only to HD users or to purchase separately via the Toolkits system. Not only does this mean several new features for those upgrading from LE and M-Powered, but the ability to now use third-party hardware makes the whole package far more appealing to new users.

Luckily, macProVideo's Scott Frieman is here to guide new users through the program and explain the new features to those who are upgrading. The tutorial is available to stream online or to download in HD to your computer or portable device using

MPV's own NED player. You get 86 videos totalling 318 minutes and divided into 12 main sections looking at different aspects of Pro Tools.

As you'd expect, this starts with a comparison of the differences between versions 8 and 9 and looks at working with sessions and exploring the interface. Frieman then delves into audio recording, working with tracks and the many editing tools available before moving onto an in-depth

27 chapters on MIDI editing. This is a useful section given the improvements made to Pro Tools' MIDI functions over the last few years.

The final sections focus more on how to set up and use the mixer window, write automation and bounce tracks to disc. It's here that you'll find useful information on Automatic Delay Compensation, an essential feature familiar to HD users but new to others. This tutorial covers a large area of the program in a relaxed and easy-to-understand manner. However, it's worth noting that this focuses specifically on the core tools and features and doesn't include anything on Elastic Audio, Beat Detective or mixing and mastering.

This is a highly recommended tutorial for anyone who's coming to Pro Tools for the first time, but it's also packed with plenty of workflow tips and shortcuts that will be of interest to seasoned users. **MTM**

MTM Verdict

An easy-to-watch and thorough look at PT9. Highly recommended for those new to the program.



Real Strings Vol.2

Manufacturer **Organic Loops**

Price **£19.96**

Contact **Time+Space 01837 55200**

Web **www.timespace.com**

**MusicTech
Choice**

Despite advances in both physical modelling synthesis and scripted sampled instruments, it's still very hard to get a good, realistic string sound, especially when dealing with melodies and moving phrases. Real Strings Vol.2, from Organic Loops, aims to fill the gap with 126 loops and phrases played on live string instruments.

Created by Pete Whitfield – who arranges and records real strings for major labels and TV/media companies – the pack contains layered violins and cellos played with a full range of dynamics, expression and emotion. You get 126 individual 24-bit loops each lasting four bars and divided into 12 construction kits from 110–140BPM. There are several different playing techniques on offer, including romantic legato chords, rhythmic staccato stabs,

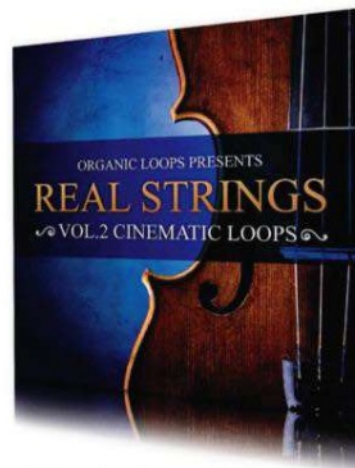
Key Features

- 126 loops
- ACID WAV, Apple Loops, REX formats
- Includes MIDI files and full scores
- Divided into 12 construction kits
- Beautifully layered real violins and cellos

chilling tremolos and tension-building trills, plus some more irregular, special effect-type bends and drones.

Each of the kits has been carefully constructed with different types of riff that can be layered to create a fuller sound, plus melody and progression variations, high sustained notes and end phrases. This makes building your own arrangement much more flexible as you can create different sections and variations, although, as a lot of the chords, figures and melodies occupy a similar frequency range, you probably wouldn't want to layer more than about three at once for fear of the mix becoming cluttered.

It's clear to hear that the work of orchestral breakbeat maestros Hybrid has been a big influence in the style, feel and layering of these riffs, with big-sounding unison melodies, subtle slides between notes and a mood that teeters between dark, beautiful and uplifting. The pack is available as a download in ACID WAV or Apple Loops formats, with the addition of REX loops, MIDI files and four-part scores as PDF and Sibelius files. This is a nice touch for anyone wanting to expand on the content here by recording their own



additional parts or use the MIDI data to add in their own sampled instruments or synths.

For anyone writing emotional, orchestral electronica these loops are a dream come true: high-quality, real strings that can instantly add organic expression to your tracks. **MTM**

MTM Verdict

A well thought-out collection of beautifully recorded loops. Perfect for breaks, house, hip hop and media composers.



Ed Solo Presents Bass Lab Vol.1

Manufacturer **Booty Farm**

Price **£24.95**

Contact **info@loopmasters.com**

Web **www.loopmasters.com**

Key Features

- 1.3GB of 24-bit audio
- 93 loops at 130, 135, 140 and 175BPM
- 47 instrument patches
- ACID WAV, Apple Loops, ReFill, Live Pack formats
- Scientifically crafted, big bass sounds

Too many electronic music producers, crafting the perfect bass sound is both a passion and a science, requiring a fine balance of distortion and clarity in different parts of the frequency spectrum. One such man is Ed Solo, best known for his heavyweight DnB, breaks and dubstep tracks as well as collaborations with the breakbeat elite. Bass Lab Vol.1 is the latest release on his Booty Farm label; it contains 93 bass line loops and 47 playable multi-sampled bass instruments.

The download pack unzips to around 1.3GB and is available in ACID WAV, Apple Loops, Reason ReFill and Live Pack formats, with each version also containing instrument patches for Kontakt, EXS24, NN-XT, HALion and SFZ. The sounds on offer range from stabby garage organ tones and

ominous rumbles to throbbing wobbles and filthy, distorted Reese basses. A combination of digital and analogue synths and effects has been used to create a no-nonsense, upfront sound, with only a few of the loops and patches containing a hint room ambience.

Although you get 93 individual audio loops, there is a fair bit of repetition as each loop is presented in both A and E keys, giving a total of 42 different riffs.



The loops are further divided into 130, 135, 140, and 175BPM for use in breakbeat, dubstep and DnB tracks.

Despite the excellent quality of modern pitch- and time-stretching, you wouldn't want to mess up these scientifically crafted tones by stretching them too much, so the addition of two pitches and different speeds is a nice touch. However, the real stars are the 47 multi-sampled bass patches, with every single note mapped to a key.

This is a great collection of tight jungle and dubstep bass sounds and we heard several faithful re-creations from classic jungle tracks. Although it isn't a huge pack and the sounds aren't amazingly original, it's the perfect tool for anyone who needs no-nonsense, club-ready bass sounds. **MTM**

MTM Verdict

A classic collection of aggressive, finely tuned DnB, dubstep and breakbeat bass loops.



REBEL: Modern Punk Rock

Manufacturer **Big Fish Audio**

Price **£65.95**

Contact **Time+Space 01837 55200**

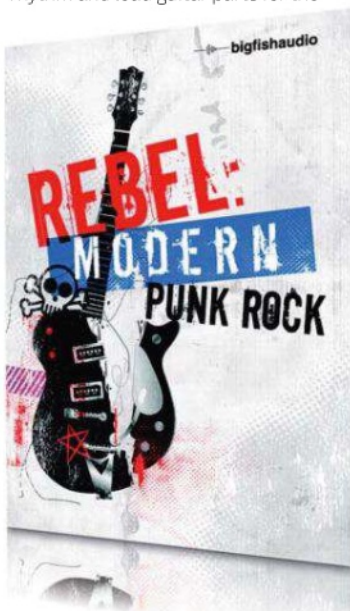
Web **www.timespace.com**

Big Fish Audio has a long history of producing top-quality samples packs that perfectly mimic a certain style or genre. The team's latest effort, **REBEL: Modern Punk Rock**, follows a similar vein, this time turning its attention to the sound of bands such as Blink 182, Green Day and Fall Out Boy.

The large collection of 25 construction kits comes on a DVD in ACID WAV, Apple Loops, REX and RMX formats. You get around 1.1GB of 24-bit song material plus 1.46GB of individual multitrack drum stems. Depending on how you plan to use the pack, these professional, original stems are potentially worth the asking price alone.

With kit names such as 'Keg Party', 'Skate Park' and 'Dunce Cap', you get an idea what to expect – the music here sounds like the soundtrack to every

American high-school film from the past 15 years! This is, of course, to Big Fish Audio's credit, as this is exactly the type of energetic and youthful punk rock-pop the company is aiming for. Each kit folder contains drums, bass, rhythm and lead guitar parts for the



Key Features

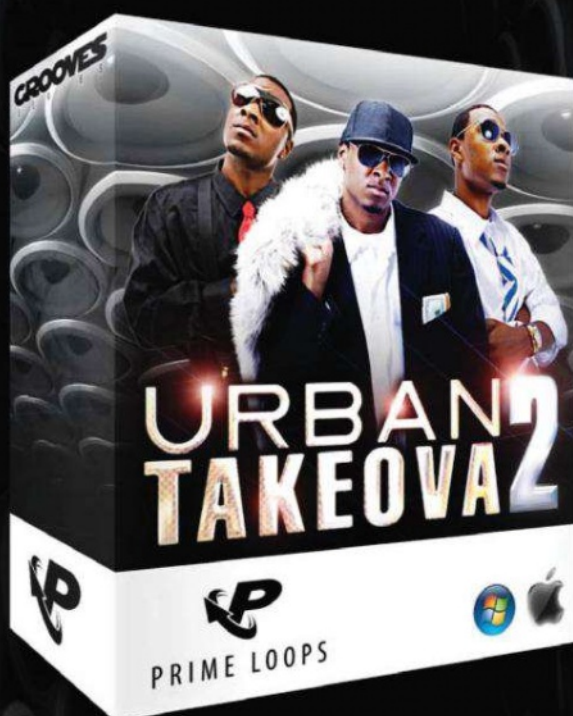
- 2.57GB of 24-bit audio
- 455 loops
- 25 construction kits
- Complete multi-track drum parts
- Perfect re-creation of American punk-rock sound

intro, verse, chorus and end sections, which enables you to quickly build up an arrangement in your DAW. Although between each kit there are subtle variations in production for each instrument – such as different drum tuning, distortion or reverb and EQ on a bass part – you can easily switch parts between kits to create alternative ideas.

The production is top-notch and simply laying down the tracks next to each other gives a polished sound that's ready to send to the mastering house. Working out who will make use of this pack is a slightly more complicated question, as any singer/songwriter will end up sounding like a hundred other American punk rock bands. However, if you're just after some riff ideas, backing drum tracks or you happen to be writing music for a high-school-based TV show, this is worth checking out. **MTM**

MTM Verdict

Not exactly original material, but superb playing and engineering combine to form a complete, professional sound.



OWN THE STREETS!

Are you ready for the 2nd strike? The Prime Loops Team are back in full effect and proud to present to you the ultimate second installment of the critically acclaimed "Urban Takeova" sample pack collections. Expect even more of the 'Takeova' sound with this uncompromising 1GB+ selection with only the hottest and most devastating royalty-free hip hop ammunition you'll ever get to hear! With "Urban Takeova 2" we're pushing limits even further this time... bigger, badder, louder!

So if you're tired of the same recycled hip hop samples.. now is the time to go official and start working with a library you can really rely on. Download "Urban Takeova" now and you're just a push-button away from all the heat and superior power you need to finally smash your competition, raid the clubs and rule the airwaves!

PRIME LOOPS
www.primeloops.com



Over 6000 music producers can't be wrong...
Join us @ facebook.com/primeloops

Trailer Voice 1 & 2

Manufacturer **Sonokinetic**

Price **£24.95 each**

Contact **Time+Space 01837 55200**

Web **www.timespace.com**



The deep sound of an American male voice has become an essential aspect of many modern film trailers, giving an epic feel of authority and grandeur. However, there are few voiceover artists who can pull it off with true authenticity and cheap imitations are easily spotted. Sonokinetic has a range of sung and spoken samples libraries, two of which focus on professionally performed and recorded trailer vocals.

Trailer Voice 1 & 2 are available as downloads from the Sonokinetic website and weigh in

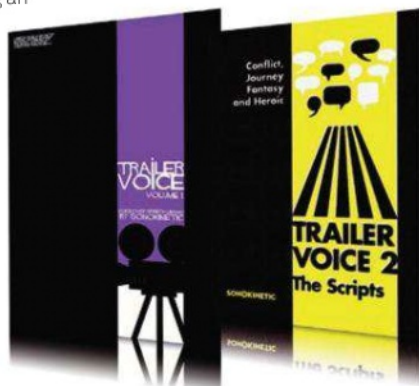
at 4.3GB and 1.19GB respectively. The first focuses on a range of short voiceover cues and single words that can be combined to form your finished speech, including phrases such as 'a once in a lifetime opportunity', 'an all-new episode' and 'from the award-winning composer', plus numbers, days, months and much more. Each line is spoken by two male performers and one female performer, with several different interpretations,

and both dry and wet versions. The processed takes have been rendered with heavy compression, EQ and Waves' L3 and MaxxBass plug-ins to give a big, upfront and deep sound.

The second edition is a little more structured and contains 40

short scripts along the themes of conflict, fantasy, heroic and journey, with each read three times by four different voices. These three variations allow you to fit the vocals to the mood of your project, with lighter, lyrical, deeper and darker plus slightly over-the-top mystical versions. For the most part this works well, although some of the read-throughs do sound fairly similar and the mystical female accent sounds like an American with a cockney twang.

You won't find much subtlety and many of the lines are fairly cliché-ridden. That said, these packs are perfect for over-the-top trailers or announcements and could be used to add a big Hollywood edge to your project or performance. **MTM**



MTM Verdict

A broad collection of professionally performed and recorded phrases and words.



Metalheads EZX

Manufacturer **Toontrack**

Price **££49.96 (requires EZdrummer)**

Contact **Time+Space 01837 55200**

Web **www.timespace.com**

Toontrack and several members from the team behind the original Drumkit From Hell pack have teamed up once again for the latest EZdrummer expansion library. Metalheads combines the raucous rhythmic talents of renowned drummer Tomas Haake with the engineering skills of producer Daniel Bergstrand in a meticulously sampled collection of drum samples and MIDI performances.

The pack comes on a single DVD and expands to around 800MB. Once loaded into EZdrummer you have the choice of two recorded kits – Tomas Haake Custom Designer Series Sonor drums, Ludwig and DW Collector's Series drums – and a range of Sabian cymbals.

Although the sampling doesn't sound as deep as the Jazz EZX pack, it doesn't really matter as the nature of the music for which it's intended is much more aggressive and fast-paced.

The jewel in the crown is the addition of triggered kick and snare channels in the mixer, which can be added into the mix to give more punch to fast double kick drum rolls and hard snare hits. This gives you a total of 14 mic channels,

providing a surprising degree of control to craft the sound of the kit. On the MIDI side you get 12 full, blistering Meshuggah tracks performed by Tomas Haake. Although Toontrack has included a single MIDI track for the entire song, the song sections aren't as small as some of the other EZX packs and the lack of time-signature information can make things a little confusing.

If you already own Drumkit From Hell you may have plenty of metal drum sounds and MIDI, but if not, this great-sounding pack is well worth checking out. **MTM**



MTM Verdict

Hard-hitting drum sounds with a useful additional kick and snare mixing channel and 12 tracks' worth of heavy MIDI drum grooves.



MTM Reviews What our ratings mean...



Let's be honest – this product is, at the very least, the best in its class.



A very good product – one that we would single out above all others.



Attractively priced as well as capable of delivering great results.



Indicates a step forward in the implementation or application of a technology.

★★★★★★★★★★★★ **EXCELLENCE AWARD 10/10**
The best in its class. This product produces superb results, is well implemented and sensibly priced.

★★★★★★★★★★★ **9/10**
This product comes highly recommended and has an effective balance of features and performance.

★★★★★★★★★★★ **8/10**
A recommended product with features, performance and pricing that meets the needs of its target market.

★★★★★★★★★★★ **7/10**
A good product, but you'll want to check that its features and performance meet your needs.

★★★★★★★★★★★ **6/10**
This product has merit, but some improvements or a more competitive price would bring it closer to its target market.

★★★★★★★★★★★ **5/10**
Certain oversights in this product's design and performance could limit its usefulness.

★★★★★★★★★★★ **4/10**
Buyer beware: this is a sliding scale of poor quality, overpricing and/or disappointing performance.

OUR REVIEWS POLICY

At MTM we take our reviews very seriously indeed. We aim to offer you nothing but the best information and expert opinion, helping you to make the right purchasing decisions. Our reviewers are experts in their field and talk to the manufacturers throughout the reviewing process to ensure accuracy.

MTM Classifieds

Put your business in front of 17,282 producers, engineers and recording musicians - call sales now! 01225 489987

Education



Award Winning Industry Training Since 1984

SSR London Open Events

SATURDAY 19th FEBRUARY - 2PM

WEDNESDAY 23rd FEBRUARY - 6PM

- Course information & demonstrations
- Exclusive special offers for Open Event attendees
- Meet the SSR tutors & see our brand new facilities
- Learn about the 'Ian Brown Scholarship'



NO APPOINTMENT NECESSARY - ALL WELCOME
Please visit the website for further information

OPEN EVENT SPECIAL OFFERS
Save over £1000 at the SSR London Open Events

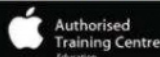
- * Discounted application fees *
- * 10% off all course fees *

TERMS & CONDITIONS APPLY

Manchester
0161 276 2100

www.s-s-r.com
enquiries@s-s-r.com

London
0208 482 7076



Authorised
Training Centre
Education



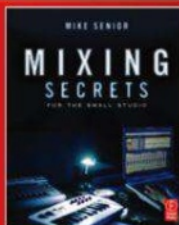
avid.com



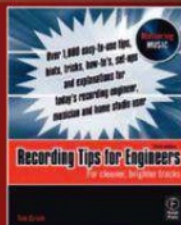
preferred training supplier

focal press books

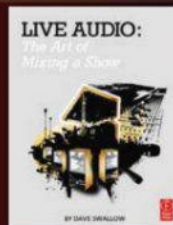
**FOR CREATIVES,
BY CREATIVES**



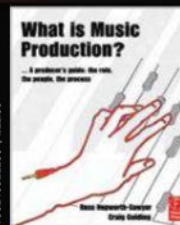
9780240915900 | £24.99



9780240521763 | £21.99



9780240916043 | £24.99



9780240911260 | £21.99



Video tutorials for Pro Tools now available at www.focalpress.com/eResources.aspx!

Focal Press Books are available wherever fine books are sold or through your preferred online retailer. Visit www.focalpress.com/audio to sign up for the Audio & Music Technology monthly e-newsletter, to view video tutorials, chapter samples and our latest eResources.

Also find us on Facebook, Twitter and YouTube!

www.focalpress.com



Avid Authorized Training Partner



Authorised Training Centre
Education



CERTIFIED
TRAINING CENTRE

MACBOOK, PRO TOOLS
KEYBOARD & MIC INCLUDED

ALCHEMEA

creating the next generation of audio engineers since 1992



Erica Basnicki: 3 hours sleep between
a 16-hour recording and Pro Tools editing
session ...we are open 24/7

ENROLLING NOW
FOR SUMMER STUDIO &
LIVE SOUND COURSES

Our objective at Alchemea is to provide the highest standard
of audio and post production training.

Whether you are looking to gain the skills & confidence
to carve out a successful career in the pro audio industry,
or are a producer aiming to improve your sound,
Alchemea has the course for you.

www.alchemea.com · info@alchemea.com · +44 (0)20 7359 3986

Education



UK'S PREMIER
CREATIVE MEDIA COLLEGE

STUDY AUDIO

2 years full time

1 year full time

6 months part time

4 weeks

OPEN DAY
February 2011
Register Online Now!

ProTools Logic Pro Ableton Live
Secrets of Mixing Music Business
Music Theory for Producers Flash for Web
Photoshop for Web Film Bootcamp

Certificate 6 months

*validated by Middlesex University

UK CAMPUSES : GLASGOW / LIVERPOOL / LONDON / OXFORD

www.saeuk.com

Education

Mixing and Mastering • Logic Pro 9 • Ableton Live 8 • Pro Tools 9 • Max/MSP • EDM • Songwriting • Music and Sound for Video Games • and more

All
6 week
courses
£399
one day
a week

Produce finished masters! In-depth, quality courses for everyone

"This is what London has been waiting for" - **Norman Jay MBE**

Our tutors have worked with: Janet Jackson, Trevor Horn, Danny Tenaglia, Universal, Get Physical, Take That, EMI, Lady Gaga, Pet Shop Boys, Busta Rhymes, David Bowie, U2, Kylie Minogue, Massive Attack, Soul II Soul, Tricky, Bjork, Madonna, Spice Girls, Nellee Hooper, JLS, George Michael, Tiga, RizMCs, Simple Records, Gamma, Hed Kandi, Jamiroquai, ADF, Andrew Lloyd Webber, Clive Henry, Coldcut, Coldplay, Mary J Blige, All Saints, MJ Cole, Eric Clapton, Sting, Spike Stent, Youth, De La Soul, Booka Shade, and many more

GARNISH
SCHOOL OF SOUND

www.garnishschool.com
info@garnishschool.com

020 7682 1082



access to **music**

Music technology courses.

Music technology
advanced apprenticeships.

Next open day: Saturday 14 May

Birmingham . Brighton . Bristol . Lincoln

London . Manchester . Norwich . York

accesstomusic.co.uk . 0800 28 18 42

Mic to Master University of Abertay
event rescheduled to
25th and 26th March.

mictomaster

Workshops for
Music Creators

Go to www.prismsound.com/workshops
or call us on 01353 648 888 for more information



Web Listings

ACM

THE ACADEMY
OF CONTEMPORARY
MUSIC

enquiries@acm.ac.uk | www.acm.ac.uk

Furniture



Mastering

Make your music shine

• Mastering
• Mix Advice

MOTTO sound

10% off for
MusicTech Readers
please quote MTshine

0113 815 3001 | www.mottosound.co.uk

MusicTech

Put your business in front of 17,282 producers, engineers
and recording musicians - call sales now! 01225 489987

Recording Equipment

Something new, different, handy and inexpensive. Now, what's not to like about that?

Meet the iKEY RM3, the first truly affordable single-space rackmount
SD/USB player/recorder!

It's ideal for a wide variety of uses: club & mobile racks,
DJs and Musicians wishing to record their live sets, restaurants,
houses of worship, schools, broadcasting, meeting & lecture halls...
and the list goes on. Record in pristine 16-bit/44.1 kHz fidelity, or MP3,
and use the **Balanced XLR Outputs** (or RCA) to connect to your audio system.
Use up to **4GB SD** or **32GB SDHC** cards, or a **USB stick** of any capacity.
Feature-rich, slick-looking, and easy-to-use, like all iKEY products.

And best of all, the unprecedented price!



Visit us at www.ikey-audio.com,
or on FACEBOOK for more details!

Call 08708700880

iKEY-AUDIO
www.iKEY-AUDIO.com

Duplication

liquidbubble
CD / DVD
Duplication/Replication
Call: 0845 230 9821
Email: info@liquidbubble.com

DVD REPLICATION ALL-IN PACKAGE INCLUDES:

- Glass mastering
- Full Colour Print on disc
- Printing of DVD inlay 4/0
- Supply of black or clear DVD case
- Over wrap of DVD case

1000 units @ £835.00

CD REPLICATION ALL-IN PACKAGE INCLUDES:

- Glass mastering
- Full Colour Print on disc
- Printing of 4PP, booklet and inlay
- Supply of jewel case with black or clear tray
- Over wrap of jewel case

1000 units @ £689.00

CD OR DVD DUPLICATION INCLUDES:

- Full Colour Print on disc
- Supply of Plastic Wallets

50 units @ £69.00
100 units @ £115.00
200 units @ £205.00
500 units @ £379.00

All prices include VAT & Overnight Delivery to One UK Address.

Sales and Services

STUFF FOR BANDS

250 CUSTOMISED STICKERS FREE
with every order placed in February 2011
T-SHIRTS, POSTERS, FLYERS, BANNERS etc...
T&Cs apply

www.promoteyourband.co.uk
Freephone 0800 996 1252

The Recording Workshop

Since 1989

32-TRACK STUDIO AVAILABLE FOR HIRE.
BASED IN WEST LONDON
Specialises in 2-month, hands-on, part-time courses on the latest recording and production techniques for beginners and advanced in very small groups. *Subjects include: microphones, EQ, effects, processors, multi-tracking, mixing, MIDI, synthesis, Cubase, sampling, production, etc...*

For prospectus call free: 0800 980 7454

  recordingworks@btconnect.com



DVD 4GB+

MTM DVD 96

There's plenty for you to get stuck into this month, including a massive pack of exclusive Virus bass sounds, more samples and loops, the latest demos, promo videos and pro tutorials...



VIRUS BASS SOUNDS

Multisamples Royalty Free

Size 995MB Format 24-bit/96 kHz, 16-bit/44.1kHz WAV, Kontakt

The Virus synth, made by German company Access Music, comes in several forms, all of which are famous for their complex and modern sounds. Our samples team has been locked away in the studio and come up with an exclusive pack of sustained bass notes, filtered arpeggios, 140BPM wobble basses, aggressive single hits and 14 multi-sampled bass instruments with 28 accompanying Kontakt instrument patches. You'll find 16-bit/44.1 and super-high-quality 24-bit/96 versions of each sound – get ready to tear a hole in your latest track!

Samples Loops Royalty Free & Exclusive

PEDAL STEEL GUITAR LOOPS

Size 108MB
Format 16-bit/
44.1kHz ACID WAV,
Apple Loops

equinox
sounds

If you're looking to inject a different flavour into your tracks, why not try the unique and distinctive sound of the pedal steel guitar? Equinox Sounds has cooked up 34 exclusive loops and FX containing sliding chords, delicate vibrato and the authentic sound of American country music, all beautifully produced. There are two construction kit folders at 60 and 87BPM, plus a folder of clean and processed FX sounds in ACID WAV and Apple Loops formats.

Web www.equinoxsounds.com

Video Tutorials 85 minutes

CORE SKILLS IN PRO TOOLS 9



macPro
Video.com

Size 444MB Format NED Player (included)
With the release of Pro Tools 9, Avid has finally opened up the program to third-party hardware, making things much more flexible and portable. This accessibility also makes Pro Tools a more appealing proposition to new users who may have been sitting on the fence. macProVideo has provided a whopping 85 minutes of pro video taken from the company's Core Pro Tools 9 tutorial, which focuses on the editing tools, MIDI and the Pro Tools mixer.

Web www.macprovideo.com

Video Tutorials 30 minutes

**Point Blank**
www.pointblankonline.net

USING LOGIC PRO'S ES1/ES2 & NI REAKTOR

Size 289MB Format mp4
Point Blank Online are back again, this time with five videos taken from its award-winning Online Sound Design course. First up are three videos using Logic Pro that examine creative gating, building synth risers using ES1 and ES2, plus a detailed look at the Platinum Verb reverb effect. You'll also find two videos on Native Instruments' Reaktor that focus on the interface and explore the Massive Reaktor synth. Check out the website for more info on the company's four-week, internet-based production courses.

Web www.pointblankonline.net

Video Interviews 25 minutes

LOOPTV VIDEOS

Size 337MB Format FLV
This month, LoopTV has cooked up a selection of video treats, kicking off with a double helping of producer interviews as their team catches up with music producers, remixers and DJs Michael Woods and UK house duo Full Intention. There's also a new tutorial from the DSP Project that shows you how to automate your Ableton Live effect envelopes to help spice up your performances.

Web www.looptv.net**iZotope Stutter Edit**

Win XP, Mac OSX

The long-awaited glitch performance plug-in designed by producer BT. Create stunning rhythmic effects, sweeps and micro edits by playing your keyboard to process incoming beats, vocals and other audio.

www.izotope.com

Demo Software



Demo Software

Overloud TH-2

Win XP, Mac OSX

This is the successor to the TH-1 custom guitar effects suite with a wealth of new features, including 25 amplifier channel models, eight new cabs, five new effects modules, spring reverb and a new cabinet module.

www.timespace.com**Melda Production MSpectralDynamics**

Win XP, Mac OSX

A complex and unique dynamics processor that uses spectral analysis to compress, expand and gate specific frequencies in the audio spectrum. You are also free to draw in your own threshold and processing shapes.

www.meldaproduction.com

Demo Software

Samples Loops Royalty Free & Exclusive

PRIME LOOPS URBAN PACK

Size 281MB
Format 24-bit/44.1kHz
ACID WAV

Prime Loops has whipped up a collection of urban-themed samples loops taken from eight of its recently released packs.

There are chunky beats, bass lines and synths in Dirty South Mafia, Midnight R&B Gold and Urban Takeova 2. Then you've got delicate chords, atmospheric ambiences and gated synth rhythms in Smooth Keys, Trip Fantasia and Ratio Padz. And finally, some party-starting FX and dramatic percussion from Sirens in Dub and Cinematic Impacts Vol 2.

Web www.primeloops.com**PRIME LOOPS**

Demo Software

Tone2 ElectraX

Win XP, Mac OSX

A powerful software instrument that uses a combination of 13 different synthesis methods. Also includes 23 analogue modelled filter types, 45 oscillator types, 18 effects and a master effects section.

www.tone2.com**NI Mikro Prism**

Win XP, Mac OSX

A new free instrument based on the Reaktor Prism synth. Comes with 70 presets, built-in cabinet simulation, filter, flanger, echo and reverb effects, plus powerful preset morphing. (Loads into the included free Reaktor 5 Player.)

www.native-instruments.com

Full Software



MTM Your Disc

This MTM disc comes packed with more than 4GB of tutorials, samples, music software and promotional videos, plus all the files you'll need to follow this month's Workshops.



SAMPLES

Virus Bass Pack
(24-bit/96kHz and
16-bit/44.1kHz WAV,
Kontakt)

Prime Loops Urban
Pack (24-bit/44.1kHz
ACID WAV)

Equinox Sounds Pedal
Steel Guitar Loops
(16-bit/44.1kHz ACID
WAV, Apple Loops)

Samples Tasters
(24-bit/44.1kHz WAV)

DEMO SOFTWARE

iZotope Stutter Edit
(Win XP, Mac OSX)

Melda Production
MSpectral Dynamics
(Win XP, Mac OSX)

Overloud TH-2
(Win XP, Mac OSX)

Tone2 ElectraX
(Win XP, Mac OSX)

TUTORIALS

macProVideo Core
Pro Tools 9

ASK Video Kontakt 4

Point Blank Online
Reaktor, Logic

Loop TV Ableton Live

Loop TV interviews:
Full Intention,
Michael Woods



SOFTWARE

Native Instruments
Mikro Prism
(Win XP, Mac OSX)

PROMOTIONAL

Line 6 POD DH (MOV)

Vir2 Q (MOV)

Arturia Origin
Keyboard (MOV)

Cinesamples
VOXOS (MOV)

Toontrack
Metalheads (mp3)

Overloud TH-2 (mp3)

iZotope Stutter
Edit (mp3)

WORKSHOPS

Guitar Rig 4
Logic Pro 9
Ableton Live 8

Supporting files
available wherever
you see this logo...



MusicTech



MTM DVD 96 March 2011

YOUR DVD CONTENT FILES

ZIP FILES

To maximise the amount of content we can bring you on each month's DVD, the video, Workshop and samples files are supplied compressed ('zipped'). Mac users should be able to decompress zip files simply by double-clicking on them; PC users may need to download a utility such as WinZip (www.winzip.com).

WORKSHOP FILES

The software Workshops that feature in each issue of MTM are almost always accompanied by files and audio so you can work through them on your system. These files are zipped to reduce the space they occupy on the DVD.

Download them to your hard drive and unzip them to access the individual files (remembering to eject the DVD, to prevent your computer from slowing down).

WHAT IS ROYALTY-FREE?

Any MTM DVD content marked 'royalty-free' can be used in your own original compositions (even commercial ones). You may not, however, re-sell these samples in any other form.

DEFECTIVE DISCS

In the unlikely event that your disc is defective, please return it to: Disc Returns, Anthem Publishing, Suite 6, Piccadilly House, London, Bath BA1 6PL.

We will endeavour to supply you with a replacement disc immediately. Please note that we're unable to provide technical support for the software on the MTM DVD – please check our website at www.musictechmag.co.uk for any known problems.

MISSING YOUR DISC?

If your disc is missing contact us at editorial@anthem-publishing.com with your full postal address and the issue number.



Centre of **Excellence**



Available from our **Studio Microphones**
Centres of Excellence including **Matter Retail**
and **Absolute Music** stores

MusicTech
EXCELLENCE
★★★★★★★★



A Ribbon Revolution...

...the rules have changed



Steve Levine

There's a revolution underway in recording studios and on live stages stretching far and wide across the UK and beyond.

Renowned producer and Chairman of the Music Producer's Guild, **Steve Levine** has added his voice to a chorus of unswerving praise aimed directly at Audio-Technica's revolutionary **AT4080** and **AT4081** Ribbon Microphones:

*"Using the **AT4080** for vocals, it sounds instantly like a late 50's, early 60's session, but without the noise. It has that thick warm vocal sound reminiscent of so many great vocals of the era..."*

*...The **AT4081** is now my first call when recording guitar amps... they sound so sweet..."*

With no fewer than 18 patents pending, Audio-Technica's **AT4080** and **AT4081** successfully solve the problems of fragility and low output that have historically plagued ribbon microphones.

The **AT4080** and **AT4081** are covered by Audio-Technica's unique lifetime warranty, and can be trialled free of charge under our First Impressions Scheme. So why not join our revolution, visit www.audio-technica.com/firstimpressions for more information.

Connect with us...



 **audio-technica**
always listening

www.audio-technica.com



SONAR X1

Less work. More flow.

SONAR has evolved. Imagine the power and maturity of an industry-standard DAW combined with the cutting-edge creative tools essential for today's music—all wrapped up in a brand new user interface which is thoughtfully designed, elegant and, dare we say it, beautiful.

Call (0845) 1305 909 for info or visit www.roland.co.uk/x1



Efficient. Powerful. Affordable.
LAUNCHES DECEMBER 2010 IN THREE VERSIONS

cakewalk
by Roland