

THE WORLD'S BEST-SELLING MUSIC SOFTWARE MAGAZINE!

cm DVD

7.6GB

PC MAC

COMPUTER music

£5.99 / October 2010 / CM156

MAKE MUSIC NOW

Jamming in
Ableton Live

Improvisation in the
studio and on stage

REASON 5 IS HERE!

Get inside the ultimate music
production studio with our
massive guide and
in-depth review

cm DVD

7.6GB DVD-ROM PC MAC

Extreme
envelopes

Give your synths a
rhythmic boost

Goa trance

Uplifting dance music
production masterclass

EXCLUSIVE FREE SOUNDS

TIME+SPACE
SAMPLES

1249 royalty-free hits, loops,
basslines, pads, FX, vocals,
construction kits and more!

+

2001
STUNNING cm
DRUM 'N' BASS
SAMPLES!

EXCLUSIVE
VIDEO

IN THE STUDIO WITH

DJ FRESH

Get started with our
BEGINNERS'
GUIDES



REVIEWED

PROPELLERHEAD REASON 5
CAKEWALK V-STUDIO 20
STEINBERG HALION SONIC
SLATE DIGITAL FG-X
SOFTUBE TUBE-TECH PE 1C
ARTIFICIAL AUDIO QUARTZ
AND MUCH MORE!

cm > 40 APPLICATIONS, INSTRUMENTS
AND EFFECTS FOR PC & MAC!

Future
MEDIA WITH PASSION
musicradar.com
OCTOBER 2010 #156 £5.99
9 1771463 1687022
10>

Arturia[®]
MUSICAL INSTRUMENTS



25 ANALOG EXPERIENCE THE PLAYER

Analog Experience - THE PLAYER is the smallest and most lightweight version of the Analog Experience Series. It features a compact MIDI keyboard controller and light version of Analog factory software. This makes for a very easy-to-use and affordable package, including the very best of Arturia's signature sounds and a dedicated

quality keyboard perfect for the mobile musician.

- Includes Analog Player with 1000 synths sounds
- Ultra thin 25 keys with velocity sensitivity in a high-quality mechanism
- High quality aluminium and wooden case
- Also functions as a universal MIDI controller



www.arturia.com

ISSUE 156 OCTOBER 2010

Future Publishing Ltd.
30 Monmouth Street, Bath, BA1 2BW
Tel: 01225 442244 Fax: 01225 732275
Email: computermusic@futurenet.com
Web: www.computermusic.co.uk

EDITORIAL

Editor: Ronan Macdonald, ronan.macdonald@futurenet.com
Art Editor: Stuart Ratcliffe, stuart.ratcliffe@futurenet.com
Deputy Editor: Lee du Caine, lee.du-caine@futurenet.com
Multimedia Editor: Tim Cant, tim.cant@futurenet.com
Production Editor: Catty Foster, catty.foster@futurenet.com
Editor, cm Specials: Andrea Robinson, andrea.robinson@futurenet.com

CONTRIBUTORS

Alex Williams, Rob Boffard, Scot Solida, John Lehmkuhl, David Gibson, Jon Musgrave, Craig Hitchings, Tim Oliver, Ben Rogerson, Oz Owen, rach Miel, Declan McGlynn, Roger Cawkwell, Chris Randall, David Newman, Paul Taylor, Leon Macey
Illustration: *Burning Question* - Jake

Group Senior Editor: Julie Tolley
Senior Art Editor: Matthew Hunkin
Creative Director: Robin Abbott
Design Director: Matthew Williams
Editorial Director: Jim Douglas

ADVERTISING

Ad Director: Clare Dove, clare.dove@futurenet.com
Ad Sales Manager: Lara Jaggon, lara.jaggon@futurenet.com
Senior Sales Executive: Leon Stephens, leon.stephens@futurenet.com

MARKETING

Campaign Marketing Manager: Charlotte Pratten, charlotte.pratten@futurenet.com
Promotions Executive: Rebecca Hodges, rebecca.hodges@futurenet.com

CIRCULATION

Trade Marketing Manager: Verity Cooke, verity.cooke@futurenet.com

PRINT & PRODUCTION

Production Co-ordinator: Frances Twentymann, frances.twentymann@futurenet.com
Production Manager: Rose Griffiths, rose.griffiths@futurenet.com
Head of Production: Richard Mason, richard.mason@futurenet.com

LICENSING

Head of International Licensing: Tim Hudson, tim.hudson@futurenet.com
Tel: +44 (0)1225 442244 Fax: +44 (0)1225 732275

FUTURE PUBLISHING LIMITED

Publisher: Rob Last, rob.last@futurenet.com
Publishing Director: Mia Walter, mia.walter@futurenet.com
Chief Operating Officer: Simon Wear
UK Chief Executive: Robert Price

SUBSCRIPTIONS

Phone our UK hotline on: UK: 0944 848 2852
Overseas: (+44) (0)1604 2510452
Subscribe online at: www.myfavouriteimagazines.co.uk

NEXT ISSUE ON SALE: September 22

Printed in the UK by Polestar, Colchester on behalf of Future.
Distributed in the UK by Seymour Distribution Ltd,
2 East Poultry Avenue, London, EC1A 9PT. Tel: 0207 429 4000



Get **Computer Music:**
Make Music Now,
Volumes 1, 2 and 3 for
iPhone and iPod touch
free in the App Store now!



welcome

There are few events in the music technology calendar bigger than the release of a new version of Reason, and number 5 certainly doesn't disappoint. With the introduction of a couple of beautifully realised new instruments, an innovative song arrangement system, and an ingeniously appropriate and retro-authentic take on sampling, Propellerhead have raised

"The resolutely self-contained software studio has trodden its own path"

their own creative bar once again. The resolutely self-contained software studio has always trodden its own path, and while many will no doubt bemoan the continued lack of third-party plug-in support, the truth is that its 'closed' nature results

in truly peerless stability and is a huge part of what makes Reason Reason. The way I see it, it's something to be celebrated, giving Reason a uniquely focused approach that sets it apart from every other DAW on the market.

In this issue of **cm**, as well as reviewing Reason 5, we're also showing you how to put its fantastic new features to work. The review's on p98, and our massive guide starts on p32.

ENJOY THE ISSUE...

Ronan Macdonald Editor



The cm Mission Our goal is to help you create great music with your PC or Mac. With that objective always in mind, we bring you step-by-step tutorials on all aspects of software-based music production, unbiased reviews of the latest products, technical Q&As, and a Dual Layer DVD-ROM packed with exclusive software and samples.

SUBSCRIBE AND SAVE! SEE P19

www.facebook.com/computer.music.mag facebook

twitter.com/computermusicuk twitter

Want to work for Future?
Visit www.futurenet.com/jobs

ABC Member of the Audit Bureau of Circulations
17,427
Jan 2009-Dec 2009



Future produces carefully targeted magazines, websites and events for people with a passion. Our portfolio includes more than 180 magazines, websites and events and we export or license our publications to 90 countries around the world.

Future p.l.c is a public company
quoted on the London Stock
Exchange (symbol: FUTR).

www.futureplc.com

Chief Executive: Stevie Spring
Non-executive Chairman: Roger Parry
Group Finance Director: John Bowman
Tel +44 (0)20 7042 4000 (London)
Tel +44 (0)1225 442244 (Bath)

© Future Publishing Limited 2010. All rights reserved. No part of this magazine may be used or reproduced without the written permission of the publisher. Future Publishing Limited (company number 2008885) is registered in England and Wales. The registered office of Future Publishing Limited is at Beauford Court, 30 Monmouth Street, Bath BA1 2BW. All information contained in this magazine is for information only and is, as far as we are aware, correct at the time of going to press. Future cannot accept any responsibility for errors or inaccuracies in such information. Readers are advised to contact manufacturers and retailers directly with regard to the price of products/ services referred to in this magazine. If you submit unsolicited material to us, you automatically grant Future a licence to publish your submission in whole or in part in all editions of the magazine, including licensed editions worldwide and in any physical or digital format throughout the world. Any material you submit is sent at your risk and, although every care is taken, neither Future nor its employees, agents or subcontractors shall be liable for loss or damage.



We are committed to only using magazine paper which is derived from well managed, certified forests and chlorine-free manufacture. Future Publishing and its paper suppliers have been independently certified in accordance with the rules of the FSC (Forest Stewardship Council).



ISSUE 156 OCTOBER 2010

cm / contents

The cm guide to Reason 5

Propellerhead's latest is a music-making powerhouse! Discover its new features on **p24**



59_ JAMMING IN LIVE

How to use Ableton's performance DAW for the creation of improvisational masterpieces

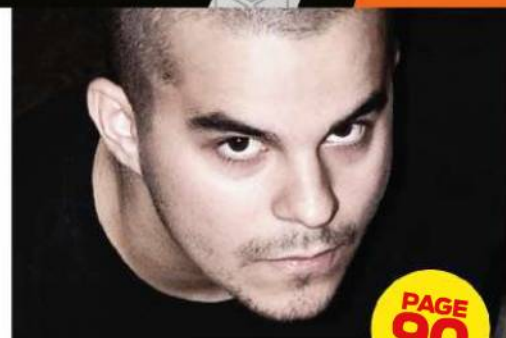
67_ PUSHING THE ENVELOPE

Breathe new rhythmic life into your synth patches

77_ MAKE IT FUNKY

Get your grooves sounding better than ever with our guide to the finer details of mixing a funk band

PAGE 59



PAGE 90

90_ THE cm INTERVIEW

Mysterious producer Lorn's new album is a world of beautiful pain. Why is his music so troubled?

Tutorials

52_ PRODUCER MASTERCLASS

DnB star DJ Fresh talks us through a work in progress

84_ TOTALLY TRACKERS

Go mobile with SunVox

85_ THE EASY GUIDE

We explore how chromatic notes add musical colour

86_ OFF THE DIAL

rachMiel kicks off his new series on avant music

88_ SOUND ESSENTIALS

Scot Solida experiments with modulation

122_ Q&A

Readers' production problems solved

128_ cm FOCUS

Go Eastern with our guide to Goa trance

Get into Goa with our step-by-step guide on p128

Give yourself up to the filter frenzy with Steinberg's new HALion Sonic workstation



Reviews

98__ PROPELLERHEAD REASON 5

The latest version of the seminal virtual studio

102__ STEINBERG HALION SONIC

Is this workstation just a revamped Hypersonic?

104__ SLATE DIGITAL FG-X

Turn up the volume with this great loudness maximiser

106__ CAKEWALK V-STUDIO

A multitasking recording solution for guitarists

108__ SOFTUBE TUBE-TECH PE 1C

Can yet another Pulteq EQ emulation add anything new?

109__ EXPERT SLEEPERS SPECTRAL

Manipulate your music's spectral content

110__ ROGER LINN ADRENALINN SYNC V2

Axe-essorise your plug-ins folder with this groovy effect

111__ ARTIFICIAL AUDIO QUARTZ

Give your tracks some Quartz movement!

112__ EASTWEST/QUANTUM LEAP HOLLYWOOD STRINGS

Bring some big-screen magic to your productions

114__ MINI REVIEWS

Round-up of sample packs, new apps and more

118__ cm RECOMMENDS

The music-making gear that's knocked our socks off



Essential cm

6__ INBOX

8__ NEWS

12__ THE BURNING QUESTION

18__ FREEWARE NEWS

19__ SUBSCRIBE

121__ BACK ISSUES

138__ NEXT ISSUE



P44 Enough Time+Space samples to see you through to Winter!

42__ FULL SOFTWARE

Martinic Combo Model V, Full Bucket Mono/Fury, Martin Eastwood MVerb and g200kg RoVee are all yours

43__ DEMO SOFTWARE

Try out the software reviewed in this issue with demo versions of Artificial Audio Quartz, Expert Sleepers Spectral Conquest and Roger Linn's AdrenaLinn



P42 Full Bucket Mono/Fury brings you Korg Mono/Poly-style action for free

44__ 1249 TIME+SPACE SAMPLES

The soundware giant is feeling generous - take advantage of 1.9GB of awesome loops, hits, FX and more

47__ SAMPLES AND VIDEO

Take the dancefloor by storm with 2021 DnB samples, then find out what DJ Fresh gets up to in private



P47 Take a peek at DJ Fresh's adventures in the studio

48__ cm STUDIO SESSION

Get your tracks out there with EnergyXT cm 2.5.3's new built-in SoundCloud upload functionality



P48 Get yourself heard: EnergyXT cm features SoundCloud connectivity

50__ READER MUSIC

Rating our readers' latest musical works

PDF GUIDES FOR NEWCOMERS

If you're a rookie, check out the **CM Beginners** folder on the DVD - a library of material put together to help you get your head around many basic computer music concepts

cm/inbox



Tell us what's on your computer-musical mind. Email cminbox@futurenet.co.uk

Message of the month

Last week I tried to download a \$500 piece of music software for free. I won't go into my 'justifications' - just about anything will work if you force yourself.

The first file took 11 hours. By the time I got to the last one, my computer had been downloading day and night for five days. The process put such a strain on my system, I couldn't even check my email. I learned all about seeding and leechers. I suffered three virus attacks, two attempts to steal my credit card and offers for porno from all over the world.

I kept going because I was getting this amazing program for free. But, one question kept nagging me. Would I be able to make music with it? Not technically; creatively. I began to feel I was ingesting karmic poison into my soul kilobyte by kilobyte. If I ever got the program running, I feared a pang of guilt

every single time I turned it on. Nothing too heavy; just a whispered reminder: 'This is stolen'.

To me, making music is pretty close to a spiritual thing. No matter what kind you make, from neo-psycho thrash metal to retro-dance ambience, it all comes from the impulse to create. And creation, for me, doesn't quite sync with larceny.

No matter what your justification, it is stealing. Hell, I bought my first car for \$500. It never occurred to me to drive off without paying for it.

So, I finally just killed the torrent and purged the sleaze from my system. I went out and bought the software. I flinched at the price; especially when I added in all the time I'd wasted trying to download the program for free. But the first sound I listened to was so gorgeous, I composed a piece of music with a freedom and purity that astounded me.

Tom D, New York City, USA

I've never heard potential damage to one's actual music used as an argument against piracy, but yeah, why not? I can see how nagging guilt could pollute the old creative juices. Yet another good reason to keep your setup legit, then. **RM**

The writer of our *Message of the month* will receive a brand new Cakewalk A-500S controller keyboard, worth £155, courtesy of Cakewalk and Roland!



A problem shared

I just bought **cm155**, and after reading your tips on problem solving and troubleshooting (*Problem solved!*), I thought I'd send an email.

I found this article really helpful, as I've had many issues while using various pieces of software on my DAW. In Pro Tools I often have to contend with the message, 'Try changing your buffer size' while recording, and I go up and down the sizes, often to no avail. This article has supported my understanding of the issue, which, hopefully, will no longer give me the headache it used to.

I was also pleased to read about the issue of 'distortion/fuzziness' in playback, as I use Cubase Essential 4 on another machine and this was a problem.

This too has been cleared up by your very useful article.

Also, **cm** has offered me a good method of selling my wares, through the article concerning whether music is dead - well, the recording and releasing of it, at least (*Burning Question*). This has offered me new insight and I shall be checking out my options.

So, congratulations on a marvellous mag and please do keep it up. It's really helpful to us budding recording artists and musicians and it makes my leisure time worthwhile. I work in another job and also play in a local function band every weekend, so your mag maintains my sanity.

Thanks a million.

Ryan Connor, Selkirk, Scottish Borders

Glad the feature helped - and equally glad to be of some psychiatric assistance! RM

Sample issues

I would just like to add support to Sarah Davis' comments in *Inbox*, **cm155**. A half-decent sample manager is what is missing from the PC platform in general, let alone the **cm** DVD.

I can't believe there's no AudioFinder equivalent for PC. The clever person who makes a decent sample manager for PC will make some money!

I've done exhaustive searching and testing to find something that works like a file manager, autoplays WAV files (including 24-bit), and displays the WAV on screen, for navigation. The best I've found

The excellent AudioFinder sample manager doesn't have a PC equivalent





Extend your Mac desktop onto your iPad with the nifty Air Display

is Extreme Sample Converter (www.extranslator.com). It does all of this, but can't delete or move files around, which is crippling. You can copy and rename, though. Perhaps you should contact the developer and ask him to make a special stripped-down version that just works as a proper browser for the **cm** DVD. He can save all of the VST features for a paid-for commercial version.

Darren Glen, Melbourne, Australia

You've kind of answered your own question, in that ESC doesn't really do what we'd need it to do to be the **cm** Studio's official sample manager. The search continues, then... **RM**

Dangdut dreams

Having been a reader for quite some time now, let me begin by praising how meaningful your magazine is to the current state of my music producing skills.

"A half-decent sample manager is what's missing from the PC platform in general, let alone the **cm** DVD"

I studied music in college and used to buy **cm** only to find myself flipping through the pages, because I didn't understand the sometimes-advanced topics that it presented. But as I learned more in college and graduated, I looked back at my pile of mags and was amazed by how helpful it was. I really am now on the same page as every page that I read in **cm** - thank you so much!

After buying your magazine for some time, though, I noticed that it's very dance/electronic-centered. As I am now working in the post-production industry, I would love **cm** to show more about orchestration or any obscure genres that we media/TV composer are sometimes asked to do music from. I would love to read about how to make Bhangra, Dangdut and other genres.

Keep up the good work!

Joshua Immanuel, Indonesia

While it's absolutely fair to say that there is a primarily 'electronic' angle to **cm** in general, we do cover other styles too - this issue's *Make it funky*, for example. **RM**

On the Air

I'm a new iPad owner always looking for ways to make music with the use of cutting-edge tech. I've come across a fantastic app called Air Display. It turns your iPad into an extended display for the Mac (Windows version will be available soon), so you can drag anything you want across from your desktop to the iPad screen.

I'm a Logic Pro user and have found it immensely useful. I can control everything via the iPad's touchscreen - Omnisphere, Nexus and Trilian, to name but a few. And at a very reasonable £5.99, it stacks up well against TouchOSC and AC-7 Pro.

I hope other DAW users and iPad owners discover this app, because it's one of the best ideas for hands-on control I've tried.

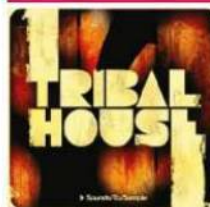
Tom Newton, Peterborough

Lag and lack of right-click aside, Air Display is indeed a must-have for any iPad-equipped studio. Allow Spectrasonics' Eric Persing to demonstrate at www.bit.ly/bgSVLr. RM

FREE!
2GB of samples
for instant
download!

Sounds/To/Sample

THE definitive download resource for music makers



Sounds To Sample **Tribal House** New & Exclusive

Capturing the sun-kissed vibe of afterhours fiestas around the world, Tribal House features 160+ dusky beat elements precision designed to work together for that killer rhythmic workout. **£15.95**

SampleStar

Deep Tech Sessions

New & Exclusive

550MB+ of moody music loops, deep basslines, synthetic grooves, delayed vox, smokey stabs and tech and minimal drum loops in the latest from Samplestar. **£22.49**



FatLoud **Urban Drums** New

FatLoud open their drum programming vaults to serve up this definitive collection of warm, deep, tight and raw drum hits and all-new loops for hip hop, RnB and pop. **£22.50**

Sounds To Sample

Disco Electro

New & Exclusive

Globally renowned US uber-producer Jon Pegnato of LA Riots opens his elusive sample vaults for the first time, exclusively to Sounds to Sample. **£16.99**



Hy2rogen **Progressive Tools** New & Exclusive

Essential selection of kick-free tops and tech percussions, build and drop FX, reverse vocals, chords and stabs, plus song-starting set of basslines, synths and sidechained pads. **£12.95**

Sounds To Sample

Deep House Synths & Stabs 2

A second exquisite serving of smokey synths, floating stabs, warped Rhodes and dusty lo-fi progressions in the latest from the Dual Shaman team, boasting 290+ late-night workouts. **£12.95**



Plus search The ALL-NEW SoundSource for essential hints and tips:

JORIS VOORN Q&A | MAKING GLITCHED VOCALS | HOW TO START A CLUB NIGHT | THE SAMPLE MAGIC STUDIO | PROGRAM THE SYNTH LINE FROM BODYROX YEAH YEAH & MUCH, MUCH MORE

www.soundstosample.com

cm/news

NEW RELEASES > COMMENT > INDUSTRY HAPPENINGS

NI updates imminent

Reaktor 5.5 and Komplete 7 to come in September, and a new Traktor system teaser

> **There's a triple whammy heading our way: Native Instruments have released new versions of Reaktor and Komplete, and are drip-feeding information on a forthcoming new Traktor "system".**

The last time Reaktor saw a meaningful update was way back in 2005, and some feared that NI had halted further work on their modular monster. Happily, this has turned out not to be the case, and version 5.5 sees a host of new features and a major interface refresh. Two new synthesis modules - modal and additive - have been added to spice up instrument creation and modification. Reaktor 5.5 also features new ensemble content, including Electronic Instruments 1 and 2 - which are collections of classic Reaktor instruments including 17 synths, drum machines and effects - and a new monophonic synth called Lazerbass that NI pitch as "devastating". In total, Reaktor 5.5 boasts over 70 unique synths, effects, sequencers and grooveboxes.

On the tech side, Reaktor's editor and audio engine have seen some speed improvements, and the interface has been comprehensively overhauled: features such as a bookmarking system, master input/output volume fader and flexible window layout aim to make it easier to work productively with the software.

Reaktor 5.5 is available as a free beta to existing users until it's officially released on 1 September (after which it'll still be free!).

NI Komplete has always been great value for money, and version 7 continues the trend. The all-encompassing software bundle now features 24 wide-ranging instruments and effects, which is an impressive 17 more than the previous edition, and raises the sonic count to 10,000 sound and 90GB of samples. NI claim they cover "everything from the dirtiest synths to heavenly choirs, pounding drums and mesmerising effects". Komplete includes flagship NI products such as Kontakt 4,

Guitar Rig 4 and Reaktor 5.5, alongside offerings from other brands like Abbey Road and Scarbee. Given that Kontakt by itself is only €120 cheaper than the entire Komplete bundle, it's an incredible deal. The full package will be available from 1 September and will set you back €499, while upgrading from versions 2-6 will cost €199.

There's something brewing in Traktor land too. NI haven't officially released much hard info on the elusive new product, but they have put out a teaser video showing Dubfire taking down Space, Ibiza using the new controller and software. The video appears to show that the new Traktor system will be an all-in-one DJ station featuring two decks and a four-channel mixing console running new software. Nothing has been confirmed yet, but this is definitely something for digital DJs to keep their beady eyes on.

www.native-instruments.com



Reaktor 5.5 has had its interface tweaked and refreshed and plays host to a raft of new instruments and effects. It can also be found in the new version of Komplete, alongside many other products

Vengeance is yours

New compressor allows you to create dynamic patterns



If Multiband Compressor maintains the standard set by its Vengeance stablemates, it should be very good indeed

> Mastering is a difficult art to, er, master, but Vengeance-Sound aim to salve the pain with their new Multiband Compressor. The plug-in works by splitting the signal into four frequency bands and compressing each independently. Each band supports various filter slopes (6-96dB/oct) and has its own dry/wet dial.

One of the plug-in's headline features is a DPC (dynamic pattern compressor) on

"Multiband Compressor has absolutely superb filters with no phasing issues"

Vengeance-Sound

each channel. According to Vengeance, this enables you to "add custom volume patterns onto the compressed signal - so you can accentuate the offbeat or the onbeat and create sidechain-like effects".

The app also includes some handy utilities, such as a live waveform scope that reveals what each compressor is up to in detail, and a limiter for each filter band in addition to a master limiter.

Vengeance Multiband Compressor will cost €149 and will be in VST/AU formats for PC and Mac. A release date has not been announced, but we're expecting it to land soon. Beware, though: this is a "dance-optimised compressor", so any attempts to use it on tracks of another genre will result in unimaginable sonic mayhem. Maybe.

www.vengeance-sound.com

Mixdown



Our high-scoring Deputy Editor reveals how you can attain a perfect ten

> The reviews section is arguably the most contentious part of every magazine that has one, and we certainly deliberate over ours at length. The final score is a particular cause for debate within the **cm** offices - it's essentially the entire review distilled into a score out of ten, so it's vital that it accurately

"Getting a 10/10 score doesn't necessarily mean that a product is 'flawless'"

reflects our opinion. We revised our scoring system as of issue 147, but with several products picking up full marks this time around, I decided it'd be worth expanding upon what, precisely, that means.

First of all, getting a 10/10 score doesn't necessarily mean that a product is 'flawless'. If it did, it'd be easier for simple products to get full marks but practically impossible for complex ones like DAWs. With such deep software, there are always going to be shortcomings and perhaps a few bugs too. The quantity and severity of these is of more concern than their mere existence.

The 10/10 rating, then, is reserved for products that exceed our expectations and raise the bar for the competition, and there are a number of ways to achieve this...

First, a product could introduce totally new - and awesome - features. For example, Celemony Melodyne DNA, with its polyphonic pitch editing. It might even create a totally new product category.

Secondly, a fresh spin on something familiar can also help to elevate a product above the rest. Think Reason 5's Blocks - it's one of those 'why didn't anyone think of this before?' features, and I won't be one bit surprised to see other DAW developers co-opt the approach for their sequencers.

Thirdly, a product might simply give better results than its contemporaries. Slate Digital's FG-X is a prime example - we've seen plenty of loudness maximisers before, but this one just sounds better.

In addition, a product needs to feel 'complete' to get full marks. While it'd be great if Reason 5 had Record's multiple rack, for instance, it's just something that'd make it even better. NanoStudio, on the other hand, while being arguably the best iPhone music app, just fell short of full marks due to the lack of EQ and compression, which we actively felt it needed to be 'complete'.

ArtsAcoustic BigRock

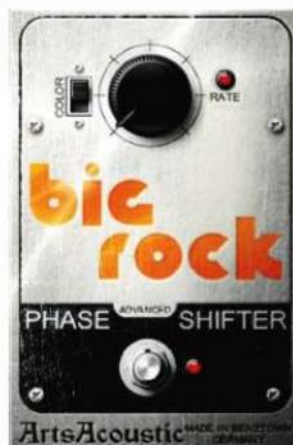
Get that Small Stone sound in a larger-than-life plug-in

> ArtsAcoustic have released BigRock, an unofficial plug-in emulation of Electro-Harmonix's Small Stone phase-shifter pedal.

The legendary device first appeared in 1974 and has been used by a myriad of artists, including synth wizard Jean Michel Jarre. BigRock is billed as the only plug-in able to reproduce the Small Stone's "distinctive and fat character". However, it goes beyond the original pedal's functionality. The plug-in can work in stereo and has additional parameters, including dry/wet mix and centre frequency. The LFO is also more configurable and there are high-pass and low-pass filters, too.

BigRock is out now for PC and Mac in AU and VST formats, priced €79.

www.artsacoustic.com



BigRock goes further than the hardware it emulates



Clockwise from top:
Freemasons, Sharooz
and Dave Spoon



© Zim Inova

PSL is nearly here

Details finalised as Producer Sessions Live weekend looms

> The time is nearly here for **cm's** first ever live event - and we're very excited! Hosted in conjunction with our sister title *Future Music*, **Producer Sessions Live** is happening at SAE London on 25 and 26 September. The weekend is set to be a top one, stuffed with product demos and masterclasses from industry heavyweights and big-name producers.

Many of the music technology industry's giants will be exhibiting their wares and demonstrating exactly how you can get the best sounds out of their kit. Roland, Steinberg and Korg are bringing all their latest gear for you to play with and providing specialists to reveal tips and tricks. Ableton and Novation are hosting a workshop on Live 8 and the funky Launchpad controller, while Source Distribution - UK distributor of Universal Audio, Presonus, Event, Moog, Eventide, Genelec and Lynx Aurora - are giving in-depth demonstrations of several of their biggest products, from monitors and FX units to digital mixers and audio interfaces.

Sound Technology - UK distributor for Propellerhead - will be showing off the brand-new Reason 5 and Record 1.5 alongside the latest products from JBL, Lexicon, AKG and Nord. Numark are bringing their range of Serato-compatible hardware controllers to the party, and Akai

Professional will be demonstrating their line of revered beat-production samplers. The list doesn't stop there, either: Avid will be demonstrating how to get creative with the latest Pro Tools systems, MOTU will be flaunting their hardware and software, and ReBEAT will be talking money with their walkthroughs on how to sell and promote your music online.

Not enough for you? Solid State Logic, Time+Space, Sontronics, FXpansion, SoundCloud, Focal Professional, Jamhub, Fostex and Tascam will also be in attendance and vying for your attention. And if you happen to spot something you like, you'll be able to buy it on the spot from show sponsors Absolute Music.

For the full list of exhibitors and a breakdown of what they'll be doing, head to the **Producer Sessions Live** website.

An impressive array of top producers are also holding masterclasses at PSL, of course, including Freemasons, Dave Spoon, Danny Byrd, Alex Blanco & Jon Carter, Sharooz and London Elektricity. Each session features a tutorial and a Q&A discussion. So what are you waiting for? Entry is £8 per day, and each **Producer Session** costs £4. Buy tickets and find out more online.

www.producersessionslive.com

Damaged



Chris Randall speaks out against our culture of musical perfection

> As languages go, German is quite subtle. While it's true that English is technically a Germanic language, we tend to coopt handy words from other languages, rather than developing our own multilayered meanings. Not so for the Germans. If they don't have a word for something, they just stick German words together until they come up with one that works. Never mind that it's 43 syllables long and comprises the entire alphabet twice.

One such word I recently learned is 'einmaligkeit'. Taken literally, it roughly translates (according to Google) as 'uniqueness', though I understand that doesn't even scratch the surface of the depth of meaning. The equivalent word in Japanese is 'ikkaisei', meaning 'once in a lifetime'. It's a defining characteristic of temporal art like photography and music.

"I propose that what makes a track human, and thus listenable, are its foibles, not its perfection"

These two words are, to all intents and purposes, the opposite of quantisation and auto-tune. The idea is to be in the right place at the right time, with the right tools and the skills to use them to capture your idea, rather than editing the artwork into submission. Live performance, in other words.

Now, the Japanese, being Japanese (on the whole), tend to take this concept to a somewhat ludicrous extreme, but I think there's no harm whatsoever in admitting a bit of ikkaisei into your work. When you create music entirely within the confines of a computer, you are aware that perfection is theoretically within reach, if you can only line things up just right and make sure it's all perfectly in tune and on time. I propose that what makes a track human, and thus listenable, are its foibles, not its perfection. Embrace the transient, and let a few mistakes through, even if they're very subtle ones. The listener wants to know that a person created the song, not an algorithm.

Chris Randall is the co-owner of Audio Damage, Inc, and proprietor of the Analog Industries blog, on which he regularly pulls no punches.

www.audiodamage.com
www.analogindustries.com
Twitter@Chris_Randall



Get your mics in line

Sound Radix debut with automatic mic-alignment plug-in

Get those mic signals perfectly aligned with Sound Radix's debut plug-in for Mac



Startup audio software developers Sound Radix have released their first offering: an automatic microphone time-alignment plug-in. Auto-Align 'listens' to multi-mic recordings, then measures and compensates for the delays between the different sources.

Sound Radix say that the plug-in is able to improve those recordings that require a sense of space, too: Auto-Align "time-places the microphones to better match the close-miked source", so that the results are simply more phase-coherent. It can also detect and deal with potentially more tricky reversed-polarity mics.

Auto-Align is available as an Audio Unit plug-in for Mac and will set you back \$149. VST and RTAS versions are coming soon.

www.soundradix.com

"Time-aligning a multi-microphone setup is crucial for a coherent and punchy sound"

Sound Radix

Trackers & Demoscene



Renoise 2.6 brings user-extendability to the popular tracker

Renoise 2.5 was a truly significant point release, but 2.6 is set to blow the world's most sophisticated tracker wide open. Dubbed Renoise Geek Edition, its boldest new feature is the introduction of lightweight programming language Lua scripting, which means that anyone with a little bit of development knowledge can create extensions and tools for almost any task imaginable and share it with the community, just as extension developers do for Firefox and Chrome. This has brought much improved MIDI controller

"Renoise 2.6's bold introduction of lightweight programming language Lua means that anyone can create extensions"

handling and there's already talk of the best community extensions being integrated into official Renoise releases.

Another big addition is Sample Autoseek, with which long samples or loops can span many patterns and you'll always hear them without having to start from the pattern that contains the sample trigger. Other new features including OSC support for remote control and a 64-bit Linux edition make this the most exciting Renoise release ever. It's available in beta for registered users at www.renoise.com.

DEMO OF THE MONTH

Ino by Quite

This production placed second in the 64k demo competition at July's DiHalt demoparty in Nizhny Novgorod, Russia. It was made using Werkkzeug, the powerful demo creator written by scene heavyweights Farbrausch. Werkkzeug requires no programming skill of any kind, so if you fancy having a go, look no further than www.theprodukt.com/werkkzeug1 for this amazing demotool. There are links to this and more demos on the **cm** DVD. Enjoy!



Ino by Quite features some beautiful light shows

New cm Special

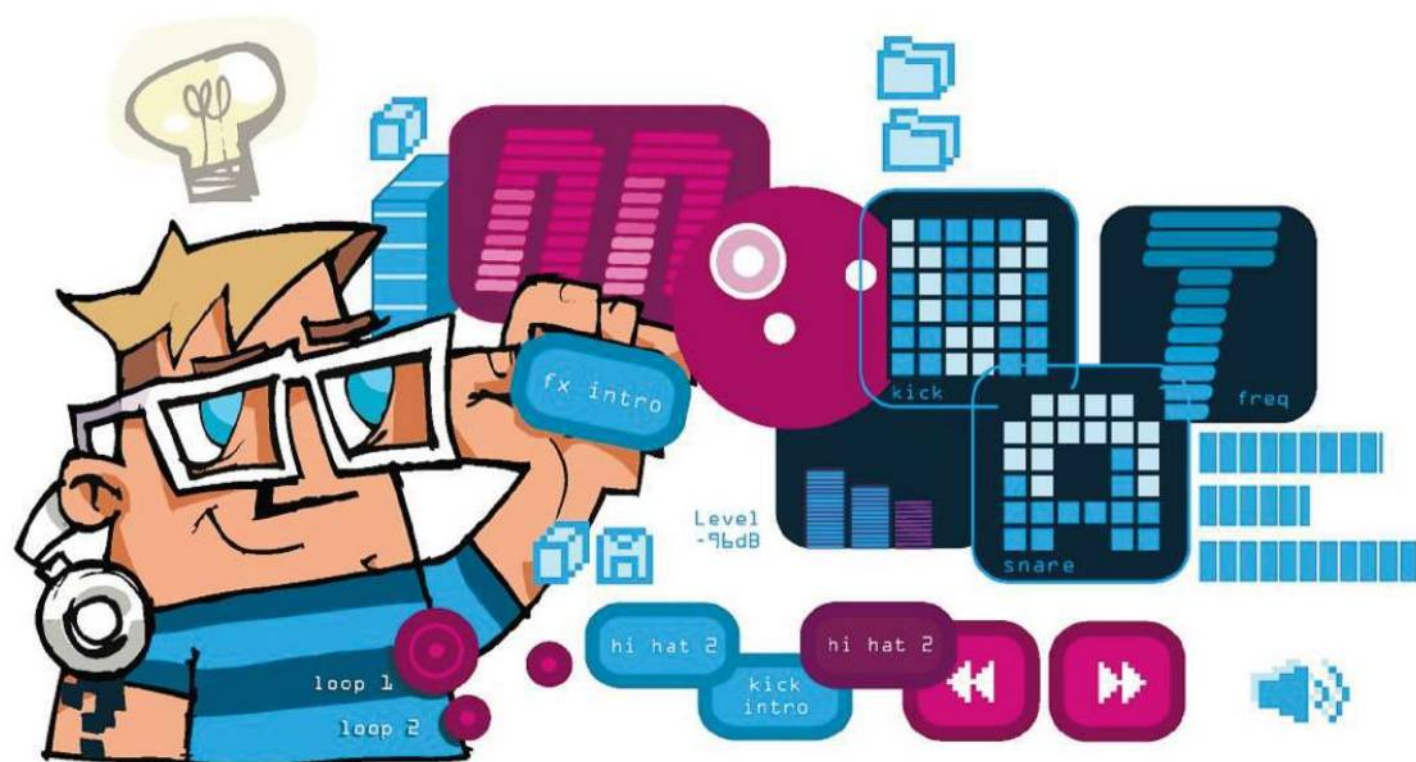
If you fancy using your iPhone, iPad, Android device or Windows Mobile phone to explore new territories in composition, bring more freedom to your live shows or simply streamline your kit bag, you need our new **cm Special**, 101 amazing apps.

From gig-friendly tuners, metronomes, chord books and guitar FX pedals to synths, sequencers, grooveboxes and beat-creation tools guaranteed to get producers re-inspired, we've got it all covered. There are tutorials on the more complex apps, plus techno legend Richie Hawtin reveals why he's already adopted the iPad into his setup for the eargasmic Plastikman tour. And if you don't have a smartphone or iPad, we've got your back: we reveal how to optimise your netbook for mobile music-making too.

cm Special 43: 101 amazing apps is out on 18 August. See p96 for stockist information.

www.computermusic.co.uk





Are music producers driving innovation in studio software?

> In the world of music software, the relationship between developer and music producer has traditionally been pretty straightforward: the former has created the tools that enable the latter to go about their creative business. Sure, musicians have always fed back to software companies and requested new features, but in the main, it's the techy guys who have dictated how we work.

In recent times, though, we've seen a raft of products that have sprung not from the minds and keyboards of programmers, but instead been dreamed up by music producers who have seen a gap in their workflow and

"Is it simply the case the music producers are more critical and demanding of their products?"

decided to set about filling it. Steven Slate, for example, made his name as a producer, engineer and songwriter - but more recently he founded software company Slate Digital, who have brought us the superb Trigger Platinum

drum replacement plug-in and the FG-X Virtual Mastering Processor, which is reviewed on p104. What is it, then, that's motivated him to get into the development game?

"While in the studio, I'm constantly finding myself in situations where I feel there could be a better tool, or even a new tool to help me do my job," explains Steven. "For Trigger, I felt that there was no drum replacer on the market that could accomplish what I needed as a mixer. The fact that not a single drum replacer before Trigger worked with phase accuracy was a real headache. I would have to manually align almost every hit to ensure that it sounded right. Also, I like to stack a few different samples to create some hybrid sounds. Before Trigger, I'd have to use a half-dozen sample replacers and then go in and align all of the samples. It was a bit insane, now that I look back. Trigger has taken hours off each mix."

Reading the Manuel

Vengeance-Sound's main man Manuel Schleis is another who's trodden the path from producer to developer, having released Multiband Sidechain, a one-stop solution for creating sidechain pumping effects, and Metrum, a kick drum designer. (New plug-in Multiband Compressor is on the way too, as reported on

p9.) As with Slate, time-saving was a key factor in his decision to start making software.

"We want to bring specific production techniques to a user-friendly level," he says. "You can simulate a multiband sidechain by creating different split tracks and multiple instances, but everyone who does this already knows that it's a pain in the ass, especially when working on bigger song projects. And you never get the filter separation without phasing issues. As a producer, I wish I'd had the Multiband Sidechain plug-in earlier in my life - it would have saved me a lot of time."

Why is it, then, that these tools are best made by producers? It seems unlikely that technical limitations were preventing other developers from creating them, so is it simply the case that music producers are more critical and demanding of their products? And is this also the case when such tools are being built?

Duda hustle

Steve Duda is a producer who's worked with the likes of Nine Inch Nails, A Perfect Circle, Rob Zombie and Tommy Lee. Now, in collaboration with Deadmau5, he's released the Nerve drum machine via the pair's Xfer Records label. Did his music-making expertise lead him to be tougher to please during Nerve's development?

"I think so, absolutely," he responds. "When Nerve was started, we wanted it to be something that was very simple, so that you could create original loops with minimal effort. While we succeeded at [meeting that aim], I wasn't able to be happy with something that I felt wasn't bringing something new to the table, or just felt like a toy."

"With this in mind, I added per-pad LFOs, and the pre-calculated FX (timestretch, pitchbend, lo-fi FX, etc). It took a fair amount of additional work, but I'm glad I did it, since they tend to be the features that people specifically mention

"The dream scenario would be for the best producers and developers to work harmoniously together"

when they're talking about the strong points of Nerve. Also, I find myself using them a lot!"

Perhaps, too, there's a sense among producers that by linking their name and experience to a product, they're also putting their reputation on the line. Here's Steven Slate: "During the development of Trigger and FG-X (and the upcoming Virtual Console Collection plug-in), I was very aware of what I wanted the plug-ins to achieve. At times this was a bit of pain because my expectations were very high!

"Being an active person in the industry really helped me to determine exactly how well the creation process was going. I've been in the studio and used tools that didn't perform as well as I needed, and I did not want people to feel that way about our plug-ins."

It's the music that matters

To cut to the chase, then, the obvious question is this: do music-makers create better software than those who are 'just programmers'? Manuel Schleis isn't so sure: "It's the same as an actor not automatically being a good director. There are so many important things going on during the development of a plug-in that do not have anything to do with making music."

He's right, of course - knowing what kind of software is required is not the same as knowing how to build it. However, Steven Slate certainly thinks that seasoned producers are at an advantage. "Everything I create comes from a personal desire to use it myself in the studio," he says. "And if it helps me in the studio, there's a good chance that it will help other engineers. That's not to say that you have to be a busy producer in order to make good music tools, but having the real experience can certainly give you the extra edge."

The dream scenario for computer musicians, of course, would be for the best producers and the best software developers to work harmoniously together, creating products that are both feature-packed and highly intuitive. That way, we might be free from applications and plug-ins that, although functional, feel a little... well, unmusical.

"There are tons of plug-ins (and even sequencers) out there that make me ask myself, 'Hell, have the programmers ever produced a whole track with that?'" proffers Manuel Schleis, echoing our sentiments exactly. "They have long, impressive feature lists, but are lacking the most important things for a piece of music software: fun and usability."

Steven Slate concurs, while reminding us that, no matter how much we talk about the details of software, its true value and quality can only be judged on how well it helps us to make music.

"I'd take a simple tool with great sound over something that offers a lot but is hard on the ears," he says. "At the end of the day, our job is to make things sound good." **cm**

Ins & outs



APPLE CORED

If you're starving for processing power, you'll be delighted to learn that the latest versions of Apple's Mac Pro range can be juiced up with a whopping 12 cores - surely enough for all but the most mental of music projects.

ONE TIME

Rapper Wyclef Jean has announced his plan to run in this year's Haitian presidential election. He says: "If I can't take five years out to serve my country as president, then everything I've been singing about, like equal rights, doesn't mean anything."

HOT CHIP

Maximum **cm** kudos this month goes to Linus Åkesson, whose Chipophone instrument stuffs a chip music synthesiser inside an electronic organ. Check out linusakesson.net to hear his jazzy take on 8-bit gaming classics, including *Auf Wiedersehen Monty*.

BEAT IT

Black Eyed Peas rapper will.i.am has criticised plans to release an album of Michael Jackson's music this November. He says MJ was a perfectionist, and that releasing an album of previously unheard tunes without his blessing would be "disrespectful".

WAVE GOODBYE

Google's real-time collaboration suite Wave is all washed up and set to be shut down. Development on the standalone version is to cease, although the site will remain up until at least the end of the year.



OPEN LABS SHUT

The assets of computer-in-a-keyboard peddlers Open Labs have been auctioned off. It's alleged that OL bigwig Victor Wong threw a huge party in the wake of the company, where 26 people were injured as his balcony gave way. Some people have all the luck, eh?

Busting jargon



Computer music terminology explained. This month: **Loudness maximisation**

The average listener will typically regard the louder of two recordings as sounding 'better', even if the difference is slight. Since the advent of digital 'loudness maximiser' effects in the 90s, it's become a trend to squeeze as much volume out of the fixed digital scale as possible. A CD produced in the late 80s will sound quieter than a modern one. The digital scale hasn't increased in that time, but mastering techniques have been developed to create loud signals that still 'fit' into the fixed digital scale.

If you increase the master fader on your DAW until it goes 'into the red', any part of the signal poking above the 0dB mark is discarded, causing harsh digital clipping. This will achieve loudness, but it sounds crude. Plug-ins such as GVST GClip offer more sophisticated clipping. Saturation is less brutal than clipping, and is more like 'inflating' the waveform. Drawbacks with these techniques are that distortion can be caused and transient character altered.

Limiting involves making the loud peaks of a track quieter - almost as if you'd used very detailed volume automation to do so - before increasing the overall level, resulting in a track

that's louder on average. The downside is that limiting reduces dynamic range and can lead to 'pumping', where the mix rapidly undulates in level as the limiter continually adjusts the gain.

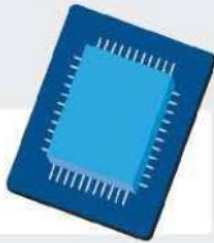
Loud masters are now the norm, so loudness maximisers have become increasingly sophisticated. The latest example is Slate Digital FG-X (see p104), with its intelligent transient saturation.

It's important to remember that each mix has its own loudness 'potential'. A controlled, balanced mix will usually go loud with no fuss, and mixes that have fewer elements going on at once are less prone to distortion or pumping.

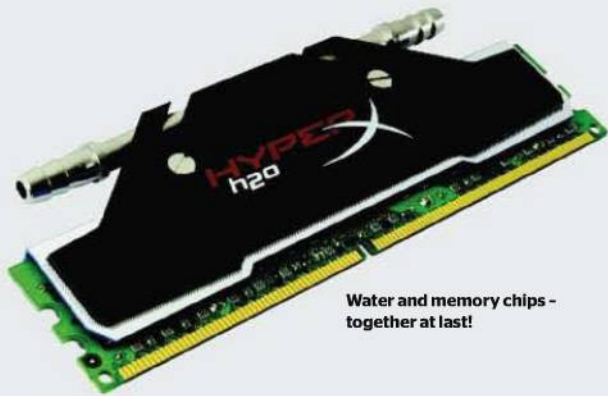


iZotope Ozone 4 gives you everything you need to make competitively loud masters

System check



Weird and wonderful goings-on in the wider world of computing



H2-WHOA!

Water-cooled processors have been popular with overclockers for some time now, but water-cooled memory has never really taken off in quite the same way. That hasn't stopped top memory-makers Kingston from giving their latest range of sticks the water-cooled treatment, though. The DDR3 Kingston Hyper H2O memory modules feature chunky water-cooled casings. They may take up more space in your PC case, but you should be able to tweak their speed up quite significantly from the default 2000 or 2133MHz. The memory modules are available in 4GB dual-channel (\$157) and 6GB triple-channel (\$235) kits from US retailers. Water deal! www.kingston.com

U CAN TOUCH THIS

Touchscreens are great, but their biggest problem is their lack of physical feedback. Enter the boffin tag-team of Malte Weiß and Jan Borchers of The Media Computing Group at RWTH Aachen University, who have created an ingenious system that allows tactile controls to be added to touch-sensitive displays. The clever 'Madgets' technology uses an array of electromagnets behind a touchscreen to hold the controls in place or even move them around. Reflective markers detect the state of the knobs and buttons, and inductive power transfer is even possible. This would enable individual physical controllers to be powered, making them light up, for example. The potential for modular virtual control surfaces is huge, so we'll be keeping a close eye on how this technology develops. hci.rwth-aachen.de/weiss

EYE CAN'T BELIEVE IT

Crazy Texas boffins Waterloo Labs have demonstrated an unusual control system that enables the user to control a computer - specifically a Nintendo Entertainment System playing *Super Mario Brothers* - by merely moving their eyes. The system takes advantage of the fact that our eyes are naturally polarised: the back of the eye is more negative than the front of the eye due to the amount of neurons on the retina. Electrodes are placed on the face to detect voltage changes, which are then filtered and amplified to create usable controller movements. Here at **cm** we're always excited by potential control technologies that leave our hands free for the consumption of tea and cakes, so we're hoping that this technology goes mainstream sooner rather than later. www.waterloolabs.com

Get with the programmers

Flux's MD and Head of Engineering Gaël Martinet tells us about their revolutionary new IRCAM Tools



Flux
Gaël
Martinet

cm How did Flux's partnership with IRCAM come about? And what is IRCAM?

GM IRCAM - Institute for Research and Coordination in Acoustics and Music - is based in Paris and is one of the world's leading public research institutes within the fields of musical expression, musical research, sound, and acoustics. They're not producing any products themselves, as it's not in their interest to spend any resources on that.

IRCAM came to us and it all happened in a very natural way. As Flux are focused on the creation of intuitive and technically innovative high-end software tools, we fit the profile completely for them. We're a company that could achieve these things with their technology.

cm Tell us the history of IRCAM Tools.

GM The IRCAM Tools are based on two of the main research and development projects at IRCAM during the last 20 years: Sound Analysis and Synthesis, and Acoustic and Cognitive Spaces. The former research project is focused on phase vocoder technology, providing transformation, pitchshifting and timestretching, as seen in the Trax suite. The research contains technology that can be used for noise reduction, filtering and a range of other applications that are very useful for professional audio products, so Trax as we see it today is only a part of the tech. I think we can expect some interesting products in the future.

cm How do Spat/Verb differ from convolution/algorithmic reverbs?

GM Convolution technology is well known and quite cool, especially to model early reflections, but you have no control over any component of the reverb, including the tail - you're basically working with a sample. Algorithmic reverbs are a lot more flexible - they allow you to adjust every component, including the tail. The benefit of being able to do this makes them more interesting in situations needing acoustic simulation.

The IRCAM Spat/Verb are based on technology developed over 10 to 20 years. One of the main differences is that the early reflection and

"Algorithmic reverbs allow you to adjust every component"

'cluster' parts of the reverb are handled per source. With convolution, you can't simulate a source moving around in a space. With Spat, you have a really amazing simulation of sources (up to eight at the same time!) moving in a space. It's not just sending a mix of sources into a reverb - in Spat, you

have a dedicated early reflection and cluster part for each source, which makes everything sound and feel more real.

Both Spat and Verb have something called 'perceptual parameters', which are basically math converted to 'human' terms, such as Presence, Warmth, Brilliance and a couple of others. Those are parameters added after thorough research, with a voting audience naming the qualities they felt when listening as IRCAM's researchers adjusted different parameters within the algorithm.

cm What's next from Flux? More IRCAM collaborations?

GM Since the collaboration really is the first true 50-50 partnership IRCAM has done, there are a lot of things to come in the future. Aside from that, there's lots in the pipeline for us too, and a couple of interesting partnerships to be announced in the near future.

New Axiom keyboards



DirectLink automatically maps Avid's Axiom keyboard controls to your compatible software

➤ Music gear giants Avid have released new versions of their M-Audio Axiom USB MIDI keyboard controllers. Available in 25-, 49- and 61-key variants, the updated 'boards sport new features that

"Our new controllers are designed to make it easier for musicians and producers to work with software instruments"

Avid

Avid reckon "make it easier for musicians and producers to play and work with software instruments".

The most interesting addition is DirectLink technology, which automatically maps the keyboard controls to common mixer and virtual instrument parameters. It's compatible with a number of DAWs including Pro Tools, Live and Cubase. On the physical side, the keybed is now semi-weighted (for improved tactile feedback), the top panel is angled and rotary encoders have a smooth response.

The Axiom 25, 49 and 61 work with PC and Mac and will be available in Europe from September, priced £200, £270 and £300.

www.m-audio.com

Soundware news

➤ For a unique take on the solo violin, check out Vir2's **Violence: Extreme Violin Manoeuvres** (£67), which sees one poor instrument scratched, hit and played with mallets, chopsticks, guitar picks and wet fingers.

The result is over 80 patches covering 'drum kits', pads, sound effects and melodic phrases.

Still in the realm of orchestral instruments, Cinesamples' **Hollywoodwinds** (£200) offers up "organic" scales, runs, chords, trills, textures, phrases and full-ensemble patches from a woodwind ensemble. You can also expect creepy atmospherics through 12-tone cluster chords, quarter-tone bends, piccolo flutters, etc.

www.timespace.com

You'd usually want to avoid digital anomalies in your tunes, but PureMagnetik's **Artifact** (\$12) takes digital aliasing, clock glitches and SysEx errors and makes them



musical. The 24-bit samples are organised into six kits for Live, Kontakt and Logic and includes looped MIDI clips.

www.puremagnetik.com

Urban beatmakers should check out Fat Loud's **Urban Drums** (£22.50). Billed as great for hip-hop, R&B and modern pop, it packs a tasty 1.1GB of drum hits and loops for you to get your teeth into.

Sounds/To/Sample's **Tribal House** (£16) features over 160 beat elements plus a selection of basslines, vocal loops and rhythmic music loops aiming to capture "the sun-kissed vibe of afterhours fiestas".

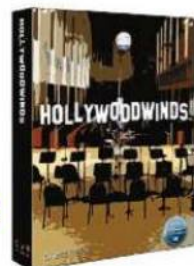
www.soundstosample.com

Plug-in kings D16 Group step into the sample pack arena with **Plasticlicks** (£69), which aims to revitalise your rhythms. D16 say that "not a single preexisting sample has been used" to create the 1500 beats in the pack, which range from obviously synthetic beats to clean, acoustic-sounding samples.

www.d16.pl

Fire Loops' **Electro hop** (£7) collates 11 hip-hop construction kits to bring you the "phattest analogue synths and drum machines" around. The product features 137 loops in WAV, AIFF and REX formats.

www.fireloops.com



News in brief

DISCORD CORRECTION

In cm155's review of Audio Damage's **Discord 3** plug-in, our For/Against section cited "No presets included" as an Against point. In fact, there are several dozen presets, so if our "no presets" jibe had discouraged you from buying **Discord 3**, then you'd better get over to Audio Damage's website and place your order. We awarded **Discord 3** an 8/10 review score, and this rating still stands.

www.audiodamage.com



SE'S SUMMER GIVEAWAY

sE Electronics are giving away a free Project Studio Reflexion Filter (aka Baby RF) worth £120 when you buy one of the following condenser mics: Z3300a, 2200T, 4400a (and stereo pair), T2, Z5600all, Gemini II, Gemini III, Gemini 5, G3500, VR1 and VR2. The offer runs until 31 October and will see the Baby RF handed out at the time of purchase or delivered with the mic if ordered online.

www.seelectronics.com



POINT BLANK GET STREET

Fancy yourself as a hip-hop producer? Create a track using Point Blank's Music Machine software and you could bag a place worth £325 on the online music school's new Hip Hop course. It's led by producer Paul Waller, who has worked with De La Soul and Gang Starr, among others. The closing date is 30 September.

mixer.pointblanklondon.com



COMPETITION WINNERS

Synth fetishists can't have missed cm154's giveaway, where you could win both of XILS-labs' superb synths: XILS 3 and PolyKB. The three lucky winners are Ben Berry, Will Priestman and Will Snook, who will all be basking in a virtual analogue glow by the time you read this.

This issue's u-he compo gives you another chance to slake your synth salacity - simply skip to p94.



IK Multimedia's superb AmpliTube is now available for iPad as well as iPhone - extremely good news for mobile guitarists of all denominations!



Game overture

Game conference Develop proves fertile ground for advice and inspiration

> In July, Game Overture visited Develop, the UK's foremost game development conference, to take a look at the current state of game audio. While there, we caught up with Hugh Edwards of Develop Award-nominated High Score Productions to find out about his recent work.

"We did a game recently called *Dogfighter*, by Dark Water Studios. These guys were very enthusiastic: the budget kept getting cut but we finally got the go-ahead. So we assembled a band for an Iron Maiden-type thing, went into the studio and hammered out this great prog rock stuff! It was one of those lovely situations where everyone was smiling - everyone loves it apart from people who hate Iron Maiden!"

So what would Hugh say to newcomers wanting to break into the games industry? "As you get more experience, people trust you more: it kind of snowballs. You have to

"To get the best start in the industry, I'd say that you need to move in with your parents for a couple of years"

do the very small jobs and do them very well to start with! To get the best start in the industry, I'd say that you need to move in with your parents, or something similar, for one to two years and then keep pushing it."

If you want to hear some of Hugh's work in action for yourself, check out High Score at www.high-score.co.uk.

One particular highlight of the conference was a talk by Steve Johnson, a sound designer at Sony Computer Entertainment's Santa Monica Studio. He demonstrated the use of a layered dynamic soundtrack in ThatGameCompany's seminal *Flower*. It's a game that's well worth checking out from an audio perspective.



Dogfighter's rockin' soundtrack is a must hear. Unless you hate Iron Maiden, of course

App watch

New music-making apps for iPhone/iPod Touch/iPad

> AmpliTube for iPhone sits firmly at the top of our list of guitar multieffect apps for upwardly mobile axemen, and now IK Multimedia have released a version for iPad. Setup is still simple: first plug the iRig guitar interface (which can be yours for a fairly reasonable £29.99) into the 3.5mm socket on your iPad, then attach your guitar (or bass) and headphones and get strumming (or slapping). The iPad app has five amps, five cabinets, 11 stomp effects and two microphones.

So far, so similar to the iPhone version, but there are differences. Pedal maniacs will be pleased to hear that you can use four stompboxes at once - one more than in the iPhone version. All of the options are accessed through an enhanced interface that displays all of the controls on one screen. Other new features for the iPad version include a tuner (which is engaged at all times, enabling hands-free tuning), metronome and backing track player, through which you can import audio files.

AmpliTube for iPad can be found in the App Store for £11.99. A free version is also available, though it doesn't contain the full range of amps and stompboxes.

www.ikmultimedia.com

If you find your studio chair particularly uncomfortable - or think that getting out of bed is a cruelty best avoided - then you're probably a fan of surface control apps that enable you to use your DAW remotely.

It's time to get excited, then, because MOTU have released an app built specifically to work with their Digital Performer DAW. DP Control features real-time two-way communication so that changes on either side are reflected instantly on the other, and boasts access to a wide range of mixer and transport functions. It also uses iOS' multitouch interface to support multi-finger mixing so you can control several faders at once. Best of all, it's free!

DP Control is available for both iPad and iPhone from the App Store.

www.motu.com



Digital Performer users can now control their DAW directly from their iPhone or iPad

COMPUTER
music10 years
back

Nobody would want a personal MP3 player, right? It's red faces all round...

> If November 2000's issue didn't put you off trying to make it in the music industry for good, we doff our hats to you. The lead feature exposed exactly what the suits were looking for - and it wasn't you. If your demo did manage to evade the bin with "all the other hopefuls' dreams", things still looked bad. We doled out warnings about royalties, contracts and even hard work. Sex, drugs and rock 'n' roll it wasn't.

In a coincidence that ties in neatly with this very issue, our 26th publication saw us getting excited about the imminent

"The lead feature exposed exactly what the suits were looking for - and it wasn't you"

release of Reason. Our main news was that "programmers have been finishing off sequences menus, context menus and mouse pointer shapes". Such detail conjures up images of **cm** staff lurking in dark clothing outside office windows; we can only hope otherwise.

cm26 also saw us making a short-sighted prediction about the fate of personal MP3 players. Back in 2000, we didn't like them one bit. The Creative DAP Jukebox we tested scored highly only because it was "a bid to make the portable MP3 player concept more practical". The review saw us condemning the whole market as having a "limited shelf-life" - but given that the first iPod was released less than a year later, we might have just slightly missed the mark on that one. Oops.



Interesting fact: **cm26**'s cover model was Kelvin Swaby, now of soul-rock darlings The Heavy



Drive time

Digitonal

Founder member Andy Dobson gives us the lowdown on his software weapons of choice

ABLETON LIVE

"It's hard to understate what a game changer Live has been. It's enabled us to be a truly improvising band, to effectively meld the laptops and acoustic instruments and be free of a restrictive timeline. What's surprised me most lately is how much more central to my writing and production process it is now, especially as a quick sketchpad. Digitonal would not be able to operate without it."

STEINBERG CUBASE 4

"I've been a user since the ST days and Cubase is an old friend. The plug-ins are still awful (I'm on v4 and I think they've actually got worse) and there are many things that frustrate, but for arranging and mixing it's as natural as breathing to me. Every studio production we do ends up in here at some point: it's a good example of the importance of using what works for your own process rather than trying to find the objective best."

OHM FORCE OHMBOYZ

"Delay is a fundamental part of my production process - from washes to rhythmic elements to minimalist pulses - and this is the best. Its level of control turns it from a straight effect to a creative tool quick to deploy at a simple level, but with enough power to be expressive."

SPECTRASONICS ATMOSPHERE

"This reminds me of the Korg X5DR and is really good for inspiration. The ensemble strings are awesome - for getting that widescreen cinematic sound, they can't be beaten. There's an incredible richness to the soundbed and textural patches too."

NATIVE INSTRUMENTS KORE

"This is the cornerstone of the electronics and the first thing I open when starting a

"It's surprised me how central Live is to my production process"

writing session. I'm much more a composer than a producer, so having a well organised sound pool is more important to me than getting nerdy with the tweaking."

AUDIOREALISM BASS LINE

"The best 303 clone, hardware or software, and the only thing I've found that comes close to the real thing. Stick this through some FX and you're basically there. I've used it on all my remix work lately and it's killer live when you rig it up to a Phat.Boy."

Be Still My Bleeping Heart: A Digitonal Retrospective is available now.
www.digitonal.com

Combo Model V

Get authentic organ sounds with this painstakingly accurate emulation of a traditional combo instrument



Developer Martinic
Format PC VST, Mac AU/VST
Web www.martinic.com

Combo Model V from Martinic is a free virtual instrument designed to give you that familiar organ sound without the hassle of actually owning an organ. We hooked up with Martinic main man Theo Niessink to find out more.

What inspired you to create Combo Model V?

"I've always liked combo organs, especially the early Vox and Farfisa models. I tried a number of organ plug-ins, but none of them seemed to

"The biggest challenge was making it sound authentic: I didn't have a real organ to compare it to"

really have that distinct cheesy quality. I like the modelled Hammond B3 simulations, and B4's combo organ sounds are pretty good, though not quite spot-on. At first I also liked ComboSister, but I could never get 'that sound'

out of it. Eventually I decided to make my own Vox combo organ plug-in."

What challenges were involved in its creation?

"The biggest challenge was making it sound authentic, especially as I didn't have a real organ to compare it to. I studied the circuitry of the original, ran simulations in specialised electronics software, searched the net for information and then used all these details to make the plug-in."

Do you have any tips for using it?

"On the real thing, the 12 oscillators were tuned individually, so it was never perfectly in tune. For an even more authentic sound, try detuning the notes just a few cents."

Will Combo Model V be updated, and do you have any other plans?

"There won't be any updates aside from some aesthetic improvements. As for a follow-up, I've already

started work on a Farfisa Mini Compact simulation, but it's nowhere near ready yet!"

Combo Model V is on the **cm** DVD. For demos and more, check out Martinic's website.

Feel the Fury

In **cm154** we covered Full Bucket Music's the blooo, an interesting little virtual analogue synth that developer Bjoern Arlt described as a "proof of concept" for a work in progress. It now appears that the project in question was the Korg Mono/Poly clone Mono/Fury, which Full Bucket Music have just released for download as a PC VST instrument on their website. You can also find it on this month's **cm** DVD.
www.fullbucket.de

Verb is the word

Last issue we looked at Martin Eastwood's latest project, MVerb, which is an open-source reverb plug-in. Linux users will be very pleased to learn that it's now available in VST and LADPSA formats for that platform. This is thanks to cern and lubomir.ivanov, who ported it using axonlib. The Linux versions can be downloaded, along with the other builds, from Martin's website.
www.martineastwood.com

Make some noise

Just as we went to press, Togu Audio Line released their latest synth, the rather lovely looking TAL-NoiseMaker. From our initial impressions, the synth looks like a combination of all the best bits from previous Togu synths, and includes some cool new features such as oscillator phase control and a bit-crusher for those dirty lo-fi sounds. The plug-in is available in PC VST, and Mac AU/VST formats.
kunz.corrupt@ch



Freeware Classic FreeG

Developer Sonalksis
Format PCRTAS/VST,
Mac AU/RTAS/VST
Web www.sonalksis.com

FreeG isn't the most exotic freeware plug-in around, but it does provide several rather useful tools. The 'G' in the title refers to gain, and essentially the plug-in is a gain control fader. But why would you need to replicate this most fundamental of DAW functionality in a plug-in? Well, FreeG's fader is extremely large and offers a 'fine' mode for making slight volume adjustments. It also enables you to enter precise dB values by typing them in, an ability that some DAWs still lack, amazingly.

"If your DAW's metering is a little stingy, FreeG provides an excellent alternative"

The other thing that FreeG does better than the average DAW is provide high-quality level monitoring. The large meter can be switched between four modes in the options screen, including PPM, Digital PPM, VU and BBC, and displays show both peak and RMS levels. The maximum reached levels in each mode are also displayed as numeric values, and their positions are displayed using arrows on the meter. If your DAW's metering is a little stingy, FreeG provides an excellent alternative.

Other functionality includes a pan control with three panning laws available, a Trim knob, and Bypass and Phase Invert switches. Overall, FreeG is an extremely useful plug-in, the only (very minor) drawback being that you have to use Sonalksis' download manager software to install it, which is a bit of a faff compared to a more straightforward installer. It's definitely worth getting hold of, despite that. **cm**

COMPUTER music

SAVE 25% WHEN YOU SUBSCRIBE

Thirteen issues per year and a DVD-ROM with every issue for only £14.60 every 3 months!

Click  **myfavourite**magazines.co.uk /cmup11

(Please use the full web address to take advantage of this special offer)

Call 0844 848 2852 quoting code cmup11 (Lines open 8am-9.30pm / 8am-4pm Saturdays)



COMPUTER music

SPECIAL

SAVE 20% WHEN YOU SUBSCRIBE

Six issues per year for only
£7.20 every 3 months!

Click  **myfavourite**magazines.co.uk /cmsp12

(Please use the full web address to take advantage of this special offer)

Call 0844 848 2852 quoting code cmsp12 (Lines open 8am-9.30pm / 8am-4pm Saturdays)

Terms and Conditions: This offer is for new UK subscribers paying by Direct Debit. Computer Music subscribers will receive 13 issues per year. Computer Music Special subscribers will receive 6 issues per year. Minimum subscription term is 12 months. If at any time during the first 60 days you are dissatisfied in any way please notify us in

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

All prices include 17.5% 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 = 0.826 GBP, 1 GBP = 1.211 EUR

thomann
MUSIC IS OUR PASSION

Musikhaus Thomann
Treppendorf 30
D-96138 Burgebrach
Germany
T +49 9546. 9223-0
F +49 9546. 9223-24
E international@thomann.de
I www.thomann.de

HOT DEALS

www.thomann.de | International Hotline: +49 9546 9223-55 | Fax: +49 9546 9223-24

Swissonic MDR-2

Mobile digital audio recorder

44.1kHz, WAV/mp3, stereo, built-in flash memory (up to 2 hours of mp3 recording), slot for separate SD (16MB - 2GB) or SDHC (4GB) cards, built-in stereo condenser mic, 2x jack ins for external mics or guitar/line, headphone out, line out, mini speaker, USB 2.0 interface, 20Hz-20kHz, includes external stereo mic and USB cable. Dimensions: 15.5 x 8.5 x 3cm. Weight: 200g

€ 69.-
order code 203423 **£ 57.-**

Swissonic MDR-4

Mobile digital audio recorder

24bit, sample rate: 44.1/48kHz, record format: WAV (16/24bit) and MP3 (64/96/224/320kbps), 5 effects (delay, chorus, room, reverb, pitch shift), built-in speaker, 128 x 64 pixel LED display, 1/8" stereo line in, 1/8" external mic in, built-in stereo mic, 1/8" headphone out, Mini-8 type USB connector, powered by PSU or 2 AA size batteries, incl. power supply unit, 1GB SD card and USB cable, dimensions: WDH: 6,7 x 2,9 x 10,7cm.

€ 80.-
order code 228599 **£ 66.-**

Zoom H2 Bundle

Mobile mp3/WAV recorder

1-point stereo mic design, MS stereo technique, record 360° sound as 2ch or 4ch data, built-in USB interface with audio interface function, WAV 96/48/44.1kHz and MP3 up to 320kbps VBR, headphone out, uses SD cards (up to 4GB), perfect for interviews, podcasts, meetings and live recordings. Includes USB cable, stand, mic-stand adapter, power supply and 512MB SD card. Bundle includes the t.bone HD660 headphones.

€ 173.-
order code 137629 **£ 143.-**

Boss Micro BR Set

4-track compact studio

Ultra portable, 32 V-tracks, loads and plays mp3 files, onboard multi-FX, dedicated guitar input, timestretch and centre cancel features, 293 rhythm patterns, built-in tuner and mic, USB port for data transfer, SD Card slot, includes 128MB card. Bundle includes the t.bone HD660 stereo headphones and the t.bone ST40 stereo microphone.

€ 175.-
order code 198217 **£ 145.-**

Roland R-05

Portable MP3/WAV recorder

24bit/96kHz, stereo mic, auto recording start function, auto song divide function, level control, edit and loop function, reverb for playback, USB, mic in, line in, optional powersupply PSB-6U not included, incl. windshield and mic stand clamp, dimensions WDH: 6 x 10.3 x 2.5cm, weight: 0.14kg.

€ 188.-
o. code 246125 **£ 155.-**

Zoom Q3

Handy video audio recorder

Stereo condenser mic, true X/Y configuration, 2.4" LC display (320x240px), video resolution 640x480 at 30 frames per second, video format MPEG-4 SP, NTSC/PAL TV out, audio formats with video: 44.1/48kHz 16/24bit Linear PCM or MP3 up to 320kbps, without video u to 96kHz/24bit Linear PCM WAV, up to 1 hour video with 2 GB SD card, auto record level, includes TV cable, soft case, wind screen, 2GB SD card and 2 AA batteries.

€ 195.-
order code 234280 **£ 161.-**

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.

€ 279.-
order code 234496 **£ 230.-**

Eidirol 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.

€ 279.-
o. code 207377 **£ 230.-**

Marantz PMD 620

Portable SD/SDHC card recorder

Selectable stereo/mono, WAV/mp3 recording, 44.1/48 kHz, mp3 bit rates from 192kbps to 320kbps, USB 2.0 connectivity to PC for drag and drop file exchange, integrated stereo condenser microphone array, mic and line level external inputs, phantom power (5V, 1mA), includes 512MB SD card. Dimensions: 10.2 x 6.2 x 23.5cm (WxHxD). Weight: 110g

€ 263.-
order code 138305 **£ 234.-**

Sony PCM-M10

Portable 24bit/96kHz audio recorder

Built-in stereo microphone, internal speaker, cross-memory recording, internal 4GB flash memory + MicroSD/memory stick micro slot, limiter and low-cut filter, 5s. pre-record buffer, manual or automatic recording level control, USB-2.0 connection, includes power supply, Soundforge Audio Studio LE, cable remote, 2 AA batteries and cable, finish: grey.

€ 325.-
o. code 238886 **£ 268.-**

Zoom H4 N

Wizoo Bundle

24bit/96kHz digital recorder
Perfect for interviews, podcasts, meetings and live recordings. 2 built-in stereo microphones, requires 24V or 48V phantom power, USB port. Includes windscreen, USB cable, cover and Cubase LE4. Bundle includes 4GB SD card, Superlux HD681 stereo headphone and Wizoo Publishing, Mobile Recording! Thomann Special Edition by Kai Schwirke.

€ 339.-
o. code 232016 **£ 280.-**

Boss BR-800

24bit/96kHz digital recorder

24-bit 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, dimensions WHD: 28.8 x 5.8 x 18.4cm, weight: 872g.

€ 385.-
order code 246121 **£ 318.-**

Tascam 2488

NEO Bundle

24-track hard disk recorder
24bit/44.1kHz, 8x mic/line inputs (4x XLR with phantom power), internal FX processor, 16x CD-RW drive, new effects for mastering, 250 virtual tracks, high speed USB 2.0 connects to PC or Mac® for data backup and SMF/WAV file exchange, 80GB hard drive. Bundle includes the t.bone HD-990D headphones and 5x Sony CDQ80N CD-Rs.

€ 738.-
order code 223374 **£ 610.-**

Tascam MD-CD1 MKII

Mastering recorder

CD deck with mp3 file playback, infrared remote receiver can be deactivated, pitch control (+16% to -50%), time track increment (adds a track ID every 1 to 10 minutes), MD deck supports ST, mono, LP2 and LP4 mode (rec/play), 1/4" stereo headphone output. Dimensions: 19"/2U. Weight: 5.4kg

€ 833.-
order code 175681 **£ 688.-**

Fostex D2424LV MKII

24-track digital recorder

44.1kHz/48kHz/88.2kHz/96kHz, quantisation 16/24bit, 56 recording tracks (24+32 additional tracks), 24 simultaneous recording tracks, 20Hz - 20kHz ±1dB, 6x Data I/O optical, Format IEC 60585 Part 3 (-S/P DIF), Alesis Proprietary Multichannel Optical Digital Interface (ADAT), WORD I/O, RS422 D-sub 9-pin, Sony 9-pin protocol ES bus, RS422 THRU D-sub 9-pin, weight: 7kg (with controller).

€ 1477.-
order code 235158 **£ 1220.-**

the t.mix Mix I 202

12-channel mixer

4x mic inputs with 3-band EQ and 48V phantom power, 4x stereo inputs, 1x aux, 2-track I/O, 1/4" balanced jack output. Dimensions: 27.7 x 27.5 x 2.8-4.5cm. Weight: 1.8kg

€ 62.-
order code 207203 **£ 51.-**

the t.mix Mix 1204 FX

4x mic ins with 3-band EQ, 48V phantom power, 2x stereo ins, 2x aux, 2-track I/O, 24bit internal DSP.

€ 131.-
order code 207206 **£ 108.-**

Soundcraft EFX 8

8-channel mixing desk

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

€ 259.-
order code 118879 **£ 214.-**

Allen & Heath ZED-10FX

Mixer

4 mic/line ins, 2 dual stereo ins, DuoPre™ preamp, 2 aux sends, USB send/return, internal 24bit FX processor, HP-filter, stereo return, 2-track return, main insert, internal power supply, weight: 3.3kg, incl. Cakewalk Sonar LE.

€ 275.-
o. code 246916 **£ 227.-**

Allen & Heath ZED-10

without FX processor.

€ 219.-
order code 246915 **£ 181.-**

Yamaha MG 166cx

16 channel mixer

8x mono mic/line ins (XLR/jack), 2x mic/line ins (XLR/stereo jack), 2x stereo line ins (jack), 3x aux sends, 8x inserts, 3-band EQ with parametric mids, internal compressors per mic channel, SPX FX processor with 16 programs, 18dB high pass filter, high-end mic preamps, 48V phantom power. Dimensions: 47.8 x 10.2 x 48.9cm. Weight: 5.5kg

€ 359.-
order code 115511 **£ 297.-**

Mackie 1402 VLZ3

14-channel mixer

New XDR 2 preamps, 6x mono mic/line inputs (XLR/jack), 4x stereo line inputs (jack), 2x stereo aux returns, 2x aux sends, 6x inserts, 3-band EQ, 18dB lo-cut filter, PFL, 48V phantom power, internal power supply, balanced master outputs (XLR/jack). Dimensions: 8.1 x 35.6 x 32.9cm (HxWxD). Weight: 4.5kg.

€ 375.-
order code 112366 **£ 310.-**

Alesis MultiMix 16 FireWire

16ch. mixer with FireWire interface
8x mic/line ins, 4x balanced stereo line ins, 3-band EQ per channel, 2x aux send/returns, 100x 28bit FX programs, headphone out. FireWire interface: ASIO/WDM drivers for Win XP SP2, Core Audio drivers for Mac OS X, includes Cubase LE.

€ 389.-
order code 186079 **£ 321.-**

Mackie 1642 VLZ3

Compact 16-channel mixer

8x mono mic/line channels, 2x mic/line stereo channels, 2x stereo channels, 4x subgroups, 4x aux (2x pre/post switchable), XDR2 mic preamps, 60mm faders, 3-band parametric EQ (mono channels), 4-band EQ (stereo channels), 48V phantom power. Dimensions: 42.5 x 13.1 x 42.1cm (WxDxH). Weight: 8.3kg

€ 499.-
order code 112362 **£ 412.-**

Behringer Xenyx XL3200

32-channel mixer

28 mic ins, 4 stereo ins, 4-band EQ with semi-parametric mids, 4 subgroups, 2 separate main outs, 6x aux send, signal and Clip LED per channel, switchable 80Hz lowcut and 48V phantom power, 60mm fader, internal power supply, 2x BNC lamp connection, 1x talkback, 2x phones out, dimensions: 18 x 91 x 54cm.

€ 666.-
order code 238220 **£ 550.-**

Mackie 1604 VLZ3

16-channel mixing desk

16x mono mic/line XLR/jack ins, 4x stereo aux returns, 6x aux sends, 16x channel inserts, 8x direct outs, 3-band EQ with parametric mids, 18dB low cut filter, PFL, XDR mic preamps, 48V phantom power, internal power supply, 4 subgroups, master insert, balanced jack outputs, includes rack kit. Dimensions: 44.5 x 12.9 x 44cm (HxWxD)

€ 869.-
order code 112364 **£ 718.-**

Phonic Summit

Digital mixer

16 channels, 24bit/96kHz, phantom power, 17x 100mm motor fader, touch screen, 26 semi-parametric 4-band-EQ for all inputs, AES/EBU I/O, 8 multi-function outs, 2 effect processors, 26 dynamic processors, SD card, Universal Expansion Card compatible with Win XP/Vista/7 and Mac OS X (incl. Snow Leopard), ext. power supply, weight: 10.5kg, incl. 19" rackmounts.

€ 1639.-
order code 246336 **£ 1354.-**

www.thomann.de

Telephone Hotline: +49 9546 9223-55

Fax: +49 9546 9223-24

Miditech Midistart Music 25

MIDI master keyboard

25 touch sensitive keys, joystick for pitchbend and modulation, octave up/down, MIDI output, USB connection, includes USB cable and Magix SampleRate SE, dimensions WHD: 38 x 8 x 24cm, weight: 2.3kg.



order code 230804

€ 46.-
£ 38.-

Miditech Midistart 3 USB

MIDI keyboard

49 full-size touch sensitive keys, pitch bend and modulation wheels, USB port for direct connection to Mac/PC, MIDI out, includes USB cable and Magix SampleRate SE PC software. Finish: Silver



order code 116317

€ 55.-
£ 45.-

Behringer U-Control UMX 490

Master keyboard

49 keys, real-time rotary controls plus 10 assignable switches, pitch bend- and modulation wheel, incl. batteries, energyXT2.5 Compact Behringer Edition and NI KorePlayer Software.



order code 251895

€ 115.-
£ 95.-

Behringer U-Control UMX 610
61 keys.

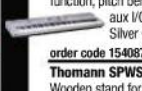
order code 251896

€ 144.-
£ 119.-

Thomann SP-5500

Stage piano

88 hammer action keys, 559 sounds, 203 styles, 3 user styles, 100 songs, 64-note polyphony, accompaniment control (start/stop, sync start/stop, fill-in A/B, fade), dual mode, split mode, DSP transpose function, lesson function, pitch bend, headphone out, stereo aux I/O, MIDI I/O, USB port. Finish: Silver Grey



order code 154087

€ 377.-
£ 311.-

Thomann SPWS-5500
Wooden stand for SP-5500

order code 204071

€ 46.-
£ 38.-

M-Audio ProKeys 88

Stage piano

88 hammer-action keys, 3 velocity curves, 64MB sound bank, 126-voice polyphony, single-split/layer modes, pitch bend and modulation wheels, 3 reverbs, chorus, tremolo, USB/MIDI interface, stereo headphone out. Pedal connections: sustain, sostenuto, expression, Windows XP and Mac OS X drivers.



order code 181874

€ 489.-
£ 404.-

Kurzweil SP2 XS

88-note digital stage piano

Weighted action keys, 64 voices, split and layering function, 4 keyboard zones, 64 Kurzweil presets (pianos, e-pianos, mallets, strings and voices), 60 rhythm patterns, metronome, 16 user set-ups, four freely assignable knobs, pitch and modulation wheels, effects, USB port, LED display, connection for expression pedal and footswitch, MIDI in/out thru, internal stereo speaker, weight: 22kg.



order code 210648

€ 659.-
£ 544.-

Korg SP-250

Stage piano

60-note polyphony, 2x 11W amplifier, 30 sounds, reverb and chorus effects, layer function with individual volume control, 2 headphone outs, damper, MIDI in/out, keyboard stand, music stand, includes sustain pedal and power supply. Dimensions: 129.5 x 38 x 14cm. Weight: 19kg



order code 189377

€ 675.-
£ 558.-

suitable lightcase

order code 116660

€ 185.-
£ 153.-

Yamaha P155

Stage Piano

88 graded hammer action keys, pure CIII piano voice, 17 voices, polyphony 128 voices, dual and split mode, metronome, 2 headphone outs, 2x 12W, includes note stand, FC-4 pedal and PA301 power supply, weight: 18.6kg.



Black & ebony

order code 223258

Black & mahogany

order code 223244

€ 1148.-
£ 948.-

Roland FP-7

Compact Stage Piano

Internal speakers, 88x PHA II keys, 128 voices, 333 sounds, 6 tone wheel organs and 9 drum sets, session partner and 3-track recorder, WAV/SMP playback, 2 headphone outs, USB (MIDI) and USB-host connection, MIDI I/O, 3 pedal jacks, DC in, DC 12V (AC adaptor). Dimensions: 134.6 x 37.5 x 13.7cm (WxDxH). Weight: 23.9kg



order code 109867

€ 1444.-
£ 1193.-

Clavia Nord Electro III

Stage keyboard

Based on authentic emulations of Hammond B3 and electric pianos, Nord sample library support, flash memory for 256MB samples and 126 programs, new effects and amp emulations, compressor and EQ.



61 waterfall keys

order code 220551

73 waterfall keys

order code 220582

€ 1545.-
£ 1276.-

€ 1690.-
£ 1396.-

Doepfer Dark Energy DVD Bundle

Expander

Monophonic stand-alone analog synthesizer with USB and MIDI interface, USB, MIDI input, 4 CV outputs, 1 gate output, external power supply, dimensions WHD: 18.5 x 14.5 x 6.5cm, weight: 1.2kg. Bundle including german video tutorial DVD „Hands on Synth Sound“.



order code 245106

€ 375.-
£ 310.-

Dave Smith Instruments Tetra

4-voice desktop analog polysynth

4-part multi-timbral with separate outputs and 128 combo programs, four banks of 128 programs, programmable input gain for total recall of feedback settings, LED display, expandable up to 4 units, separate outputs for each of the four voices, USB output. Includes Prophet '08 factory programs.



order code 233868

€ 649.-
£ 536.-

Cwejman Sound S1 MKII White Edition

Expander

Limited edition, synth-sounds of the 60s and 70s, 64x front mounted patchable ins and outs, built-in 16bit MIDI to CV converter, 3 super stable oscillators, LFO, noise generator, 2 multi-mode filters, 2 envelope generators, all electronics (incl. switches, potentiometers and jack holders) are mounted directly on main PCB, shielded power supply



order code 245188

€ 2589.-
£ 2147.-

Moog Minimog Voyager Electric Blue

Electric Blue Edition V3.3

Performance synthesizer, fractal blue solid ash cabinet, electric blue back lit panel, new blue LEDs, new killer patches, 7 banks of 128 presets, external mixer knob, MIDI enhancements allow you to send either 7 or 14bit resolution data from the mod wheel.



order code 188096

€ 2833.-
£ 2340.-

Yamaha Motif XS 8

88-key workstation

355MB Wave ROM, 128 voices, presets: 1024 normal voices + 64 drum kits, colour display, 4-part arpeggiator, 4 layers or splits in performance mode, sequencer, internal sampler, USB, Ethernet.



order code 111125

XS 61 keys

order code 111123

XS 76 keys

order code 111124

€ 3255.-
£ 2689.-

€ 2333.-
£ 1927.-

€ 2699.-
£ 2229.-

Behringer BCF 2000

DAW controller

8 motorised faders, 16 + 4 illuminated switches, footswitch connection, 32 user presets, MIDI I/O (usable as MIDI interface), LED display, generic USB MIDI supported (Windows® XP and Mac OS X®).



o. code 168766

Behringer BCF 2000 WH

Finish: White.

order code 119851

€ 149.-
£ 123.-

€ 122.-
£ 101.-

Akai APC 20

Ableton Live USB controller

Exclusive bi-directional communication between the APC 20 and Ableton Live (no mapping required), USB plug-and-play, 40 triggers, 1 rotary control knob, 8 channel faders, 1 bus fader, compatible with PC and Mac, includes Ableton Live Lite Akai APC 20 edition.



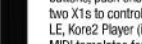
order code 243147

€ 185.-
£ 153.-

Native Instruments Traktor Kontrol X1

USB DJ controller bag bundle

Instant recognition by Traktor, software controlled backlit buttons, fits perfectly alongside a standard club mixer, super-intuitive loop and cue control section, 8 knobs and 8 buttons, push encoders, expandable (connect two X1s to control four decks), incl. Traktor LE, Kore2 Player (incl. selection library) and MIDI templates for controlling other DJ and performance software. Bundle incl. X1 Bag



o. code 243915

€ 211.-
£ 174.-

Akai APC 40

Ableton Live DAW controller

USB plug-and-play, 40 triggers, 16 rotary control knobs with LED, 8 channel faders, 1 bus fader and 1 crossfader, 2 footswitch connections for tap tempo, tempo nudge, record enable, solo/cue function, for PC/Mac, includes Ableton Live Lite Akai APC40 Edition.



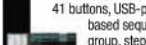
order code 223229

€ 398.-
£ 329.-

Native Instruments Maschine

Groove production studio

Pad controller, 16 dynamic pads with rotary buttons, 2 backlit displays, 11 rotary knobs, 41 touches, USB-powered, MIDI I/O, pattern-based sequencer with 64 patterns per group, step sequence programming and realtime recording, drum grid and piano roll editors, sampler, > 20 built-in effects, > 5GB sounds, PC/Mac.



order code 223060

€ 539.-
£ 445.-

Behringer U-Control UCA 202

USB audio interface

48kHz converter, 2x RCA I/O, headphone output with dedicated level control 3.5 mm, S/PDIF optical output, bus powered, plug and play for Windows and Mac.



order code 191768

€ 27.-
£ 22.-

ESI DualFire

24bit/96kHz FireWire audio interface

2x ins with level controls (1/4" jack), mic preamps with phantom power (XLR), 2x hi-Z ins, 4x analogue outs, direct input monitoring with level control, headphone out, bus powered or via separate power supply. Supports DirectWire 3.0, MME, ASIO 2.0, GSIF 2.0, DirectSound and Core Audio. Includes power supply and Steinberg Cubase LE 4.



order code 206255

€ 85.-
£ 78.-

M-Audio Fast Track Pro

USB audio interface

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



order code 184360

€ 145.-
£ 120.-

tc electronic Desktop Konnekt 6

FireWire audio interface

24bit/192kHz, 1x mic input, 48V phantom power, 2x instrument or 2x line inputs (switchable), 2x balanced line outputs, headphone output, monitor controller with level meter, DIM function, integrated M40 Studio Reverb, direct monitor mix function, includes power supply.



order code 205137

€ 178.-
£ 148.-

SSL Duende PCIe

DSP-powered SSL processing

The legendary sound of SSL with up to 32 channels, SSL EQ and dynamics processing, based on SSL's award-winning C Series mixing consoles, relieves the plug-in processing burden on your computer's CPU. PCI-Express card. Expandable with optional SSL plug-ins for the Duende platform. Supports VST, Audio Unit or RTAS (Digidesign System Tools 7 through the use of optional VST-RTAS wrapper) host application.



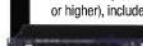
order code 209147

€ 278.-
£ 230.-

Tascam US-1641

USB 2.0 audio interface

24bit/96kHz, 8x mic/line ins with phantom power and front level meters, 2x balanced line/instrument ins (front), 4x balanced line ins (rear), 4x line outs, monitor out, S/PDIF I/O (switchable to AES/EBU), MIDI I/O. Compatible with Win XP, Vista 32 and Mac OS X (10.4 or higher), includes Steinberg Cubase LE 4. Dimensions: 19"/1U



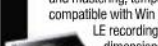
order code 138750

€ 279.-
£ 230.-

Roland Mobile Studio Canvas SD-50

Audio/MIDI interface & sound module

USB, 128-voice polyphony, 1125 GM2/GS/mobile studio canvas solo tones and 32 drum sets, 2x I/O, 24bit/44.1kHz, V-Link support, built-in hardware DSP FX for reverb, chorus, and mastering, tempos, A/B loop, repeat, compatible with Win and Mac, incl. Sonar 8.5 LE recording software (Win only), dimensions: 17.8 x 25.7 x 7.2cm, weight: 0.8kg.



order code 242244

€ 333.-
£ 275.-

Digidesign Mbox 2

USB MIDI/audio interface

2x analog inputs (XLR/TRS), integrated phantom power, 2x analog outputs (TRS), S/PDIF I/O, MIDI I/O, zero-latency monitoring, USB powered. Includes Pro-Tools LE software, dimensions WHD: 22.4 x 18.4 x 7.7cm.



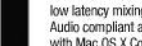
order code 185335

€ 398.-
£ 329.-

Apogee Duet Bundle

FireWire audio interface

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



o. code 209773

€ 415.-
£ 343.-

M-Audio Delta 1010

24bit/96kHz recording system

8x analog I/O, 2x digital I/O, 6x AD/DA, S/PDIF, MIDI I/O, 20Hz-22kHz, wordclock, balanced I/O. Compatible with Windows XP (Home/Pro with SP2), ASIO2, Mac OS X. Includes Ableton Live Lite. Dimensions: 19"/1U. Weight: 2.2kg



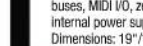
order code 137104

€ 438.-
£ 362.-

Focusrite Saffire PRO 40

24bit/96k FireWire audio interface

20x I/O, 8x mic preamps, 8x analog I/O (2x mic/line/instr. combo XLR, 6 mic/line combo XLR), ADAT I/O, 2x S/PDIF I/O, 2x monitor outs, monitor switch, 2 separate headphone buses, MIDI I/O, zero-latency DSP mixer/router, internal power supply, includes plug-in suite. Dimensions: 19"/1U. Weight: 3kg



order code 219725

€ 458.-
£ 378.-

MOTU Ultralite MKIII Hybrid

www.thomann.de

Telephone Hotline: +49 9546 9223-55

Fax: +49 9546 9223-24

the t.bone SC140

True condenser microphone
18mm diaphragm, cardioid, 20Hz-20kHz, -3dB 75/150Hz low cut, -10/20dB pad, 130dB max. SPL. Includes shockmount, windscreen and aluminium case.

order code 195305
SC140 Stereo-Set
Matched pair with stereo bar: **€ 83.-**
order code 195307 **£ 77.-**

Rode NT5-MP

Condenser microphone stereo bundle
2 matched small diaphragm condenser microphones, 0.5" gold sputtered capsule, cardioid, 20Hz-20kHz, excellent for drum overheads, acoustic guitar and stereo live recordings. Including plastic case, microphone clips and wind screens.



order code 154595 **€ 269.-**
£ 222.-

Oktava MK012-01 MSP2 Matched Pair

Matched stereo set
2x small diaphragm condenser microphones, cardioid, 20Hz-20kHz, delivered in a wooden box. Finish: Silver. Made in Russia!

order code 165104
MK012-01 MSP2
Single mic, cardioid
order code 165103 **€ 279.-**
£ 230.-
€ 149.-
£ 123.-

AKG C451 B Stereo

Condenser microphones
Bundle with 2 pieces, cardioid polar pattern, nickel plates, switchable HP filter (75/150Hz) and pad (-10/-20dB), incl. W90 windscreen, SA60 clamp, H50 and case, suitable for overheads, hi-hats, percussion, acoustic guitars, etc.



order code 159411 **€ 649.-**
£ 536.-

Neumann KM 184 Stereo-Set

Small diaphragm condenser mic bundle
2x KM184 condenser microphones with sequential serial numbers, cardioid, 20Hz-20kHz. Includes 2x WNS100 windshield, 2x SG 21/17 stand adapters and wooden box.



Finish: Silver
o. code 153692
Finish: Black
o. code 150648 **€ 1077.-**
£ 890.-

StudioProjects B1

Large diaphragm condenser microphone
1" Capsule, transformerless circuit, requires +48V phantom power, cardioid, 20Hz-20kHz, -34dB sensitivity (0dB= 1V/Pa), 2000, 130dB max. SPL. Includes aluminium case, 12dB-A noise (IEC651). Includes foam wind screen, zippered bag and shockmount.



order code 180703 **€ 105.-**
£ 87.-

the t.bone SC1100 Set

Studio large diaphragm microphone
Polar patterns: cardioid, figure-8 & omni. Low cut switch and -10dB pad, 20Hz-20kHz, includes aluminium case and shockmount. Bundle includes the t.bone MS180 pop shield.



order code 203865 **€ 139.-**
£ 115.-

AKG C3000

Studio large diaphragm condenser mic
Cardioid, 20Hz-20kHz, 2000, switchable -10dB pad, includes shockmount. Diameter: 53mm. Length: 162mm



order code 141408 **€ 158.-**
£ 131.-

Rode NT1-A Complete Vocal Recording Solution

Large diaphragm microphone
20Hz-20kHz, 1000 impedance, 132dB dynamic range, 137dB max SPL. Includes SM6 deluxe shockmount, 6m cable and Peter Freeman 'Studio Secrets' tutorial DVD.



order code 235937 **€ 179.-**
£ 148.-

the t.bone SCT800 Set

Valve studio microphone
12AT7 valve, 20Hz-20kHz, 2000 impedance. Includes deluxe case, shockmount and external power supply. Bundle includes the t.bone MS180 pop shield.



order code 203198 **€ 188.-**
£ 155.-
SCT800 Stereo-Set - matched stereo pair (pop shield not included): **€ 377.-**
order code 174362 **£ 311.-**

the t.bone Retro Tube II

Large diaphragm tube condenser mic
Retro bottle design, 35mm dual diaphragm capsule, valve preamp, 9 different selectable polar patterns, 10dB pad switch, hi-pass filter switch, 20Hz-20kHz, < 2000 impedance, 20dB equivalent noise level, 134dB max SPL @ 0.5% THD. Includes power supply, 7-pin XLR cable, wooden box for mic and aluminium case for mic and all accessories.



o. code 225039 **€ 235.-**
£ 194.-

Blue Bluebird

Studio condenser microphone
Transformerless design, requires phantom power (35V min), 138dB max SPL, 20Hz-20kHz, cardioid, includes specially designed shockmount (The Birdcage) and metal mesh pop filter (Bird Nest).



order code 110642 **€ 266.-**
£ 220.-

the t.bone SCT2000 Set

Valve studio microphone
Truly warm sound, 20Hz-20kHz, omni/cardioid/fig-8 plus 6 intermediate stages, up to 130dB SPL. Includes case, shockmount and power supply. Bundle includes the t.bone MS180 pop shield.



order code 203196 **€ 279.-**
£ 230.-

SE Electronics SE 2200T

Large diaphragm condenser mic
Gold plated 1" diaphragm, 100Hz switchable high-pass filter, -10dB switchable pad, frequency response: 20Hz - 20kHz, sensitivity: -33dB +1dB (0dB=1V/Pa 1000kHz), impedance: <= 2000, equivalent noise level: 16dB (A weighted), max SPL: 130dB (0.5% THD @ 1000Hz), connector: 7-pin, power supply and shockmount included.



order code 244907 **€ 292.-**
£ 241.-

Shure SM 7 B

Studio microphone
Dynamic studio microphone with cardioid polar pattern, 50Hz-20kHz, bass rolloff switch, mid-boost switch, 1507 impedance, includes deluxe case, shockmount and external power supply. Bundle includes the t.bone MS180 pop shield.



order code 129929 **€ 389.-**
£ 321.-

Avantone CV-12

Multi pattern large capsule valve mic
Hand selected Russian made 6072A valve, 9-pattern switchable on the PS-12 power supply (omni, cardioid and figure-8), frequency range: 25Hz - 20kHz ±3dB, max. SPL: 136dB, high-pass switch 80Hz, 6dB/octave switch, -10dB switch, weight: 800g, incl. padded wooden box, shockmount, metal road case and connection cable.



order code 248722 **€ 469.-**
£ 387.-

Neumann TLM 102

Large diaphragm condenser microphone
Cardioid pattern, 20Hz-20kHz, 500 impedance, 12dB-A equivalent noise level, 144dB max SPL for THD 0.5%, includes SG2 stand mount swivel. Weight: 260g.



Finish: Nickel
o. code 237768
Finish: Black
o. code 237769 **€ 519.-**
£ 429.-

AKG C414 XLII

Large diaphragm condenser mic
9 polar response patterns (cardioid, wide cardioid, eight, hypercardioid, omni and 4 mix pattern), 20Hz - 20kHz, 6/12/18dB pad, 40/80/160Hz HP filter, 140dB SPL max., CK12 capsule, high boost above 4kHz, peak hold LED, lock mode to save preferences, transformerless FET XLR out, incl. CK12 mic head, H85 shockmount, popfilter PF 80, windscreen W414X and alu case.



o. code 240602 **€ 885.-**
£ 731.-

Neumann TLM 103 Studio Set

Studio microphone
Large diaphragm cardioid microphone, pressure gradient transducer with one-diaphragm capsule, transformerless circuitry, extremely low noise: 7dB, high-quality professional equipment for limited budgets, includes shockmount and box. Finish: Silver



order code 174067 **€ 933.-**
£ 771.-

Brauner Phantom Classic

Solid state microphone
Cardioid polar pattern, pressure gradient transducer, equivalent noise <110dB, signal to noise: 83dB, 20Hz-22kHz, 142dB max SPL @ 0.3% THD, requires 48V phantom power. Includes flexible suspension mount, aluminium case and Voxox cable.



order code 139461 **€ 945.-**
£ 781.-

ART Tube MP

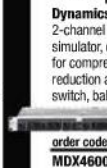
Tube microphone preamp
Hand selected 12AX7A valve, limiter, 48V phantom power, phase reverse, XLR and jack I/O, perfect for hard disc recording or as a valve DI.



order code 191529 **€ 37.-**
£ 31.-

Behringer MDX2600 Composer Pro XL

Dynamics processor
2-channel compressor, expander, limiter, tube simulator, de-esser, side chain, auto mode for compressor and limiter, stereo link, gain reduction and I/O level via LEDs, 10dBV/4dBu switch, balanced XLR/jack I/O. Dimensions: 19"/1U.



order code 157716 **€ 89.-**
£ 74.-
MDX4600 Multicom Pro XL 4-ch. expander/gate/comp./peak-limiter **€ 109.-**
order code 159074 **£ 90.-**

StudioProjects VTB1

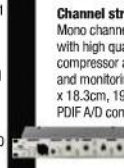
Tube preamp
Incorporating true class A/B switching, the VTB1 is a totally discrete circuit, the tube drive is a variable drive to a 12AX7, allowing the user to blend as little or as much of the tube drive they want. 48V phantom power, balanced outputs (XLR & 1/4").



order code 183260 **€ 111.-**
£ 92.-

Focusrite Trakmaster Pro

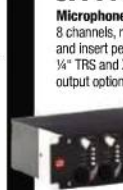
Processor
Mono channel strip for vocals and instruments, with high quality mic preamp, vintage compressor and EQ, zero-latency headphones and monitoring, dimensions WHD: 48.4 x 4.4 x 18.3cm, 19"/1U, weight: 2.38kg, optional S/PDIF A/D converter available.



order code 180955 **€ 222.-**
£ 183.-

SM Pro Audio EP84

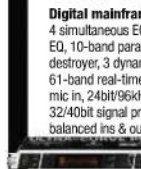
Microphone preamp
8 channels, new design, 48V phantom power and insert per channel, XLR/jack combo inputs, 1/4" TRS and XLR outputs, 2U 19" rack ADAT output option available.



order code 198123 **€ 225.-**
£ 186.-

Behringer DEQ2496 Ultra-Curve Pro

Digital mainframe
4 simultaneous EQ modules (31-band graphic EQ, 10-band parametric EQ, feedback destroyer, 3 dynamic EQs per channel), 61-band real-time analyzer with separate RTA mic in, 24bit/96kHz AD/DA converters and 32/40bit signal processors, 1130dB dynamics, balanced ins & outs with gold-plated XLR sockets, AES/EBU & optical S/PDIF.



order code 162785 **€ 266.-**
£ 220.-

SPL GoldMike 9844

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



order code 123370 **€ 425.-**
£ 351.-

Universal Audio 710 Twin-Fifty Bundle

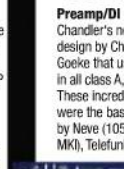
1-channel mic/line/DI preamp
Dual path 310V class A valve & transimpedance solid state preamp, +70dB gain, 48V phantom power, -15dB pad, phase invert, 75Hz low cut filter. Bundle includes UAD-2 Solo PCIe DSP card, VST and AU support, LiveTrack™ low-latency live monitoring/recording mode, Mix Essentials II (1176SE Limiting Amplifier Emulation, RealVerb Pro, CS-1 Channel Strip, Pultec EQP-1A EQ Emulation).



order code 244200 **€ 679.-**
£ 561.-

Chandler Limited Germanium

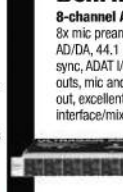
Preamp/DI
Chandler's newest series, a completely new design by Chandler Limited designer Wade Goeke that uses classic germanium transistors in all class A, transformer balanced, circuits. These incredibly smooth sounding transistors were the basis of the earliest transistor designs by Neve (1053, 1055, 1057), EMI (TG12345 MKI), Telefunken, and Fairchild.



order code 196274 **€ 1222.-**
£ 1009.-

Behringer ADA8000

8-channel AD/DA converter
8x mic preamps with phantom power, 24bit AD/DA, 44.1 & 48kHz Wordclock or ADAT sync. ADAT I/O, ADAT in can be routed to line outs, mic and line I/Os are routed to ADAT out, excellent expansion for DD3216 or any interface/mixer with ADAT I/O.



order code 164573 **€ 189.-**
£ 156.-

tc Helicon VoiceTone Create

Vocal FX unit
99 music style based FX combinations, 5 'favourite' user presets, XLR mic level I/O in stereo or mono, clean studio quality mic preamp with phantom power, 2x XLR outs (for mono or stereo operation), tap tempo function.



order code 117131 **€ 149.-**
£ 123.-

tc Helicon Harmony-G

Compact vocal processor
Harmony arrangement algorithm listens to guitar and voice to follow your music, 6 reverb/delay combinations for vocal and guitar in, 10 presets each with A/B location, selectable harmony voicing, XLR mic in with 48V phantom power, stereo line out (balanced XLR), guitar in and pass-thru for separate amp/tuner, includes external power supply.



order code 205731 **€ 149.-**
£ 123.-

Boss VE-20

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



order code 235812 **€ 189.-**
£ 156.-

Roland VP-7 Vocalist

Vocal processor
64-voice polyphony, real time vocals for harmony, ambience, tuning, headphone out, line out jack, jack/XLR (phantom power), foot pedal jack (bypass on/off, MIDI in, power supply jack, incl. power supply and headset microphone, dimensions WHD: 24 x 14.4 x 6.4cm, weight: 0.8kg.



order code 242074 **€ 449.-**
£ 371.-

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. Dimensions: 35 x 7.6 x 21.6cm. Weight: 2.3kg.



order code 225557 **€ 699.-**
£ 577.-

The Thomann services

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

www.thomann.de

Telephone Hotline: +49 9546 9223-55

Fax: +49 9546 9223-24

The Thomann services

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

AKG K-450

Hi-Fi headphone

for Apple iPod, MP3 and MD players, dynamic, closed, impedance: 32Ω, max. SPL 126dB, frequency response: 11Hz - 29.5kHz, 3.5mm stereo mini plug, 3D-axis folding mechanism, incl. 2x cords with length 0.5m and 1.1m, weight (without cable): 120g, incl. bag and adapter for 2,5/6,3mm stereo jack.

order code 221309

€ 63.-
£ 52.-

AKG K 240

Studio stereo headphones

Half open, 55Ω, 88dB/mW, 15Hz-20kHz, ear-enclosing, cable connection, distortion-free playback (new XXL cap), involving sound from new Varimotion system, ideal for Walkman and sound cards. Weight: 240g

order code 153257

AKG K 141 MKII

Dynamic, semi-open, 55Ω, 18Hz-24kHz, plug-in cable. Weight: 225g.

order code 206955

€ 89.-
£ 74.-

€ 95.-
£ 78.-

Sony MDR-7506

Professional headphones

Closed back, 63 Watts, 106dB, 1/4" and 1/8" jack connectors, compact, designed for professional DJ and studio use.

order code 135709

€ 115.-
£ 95.-

AKG K271 MKII

Closed dynamic studio headphones

Circumaural design, 55Ω, 200mW max input, 16Hz-28kHz, 104dB/V sensitivity, self-adjusting headband and auto-shut-off feature, 3m cable. Includes 5m coiled cable, 1 pair velvet pads and gold plated mini-jack to 1/4" screw-on adapter. Weight: 240g

order code 206951

5m extension cable

1/4" stereo jack.

order code 153216

€ 129.-
£ 107.-

€ 650.-
£ 540.-

AKG K 701

High-end reference headphones

Revolutionary flat wire voice coil technology, dynamic, open back, 62Ω impedance, 105dB efficiency, 10Hz-39.8kHz, 200mW max input power, hard gold plated 1/4" jack plug, 3m cable. Weight: 235g (not including cable).

order code 185476

€ 199.-
£ 164.-

ESI nEar04 Classic

Active 4" studio monitors

Magnetically shielded, bi-amped, 20W bass + 20W treble, balanced/unbalanced 1/4" jack inputs. Dimensions: 20.6 x 13.6 x 14.9cm. Pair price!

order code 232799

€ 95.-
£ 78.-

Behringer MS40

Active 2-way multimedia monitors

Studio monitors for computer studios, multimedia and keyboard monitoring. 2x 20W, 24bit/192kHz D/A, optical and coaxials digital input, 2x analog inputs (stereo mini-jack and RCA), volume controls, 2-band EQ, headphone output (1/4" stereo jack), magnetically shielded. Pair Price!

order code 182187

€ 99.-
£ 82.-

KRKR RP5 Rokit G2

Active studio monitor

75W, 5" + 1" speakers, 53Hz-20kHz, magnetically shielded. Dimensions: 27.6 x 18.5 x 25cm. Weight: 8kg. Unit price!

order code 213024

KRKR RP8 Rokit G2

8" + 1", 140W.

order code 213090

€ 135.-
£ 112.-

€ 215.-
£ 178.-

Yamaha HS50M

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. Unit price!

order code 186461

€ 144.-
£ 119.-

ESI nEar08 Classic

Active 8" studio bi-amp monitors

2-way bookshelf monitors, magnetically shielded, 70W LF & 70W HF amplifier power, 40Hz-24kHz, 1x balanced XLR input, 1x balanced/unbalanced jack input. Dimensions: 35.8 x 25.5 x 32.2cm (HxWxD). Weight: 10kg each. Pair price!

order code 222139

€ 215.-
£ 178.-

Mackie MR8

Active nearfield monitor

8" woofer (100W), 1" tweeter (50W), frequency response: 40Hz - 20kHz, max. SPL per pair: 116 dB SPL @ 1m, XLR, jack (6.3mm) unbalanced and RCA, magnetically shielded, dimensions HWD: 40.6 x 27.6 x 34.6cm, weight: 12.5kg. Unit price!

order code 207242

€ 215.-
£ 178.-

Genelec 8020BPM

Active 2-way studio monitor

Power switch, 66Hz-20kHz (±2.5dB), 105dB SPL peak @ 1m, 95dB SPL @ 1m, 105mm (4") high efficiency bass driver, 19mm (3/4") metal dome tweeter with Directivity Control Waveguide, 3kHz crossover, magnetically shielded, aluminium cabinet, includes wall bracket. Power per channel: 20W (bass), 20W (treble). Dimensions: 22.6 x 15.1 x 14.2mm. Weight: 3.7kg. Unit price!

o. code 235038

€ 279.-
£ 230.-

Adam A7 Special Edition

Active nearfield studio monitor

Finish: black piano lacquer, 6.5" Rohacell / kevlar sandwich woofer, A.R.T. tweeter, frequency range 46Hz to 35kHz, 100W (sin), 150W (rms), XLR and RCA input, dimensions: 18 x 33 x 28cm, weight: 8kg. Unit price.

order code 241073

€ 377.-
£ 311.-

Adam A7 Special Edition

Active nearfield studio monitor

Finish: white piano lacquer, 6.5" Rohacell / kevlar sandwich woofer, A.R.T. tweeter, frequency range 46Hz to 35kHz, 100W (sin), 150W (rms), XLR and RCA input, dimensions: 18 x 33 x 28cm, weight: 8kg. Unit price.

order code 244797

€ 377.-
£ 311.-

Adam A7X

2-way active bassreflex nearfield monitor

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

o. code 245513

€ 428.-
£ 354.-

Dynaudio BM5A MKII

Active nearfield studio monitor

2-way bass reflex design with 7" woofer and 1" soft dome tweeter, 90W (2x 50W RMS), max SPL 1m (pair): 117dB, frequency response: 48Hz - 21kHz, HF/MF/LF audio room filters, dimensions WHD: 18.6 x 32 x 32cm, weight: 8.7kg. Unit price.

order code 246075

€ 469.-
£ 387.-

Genelec 8030APM

Active 2-way studio monitor

58Hz-20kHz free field frequency response, 108dB SPL peak @ 1m, 130mm (5") bass driver, 19mm (3/4") metal dome tweeter with DCW (Directivity Control Waveguide), 3kHz crossover frequency, Amplifier power: 40W bass + 40W treble, magnetically shielded, aluminium cabinet, balanced XLR input. Dimensions: 28.5 x 18.9 x 17.8cm. Weight: 5.6kg

order code 171718

€ 469.-
£ 387.-

Yamaha HS80M stand bundle

Active 2-way studio monitor package

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

o. code 227555

€ 495.-
£ 409.-

Mackie HR824 MK2

Active 2-way studio nearfield monitor

8.75" low-distortion LF woofer, 1" titanium dome ferrofluid cooled tweeter, twin FR series amps (150W LF & 100W HF), passive radiator provides tight, articulate bass extension down to 35Hz, balanced XLR/TRS and unbalanced RCA inputs. Unit price!

order code 138446

€ 529.-
£ 437.-

Adam A8X

2-way active bassreflex nearfield monitor

9" carbon/rohacell/glass woofer with 150W, X-A.R.T. tweeter with 50W, shelving filter tweeter: >5kHz ~ ±6dB, shelving filter woofer: <300Hz ~ ±6dB, frequency range: 38Hz - 50kHz, crossover frequency: 2.3kHz, SPL max. / pair 1m: 120dB, gain: +14dB / - Infinite dB, gain tweeter: ±4dB, THD 90dB/1m > 100Hz: <0.5%, inputs XLR and RCA, input impedance: 30kΩ, dimensions: 25.5 x 40 x 32cm, weight: 12.8kg. Unit price.

o. code 245573

€ 569.-
£ 470.-

Behringer DJX 750

5-channel DJ mixer

24bit digital effects, BPM counter with time and sync display, Ultralight faders, XPO stereo surround effects, 3-band kill EQ, 3-way kill switch, monitor function with master/cue balance control and split option, auto talkover.

order code 223751

€ 166.-
£ 137.-

Behringer DDM 4000

32bit digital DJ mixer

Beat-synchronized sampler, 4 multi-FX sections, 2 patented BPM counters, digital crossfader and MIDI, 4x phono/line stereo channels. 2x mic inputs with gain, EQ, talk function and FX. 4x stereo channels with gain, programmable parametric 3-band EQ with kill function, fader curve control and flexible crossfader.

o. code 206918

€ 299.-
£ 247.-

Pioneer DJM 400

Professional DJ mixer

2 channels, mic/aux switch (to select 2x mic inputs or 1x stereo line input), fader start, rotary pots for master output, talkover (-20dB), peak level meter.

order code 191081

€ 433.-
£ 358.-

Pioneer DJM-700

Professional 4-channel DJ club mixer

Crossfader assignment, fader start, 3-band EQ (-26dB to +6dB), talk over (-20dB), peak level meter, rotary pots for master output. Dimensions: 32 x 38.1 x 10.8cm (WxHxD). Weight: 7.5kg

Finish: Black

order code 118996

Finish: Silver

order code 119965

€ 811.-
£ 670.-

€ 833.-
£ 688.-

Allen & Heath XONE DX

DJ controller and mixer

4 channels with effects, 2 dual layer deck simulators, 20-channel USB 2.0 soundcard, 24bit/96kHz audio system, 168 individual MIDI messages available, TCH incl. FX, looping and time-stretching, RAA/phone inputs for external decks, mix outputs on RCA and balanced XLR, built-in hardware MIDI interface, high quality faders, weight: 6kg.

order code 238350

€ 1069.-
£ 883.-

Gemini CDM 3610

Dual CD player

With 2-channel mixer, CD, CD-R and MP3, anti-shock, single auto-cue, continuous play, fader start, seamless loop with reloop, pitch bend with jogwheel or tracer, ±16% pitch control, LED VU meters, 3-band EQ and gain per channel, headphone jack, mic input, aux input (line and phono).

order code 248364

€ 319.-
£ 263.-

Denon DN-S 1200

Single CD player

Touch sensitive jog disc, MIDI interface controller (PC/Mac), USB audio, hot starts & seamless looping, 3 platter effects, 4-way BPM counter, memo function, pitch range & deep pitch resolution, vibrant tube display with 2-line character text support, loop A/B trim, power-on-play, slot-in CD player, D-Link, 4 built-in DSP effects, next track function with cross fader, dimensions: 21.5 x 8.7 x 23.2cm.

order code 205617

€ 425.-
£ 351.-

Pioneer CDJ-350

Single CD player

Plays MP3, AAC, WAV, AIFF, USB (flash recorder, disc drives), USB A/B connection, includes Rekordbox music management software, beat display function for better scratch and looping performance, auto beat loop function, dimensions: 21.8 x 29.6 x 10.8cm, weight: 2.7kg, system requirements: Windows VISTA/XP, Mac OS X 10.4 or higher.

order code 249908

€ 599.-
£ 487.-

Pioneer CDJ-900

Professional single CD player

Compatible with MP3, AAC, WAV, AIFF and Tatum Pacemaker Data, 24bit/48kHz sound card as well as HID and MIDI control by USB, Wolfson DAC processor, quantized beat loop, slip mode, quick return scratch, advanced auto beat loop, plays audio from CD, CD-R, CD-RW or USB, frequency range: 4Hz - 20kHz, includes Rekordbox music database management software.

order code 238584

€ 1279.-
£ 1056.-

Pioneer CDJ-2000

Professional multifunction 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 loop, compatible with MP3, AAC, WAV, AIFF and Tatum Pacemaker data, 24bit/48kHz soundcard, HID and MIDI controllable from USB, frequency range: 4Hz - 20kHz, dim.: 32 x 40.6 x 10.7cm, weight 3.9kg.

order code 238585

€ 1775.-
£ 1466.-

Hercules DJ Console RMX

DJ controller

Integrated USB audio interface, 2 jog wheels, 6 faders, DJ buttons for DJing control, FX and loop buttons, mic in, headphone out, 4x line outs (1/4" mono balanced jack), 4x RCA outs, 2x stereo ins, includes VirtualDJ DJC edition software (PC/Mac).

order code 208113

€ 269.-
£ 222.-

Native Instruments Traktor Scratch Duo

Professional DJ system

Control digital music files using turntables or CD decks, up to 2 decks simultaneously, controllable by CD player and MIDI controller, USB 2.0 audio interface, bus powered, 4x high-gain outputs, 4x inputs with phono preamps, 8x LEDs, 2x vinyls and 2x CDs.

order code 227391

€ 322.-
£ 266.-

Korg Kaoss Kaossilator Pro

Phrase synthesizer

Touchscreen Pad, 200 sounds, new sound effects and synth sounds, drum samples and presets for vocoder, 31 scales synchronized with flexible gate arpeggiator, loop recorder, USB/MIDI, SD card slot, editor/librarian software, stereo RCA I/O, MIDI I/O, headphone output, adjustable microphone input, dimensions: 21 x 22.6 x 4.9cm, weight: 1.3kg.

order code 243144

€ 355.-
£ 293.-

Vestax VCI-100

DJ MIDI controller

90 parameters assignable via USB transmitted MIDI signals, touch sensor and acrylic platter mechanism, every crossfader motion is digitally converted and sent to the software, curve settings are generated with the built-in CPU, USB bus-power or optional power supply, includes NI Traktor LE software, plug & play with Apple and Windows computers.

order code 113145

€ 377.-
£ 311.-

Rane SL3 Serato Scratch Live

DJ complete system

Compact hardware design, 3 Vrms 24bit, 44.1/48kHz converter, 104dB DAC dynamic range, aux in for live recording or live feed, aux out for SP-6 sample player, USB 2.0, phono preamp in studio quality, direct thru, due to Serato's proprietary control scheme, the result is a feel and sound indistinguishable from playing vinyl.

order code 228530

€ 699.-
£ 577.-



The cm Reas

guide to Reason 5

With its fourth full-version update, Propellerhead's awesome software studio is back in the limelight once again. We show you how to put its powerful new features to use

> If you've read our review of Reason 5 (p98), or even our recent preview (cm154), you'll no doubt be absolutely gagging to try Propellerhead's amazing new software studio. And whether you've preordered your copy or downloaded the demo version, we're here to help you get to grips with it.

And there's certainly a lot to get through. Not only does Reason 5 add the awesome new Kong and Dr. Octo Rex devices to the rack, it also introduces the biggest leap forward in sequencing we've seen for some time: Blocks.

Throw in the awesome new sampling and sample-editing functionality, plus a number of less glamorous but eminently useful new tools, and Reason 5 really is one of the application's most significant updates yet.

A perfectly good Reason

It's not just Reason that's been updated, either. Its symbiotic sibling Record has also been

bumped up to version 1.5, a (free for registered users) point release that introduces a number of tasty enhancements. The revolutionary Blocks system is common to both packages, but that's not all that's new in Record. Neptune is Propellerhead's take on pitch-correction, and what a take it is. Offering huge amounts of creative potential, as well as doing the basic job of pitch-correction very well indeed, it puts R&B-inspired vocal processing firmly in the hands of Record users, and stands as yet another highly persuasive argument for investing in the combo package.

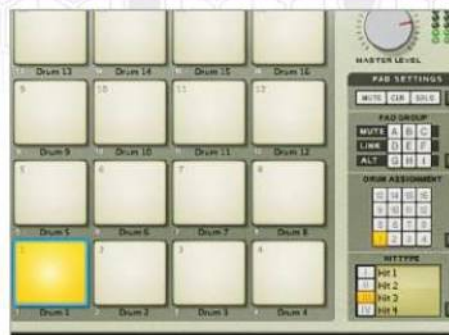
Many Reason and/or Record users won't have encountered Auto-Tune-style pitch correction before, so even though this guide is primarily about Reason 5, we'll be devoting a couple of pages to showing you how to get creative with Record's powerful new tool.

Right, if you weren't itching to get cracking before, you certainly should be now. Let's take a long, hard look at how it all works...



> Step by step

Building a drum kit in Kong



1 > OK, let's get started on our exploration of Reason 5 with the superb Kong drum machine. Click **Show Drum And FX** at the bottom left to open up the list of modules, then click a pad to select it. Next, click the icon at the top left of the currently selected drum module (**NN-Nano Sampler** by default). Take some time now to go through the list and get a feel for the modules on offer.

2 > The physical modeling and synth drum modules are great, but for now select **NN-Nano**. In it you'll see four drum slots. Each of these hosts one of the four hit types available to that pad. Double-click each to open the browser and load a drum sample of your choice into it.

3 > Click the pad and you'll hear your first choice. Look to the right of the pads and you'll see the **Hit Type** selection for the highlighted pad. Flick through the four Hit Types to hear them all. This affords you access to up to 64 different hit types per bank (which makes for quite a good bespoke kit), although only 16 are playable at any one time.



4 > Let's take things up a notch. On the **cm** DVD you'll find four snare drum hits of increasing velocity. They're numbered sequentially, with the fourth being the hardest. Double-click the first drum slot and select all four samples. (You can select as many as you like for each drum - we pushed it as far as 16.) A layer will be automatically added for each.

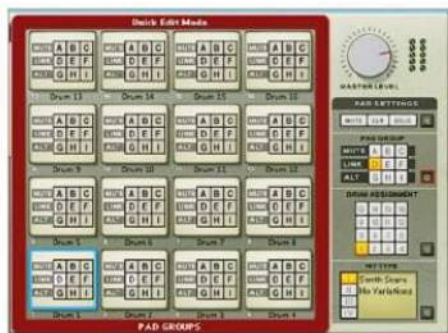
5 > To the right of each sample name is a horizontal bar defining its velocity range. Set roughly equal ranges for each using the sliders (the further left, the lower the setting) or type values into the boxes to the right of the sliders. Be sure that the fourth sample reaches the highest value range. You now have velocity-sensitive control over that drum pad.

6 > Just to the right of the numerical velocity range is a checkbox labelled **Alt**, for Alternate layers within a Hit Group. Tick these checkboxes for each of the four Hit Types, then strike the pad repeatedly at full strength. With each stroke, a different sample will play. This can be very useful when creating realistic acoustic drum patterns, or for simply adding an element of chance to your grooves.

POWER TIP

> Layer up

The really interesting thing about layering in Kong is that it not only enables you to set up samples of different 'strengths' for each velocity layer in the interests of realism, but for the crafty programmer (or skilled player) it also means that you can set up at least two different drum samples for each pad, and use the velocity control in your sequencer (or varied playing strengths on your keyboard or drum pad) to determine which one plays. Layering can be used to simply double, triple or quadruple the number of drums available on the pads at any one time, or to really let your crowd know you mean it when you start hammering those pads hard!



7 > Let's take a look at Kong's grouping options. Using a fresh, initialised patch, load drum pads 1 and 2 with a snare and a closed hi-hat respectively (either samples or the synth modules). Find the **Pad Group** options on the right. Hit the Quick Edit button (**Q**) and select **D** for both pads. Hit the **Q** button again and play pads 1 and 2 - you'll hear both of them when either one is struck.

8 > Load two additional closed hi-hats onto pads 3 and 4. In Quick Edit mode, deselect **D** for pads 1 and 2, but select **G** for all three of the hi-hat pads. Now, no matter which of three hi-hat pads you play, Reason will randomly trigger one of the three sounds. Note also the **Mute** group options - if you place, say, open and closed hats in the same group, playing one will mute the other.

PRODUCER SESSIONS **LIVE**

25th & 26th September 2010

From the
makers of

FutureMusic
Technique and technology for making music

**COMPUTER
music**
MAKE MUSIC NOW


musicradar.com
The No.1 website for producers

**MASTERCLASSES
WITH TOP PRODUCERS**

**DEMOS FROM
THE PROS**

**HANDS-ON WITH
THE LATEST KIT**

BUY THE LATEST GEAR

Freemasons / Dave Spoon /
Tommy D / Danny Byrd /
London Elektricity / Sharooz /
Jon Carter & Alex Blanco

And more...

TICKETS ON SALE NOW!
www.producersessionslive.com

LIVE FROM SAE LONDON

SPONSORED BY

absolutemusic

> Step by step Kong's effects



1 > Let's take a quick tour of Kong's effects. **Create** a Kong and initialise it. Load each of the physical and synth drums into pads of their own, in the order they appear in the menu. Program or record a basic rhythm over a bar or two, trying to use all of the loaded sounds.

2 > Play your rhythm back. It should sound pretty dry. Use Kong's **Solo** buttons to isolate each drum in turn and apply some compression from the **FX 1** menus on each drum. That should sound a bit tougher. Add some compression to the **Master FX** slot, too, and the whole kit should sound considerably fatter.

3 > In the **Snare Drum** panel, load Rattler into the **FX 1** slot and have a play with the parameters. This effect is designed to replicate the actual snare - the wires held at tension against the lower head of the drum. Try adding it to all the other drums - we guarantee you'll come up with some sounds you love. Do the same with the Resonator and Ring Modulator effects, too.

> Step by step Using Kong's effects with Reason's other devices



1 > Now that you've tried those nifty Kong effects on each drum, you'll no doubt be eager to try them out on some other sound sources too. Start a new project, Create a Kong and a Dr. Octo Rex (you can either load a REX loop of your own choosing or leave it on the default one), and flip to the back of the rack.

2 > Click the Kong's **Show Drum And FX** button to open the lower panel, unhook the default cabling from the Dr. Octo Rex into the the mixer and send the Dr. Octo Rex's **Main Outputs** to the **L-R Audio Inputs** on the back of the Kong. The Kong's outputs are now effectively Dr. Octo Rex's outputs, and Dr. Octo Rex can access Kong effects through the Bus FX and Master FX.

POWER TIP

> Bypass the bus

If, for reasons of setup simplicity or CPU usage, you want to use an already active instance of Kong as an effects processor (or you just want to blend a loop with your Kong drums before processing), you can do so by connecting your other device to either Kong's **L-R Audio Inputs** or **Breakout Inputs**. The difference with the Breakout Inputs is that they skip the Bus FX, which can be useful if you have a reverb or similar 'send-style' effect attached to the Bus FX, because there's no way to set the dry/wet balance of the Bus effect for signals coming in via the Audio Inputs.

The right route

Even by Propellerhead's standards, Kong is incredibly flexible when it comes to signal routing. On this page, we're introducing you to some of the Kong's effects modules, but of course, you might want to apply one of Reason's other reverbs to a snare or hi-hat, rather than Kong's internal one. If you go with our suggestion of mixing via the 14:2 Mixer (see p41), then setting this up is a cinch - just hook the reverb up to the mixer. If you prefer to keep your Kong setup mixer-less, though, each drum pad offers two very handy auxiliary sends and an internal bus send.

The latter is for the Bus FX slot within Kong, which is intended for effects like reverb (to which you might well want to send a certain amount of signal from multiple pads at once), keeping each pad's FX1 and 2 effects

slots free for the more insert-appropriate likes of Rattler and Resonator.

Each pad also features a pair of Aux send knobs (1 and 2) that send the signal from that pad to whatever you have connected to Kong's Aux Send Outs (reverb and delay, for example). If you hook the outputs up to a Remix 14:2 Mixer, you can access whatever's connected to that mixer's auxiliary outputs via those same Aux 1 and 2 controls.

You can give a track real cohesion and depth by using auxiliary effect sends - a point that's often lost in these days of near-limitless plug-ins. By offering such a solid array of effect-routing options, Kong encourages this vital production technique. So experiment away, and try out this amazing device's various approaches in isolation and



Kong's auxiliary outputs are very useful indeed, so don't forget to use them

conjunction. There are no set rules in music production, but many of the standard practices are standard for a good reason: they work.



HALION SONIC
Premier VST Workstation

**EXPLORE UNLIMITED
SONIC DIMENSIONS.**



facts on www.steinberg.net



steinberg
Creativity First

> Step by step MIDI locking and using multiple controllers



1 > Reason 5 enables independent locking of multiple MIDI hardware units – either to different devices or the same one. First, attach your MIDI controllers (we're using Native Instruments' Maschine and Arturia's Analog Factory Experience controller). In Reason's **Preferences**, add them to the list of devices, making sure that neither is selected as the master keyboard for now.

2 > Next, start a new project and create a Thor synth and a Kong Drum Designer. Right-click the former to reveal the option to lock any attached hardware unit that hasn't been assigned master keyboard duties (ie, both of them, in our case) to the device. For now, let's lock the Arturia keyboard to Thor.

3 > Next, we follow the same procedure for the Kong, locking Maschine to it. You might need to set up your MIDI drum pad to send Kong-compatible MIDI notes, so check the manual for your specific device if in doubt. A cursory tap of our pads and keys should reveal that each is locked to its partnered device, irrespective of what's selected in the Reason rack.



4 > We add a couple more synths, then go to **Hardware Preferences** and select the Arturia keyboard as the master keyboard. Back in the project, a few taps and hits will show that the drum pads and Kong are still connected, but as we move through the different synths, our keyboard switches between each active device. This sort of setup will be optimal for most users.

5 > Finally, we add our main studio controller keyboard to the setup, deselect the **Master Keyboard** option on the Arturia, make sure the new keyboard isn't selected as the master and then go back to our project. The last thing to do is lock both keyboards to one synth, enabling two people to play it at the same time or have it accessible from different parts of the studio.

POWER TIP

>Single lock

Hardware locking is useful even if you only have one controller. For example, if you want the freedom to tweak the parameters of any device in the rack while keeping your keyboard tied to a specific synth, you can simply lock your controller to it. And because Reason makes it so easy to do, you can quickly lock and unlock the keyboard whenever you like, without having to delve into the preferences.

Padding it out

These days, many computer musicians have more than one MIDI controller in their studios. The range of hardware MIDI devices on offer is absolutely huge – from keyboards and fader-banks to drum pads and button-studded 'blank canvas' surfaces.

But up until now, Reason users have had a little less incentive to invest in multiple controllers than users of other DAWs. While you could attach as many as you liked, only one could be locked at a time, so all the others would only play whatever was currently selected or set in record mode. It wasn't possible to have loads of MIDI devices attached and running simultaneously in any meaningful way.

Consequently, while you could just about justify investing in an MPC-style drum pad for

use with Reason, it might have meant sacrificing another controller, and there weren't any instruments that really lent themselves to such a device anyway.

With the introduction of Kong and proper multicontroller support in Reason 5, though, that situation has changed – and those 16-pad surfaces (Akai's MPD range, Korg's PadKontrol, Native Instruments' Maschine, etc) suddenly look a whole lot more viable. Kong is a joy to use on its own, but it is undoubtedly at its best with a drum pad attached.

A drum pad controller gives you a far more natural and funky way of building rhythms than programming them in manually or even using a keyboard. If you've never had the pleasure of using a drum pad before, get

down to your local music shop and ask them to give you a demo – you'll be amazed at the difference that it makes.

It's not just your beats that can benefit from a set of pads, either. There's nothing stopping you from assigning it to a synth instead of your usual keyboard; basslines in particular can really benefit rhythmically by being 'tapped' rather than 'played'.

Ultimately, though, it's the locking that's the key – having your beats always available in one hand and your musical parts always available on the other opens up some very creative new compositional avenues. If you don't have a drum pad yet, but you do have a couple of MIDI keyboards, try locking one of them to Kong to get at least a flavour of such a setup.

The best production gear is back in town.



westendproduction

New store open:

11 Great Russell Street, London, WC1B 3NH

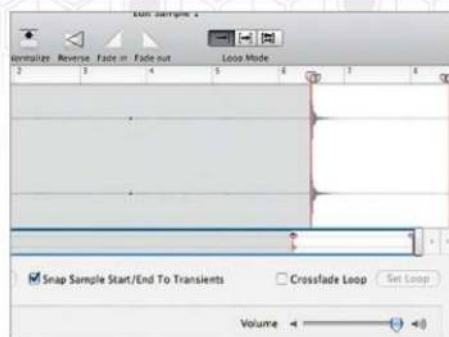
Nearest tube: Tottenham Court Road

Tel: 020 7631 1935

www.westendproduction.co.uk

3 3NH
Spend £100 or over
and enter our £5000
Studio Prize Draw

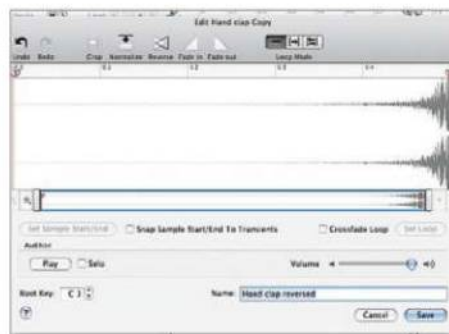
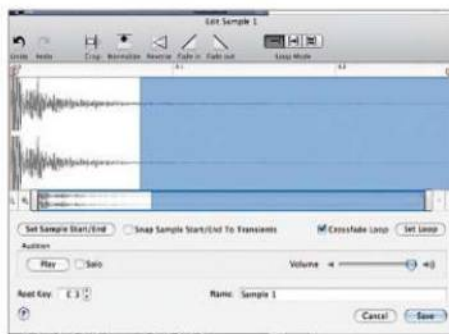
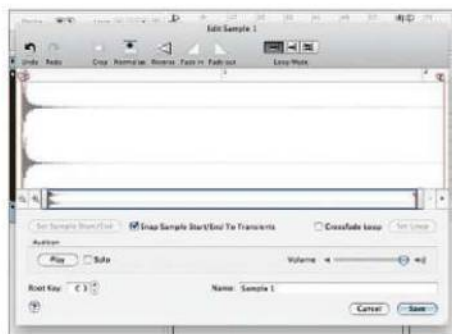
> Step by step **Sampling in Reason 5**



1 > The excellent new sampling system in Reason 5 couldn't be any easier to use. The only external requirement is a sound source. We're using our laptop's built-in microphone, which is set up as the default input in **Audio Preferences**. However, you can take the source from any audio input routed into Reason (such as a synth, guitar or decks connected to the audio interface).

2 > Start a new project, open the **Tool** window and click the waveform button to open the Sampling page. Click the smaller waveform button at the bottom left of the window to start sampling and play your instrument (or sing, clap, etc). We recorded ourselves clapping our hands. Click **Edit** to stop sampling and open the **Sample Editor**.

3 > Now it's time to set the start and end points. If you engage **Sample Start/End To Transients**, the markers will automatically jump to the transients, making it much easier to set values without having to zoom in, particularly when you're isolating one beat from a loop. You might also want to take this opportunity to name your sample.



4 > With your markers set, audition the sample to make sure it sounds right, then hit **Crop** to cut away the unwanted audio. Important note: We're doing it this way because we only want one sound from the recording; if you plan to take multiple samples from a recording (single hits from a drum loop, for example), use the **Tool** window's **Duplicate** button to make a copy before editing!

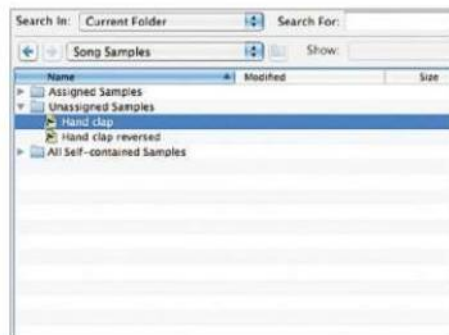
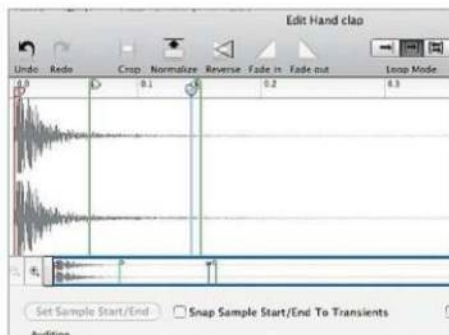
5 > It's common practice to normalise samples as part of the editing process, so that's what you should do next. We also noticed some hiss in our recording. To get rid of it, highlight the audio from the end of the main sound to the end of the tail and click **Fade Out**. Now it's much tidier - particularly when compression is applied (which raises noise levels).

6 > We decide to try reversing our sample, which, as you'd expect, simply involves clicking the **Reverse** button. Before we do that, though, we hit the extremely handy **Duplicate** button once more, reverse the copy and name it appropriately. Now we have two versions of our sample: one forwards and one backwards.

POWER TIP

> Sample looping

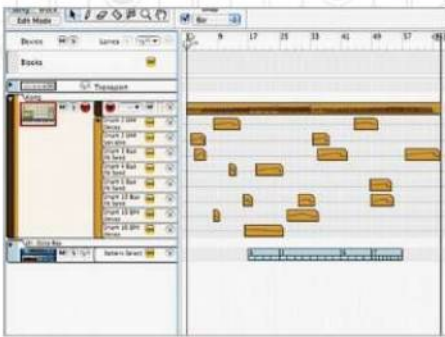
There are endless cool sample looping techniques to be exploited. Try setting loop points early in a reversed sample for a fast, repeating noise that explodes into a crescendo when released. This works really well with reverse hi-hats and white noise effects, and is even better with reverb and delay applied at the end of the sample. You should also have a go at extending sampled synth notes by looping the body of the sound.



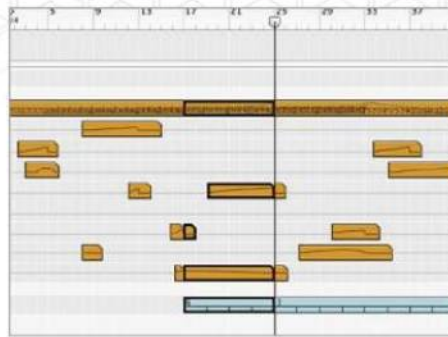
7 > Let's look at the three **Loop** modes. Standard is unlooped, while the middle one loops the section of the sample spanned by the loop start and end markers indefinitely. The third option loops does the same thing, but cycles between forward and reverse playback.

8 > Now that we've got our sample sorted, we need to import it into a playback device. Create an NN-19, NN-XT, Kong or ReDrum and load your sample into it in the usual way (they'll be in the Reason file browser), ready to be sequenced. As well as sampling 'into the browser', you can also hit the waveform button on any of those devices to sample directly into it.

> Step by step **Blocks party**



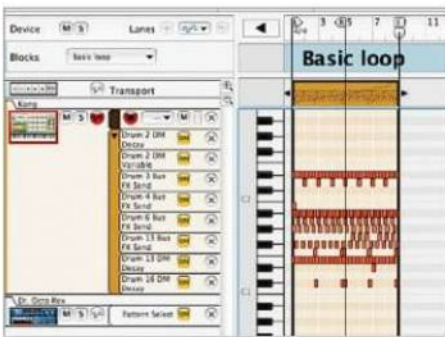
1 > Reason 5's Blocks system is a whole new sequencer mode. It enables the combining of parts into self-contained arrangement 'chunks' that can then be easily laid out and edited. Load Reason 5's **Demo Song**. We find that it's much easier to see what's going on when you detach the **Sequencer** window, so do that from the **Window** menu.



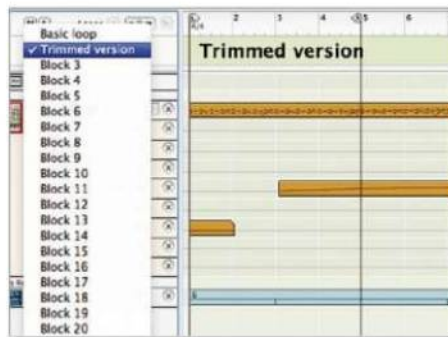
2 > Let's build our first block, which, for the sake of example, we'll call our 'basic loop'. Make sure the sequencer is in Song mode and, using the **Slice** tool, chop all the parts to be included in the verse so that they don't extend beyond the section you want to use (in our case, bars 17 to 25). Then highlight them all and select **Edit** > **Copy** (Ctrl/Cmd+C).



3 > Switch to Blocks view by clicking the **Blocks** button at the top right of the sequencer window, and select **Edit** > **Paste** (Ctrl/Cmd+V) to copy all of the data into the block. You don't actually have to slice the parts - you can simply set the block's start and end points to the desired positions - but doing so keeps things much clearer, as you won't end up with 'overmatter' associated with the block.



4 > Name the block, then click one of the parts within it to open its editor (or click the **Edit Mode** button). All parts in a block can be freely edited, and, crucially, making a change to the contents of a block in Blocks mode automatically makes the same change to the contents of all other instances of that block. Thus, you can make a tweak to all your verses at once with just one edit.

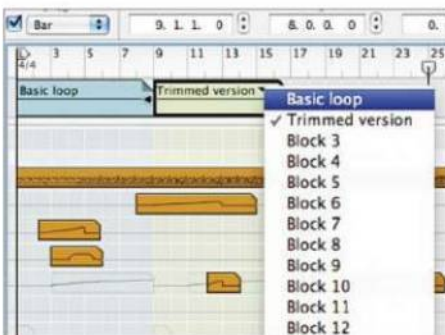


5 > Let's create a variation on our block. Copy the contents of the block, click the **Blocks** dropdown menu at the top of the **Device** list, select a new block and paste the contents into it. To make a variation, simply edit the parts within the block. You can have up to 32 blocks in a project, but just a few variations (thoughtfully named, of course!) will do for now.

POWER TIP

>Find your way

You may need to do a fair bit of experimenting with Blocks to find the best way to incorporate them into your workflow. For example, we like to get a track largely laid out using Blocks, then commit the parts to the main arrangement right at the end, before adding variations. That way, any tweaks we make to a given section are applied globally. We also use additional blocks to move good edits around at this point. If you're a veteran Reason user, a great way to learn Blocks is to revisit some old projects and remix them using the feature.



6 > Flip back into Song mode and look to the **Blocks** lane at the top of the sequencer. Using the **Pencil** tool, draw some blocks into this lane. Click the top of a block to reveal a dropdown list of all your defined blocks and select the one you want to use at that point in your track. You can also cut, copy and paste blocks within the lane, just like any other region.



7 > With the original **Demo Song** still in place, draw in enough blocks to fill the whole track (or drag the **End** marker to repeat automatically) and remove about half of the original information from the arrangement, leaving the blocks as they are. You'll notice that the information in the blocks is displayed in the arrangement in grey, making it clear what's part of a block and what isn't.



8 > Wherever there's nothing in the arrangement, the block present at that point will play; but where there is data in the arrangement, that data overrides the block. Thus, you can easily add a one-off drum fill, say, to a block without affecting all instances of it. Finally, right-click a block and select the **Convert Block Clips To Song Clips** option, which commits the block data to the arrangement.

> Step by step **Triggering loops with Dr. Octo Rex**

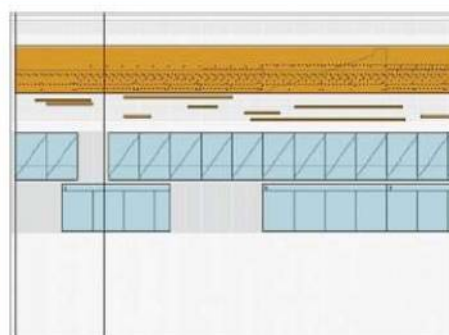
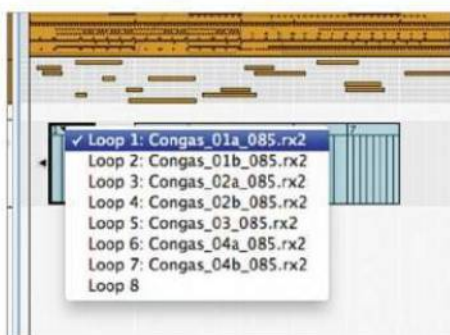


1 > Dr. Octo Rex is Reason 5's supercharged successor to the classic Dr. Rex loop player. The default setup comprises seven different loops, all variations on a theme. Hit the **Run** button and click the **1-8** buttons to preview each one. Now click the triangle at the bottom left to open the programmer - yup, Dr. Octo Rex has a two-deck GUI.

2 > First, let's try playing back some loops using a MIDI keyboard. Make sure the **Enable Loop Playback** button is active on the top deck and play the keys from E0 to B0 on your connected MIDI keyboard. These should trigger each of your loops in turn, although any empty slots (slot 8 here) won't make any sound, obviously.

3 > Next to the **Modulation** wheel are the three playback option buttons. When triggering a loop, you can set it to not play until the start of the next bar, beat or 16th-note. The full-bar option gives you plenty of time between pressing a key and the loop triggering, while the beat and 16ths options are great for stuttering loops.

> Step by step **Sequencing Dr. Octo Rex**



1 > Dr. Octo Rex uses **Pattern** lanes to switch between its loaded loops. Load the Reason 5 **Demo Song**, and in the **Dr. Octo Rex** track's **Pattern** lane, draw in a pattern selection. Extend its end and you'll see that it automatically loops according to the current loop length. Change the loop slot triggered using the drop-down menu.

2 > Copy and reassign a few pattern regions to create a quick arrangement, using the seven loops on offer. You might be wondering what's happened to Dr. Rex's old 'Copy loop to track' function - relax, it's still very much in place. To use it, simply select one of the loops in Dr. Octo Rex in the rack and hit the **Copy to Track** button.

3 > In the sequencer, a new lane has been created for Dr. Octo Rex. Playback a section with no Pattern lane information in it and you'll hear the MIDI information copied in step 2. When Dr. Octo Rex encounters any pattern information, it'll play both it and the MIDI data, which is important to remember when arranging.

Creative looping

One of the best things about Reason 5 is how well integrated and complementary all of the new features turn out to be. Dr. Octo Rex's many talents being no exception.

As we've seen, you can use a MIDI keyboard to trigger loop playback in various ways, enabling Dr. Octo Rex to be played live, with eight variations to choose from. Further to that, as we've also explored, Reason 5 enables the connection and independent device assignment of multiple controllers, and when those devices are all Dr. Octo Rex players, things get seriously loopy. You could have four Dr. Octo Rexes, loaded with drums, percussion, bass and synth loop variations (up to eight of each) respectively, and play them all yourself on four keyboards (or a



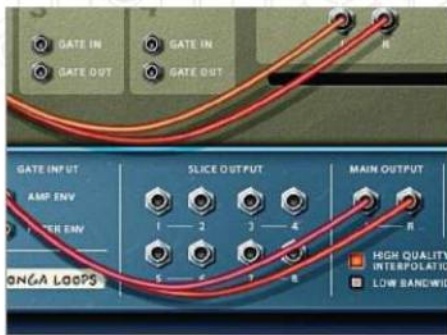
Dr. Octo Rex could turn out to be a powerful loop playback system for live performers

single keyboard divided into four zones). Why would you want to do this? Well, first and foremost, it's a great way of quickly creating an arrangement on the fly - particularly in conjunction with the Blocks system.

Not only that, but Dr. Octo Rex's comprehensive multitrack loop playback functionality opens up the possibility of playing complete backing tracks live within Reason. It would take a certain amount of practice to pull this off successfully in front of an audience, but the same (and then some!) could be said of guitar, keyboards, drums or any instrument.

We suspect that, as it's such a versatile new tool, it will take a certain amount of time and abuse on the part of Reason's more adventurous users to really push Dr. Octo Rex to its limits; but we also believe that the results will be all manner of ingenious applications of multi-loop play and manipulation. Watch this space...

> Step by step **Slice routing**



1 > One of Dr. Octo Rex's most important features can be found around the back - it boasts eight independent Slice Outputs, which can be used to send slices off down their own signal paths for processing with Reason's other devices. Let's process a snare taken from within a loop using this feature. Select **Loop 6**.

2 > Find the slices that fall on beats 2 and 4 - in loop slot 6 they're slices 4, 10, 16 and 22. Click each one, then turn to the controls under the waveform window, the rightmost of which sets the output for the selected slices. Set it to **1-2**, then wire **Slice Outputs 1 and 2** into the 14:2 Mixer, alongside Dr. Octo Rex's **Main Output**.

3 > You can either use Aux sends in the mixer, or insert effects devices in between the Slice Outputs and the mixer. Whichever method you choose, the result is that you can now process and mix selected slices separately from the rest of the loop that contains them.

> Step by step **Per-slice editing**



1 > Dr. Octo Rex gives you control of a number of extra per-slice parameters (the knobs below the Waveform display) beyond those of the original Dr. Rex. First is the **Reverse** knob. Try this on various types of slice (ie, the attack phase of a drum or a quiet section with reverb tail) to get a taste of the creative possibilities.

2 > Filter **Frequency** is another very useful knob, enabling you to set the filter cutoff for each slice. We'll see shortly how this can be combined with another of Dr. Octo Rex's new features, but for now, just try alternating the value from high to low on the slices we sent to that separate output earlier.

3 > Finally, let's look at the **Alt** groups. Each slice can be assigned to one of four Alt groups, and whenever any slice in a group is triggered, a randomly selected slice from that group is played back, generating constant random variations. If all slices are sent to the same Alt group, they'll play back totally randomly.

> Step by step **Using Slice Edit Mode**



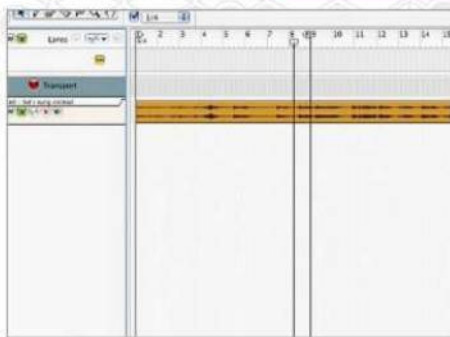
1 > It's fantastic having so many editable parameters on offer on a per-slice basis, but what do you do if you want to quickly adjust one or more parameters for all of the slices in a loop? Well, just to the right of the slice control dials is the **Slice Edit Mode** button. Click it and select the **Pan** parameter by clicking its title.

2 > Automate the **Pan** control by clicking and dragging the display from top left to bottom right to create a stepped value progression. Play the loop and you'll hear it pan from one side to the other. The edit style of each parameter varies - automating the **Reverse** function, for example, will yield a simple on or off.

3 > Finally, let's draw in some **Pitch** control edits, creating a pattern that causes select slices to jump up and down an octave. This is a trick worth trying on everything from musical instrument riffs to vocal loops. Also, try applying radical pitch changes to the 'air' gaps between hits for some possible interesting effects.

> Step by step

Introducing Record 1.5's Neptune Pitch Adjuster And Voice Synth



- 1 > One of Record 1.5's headline new features is Neptune, its weapon against poor tuning. To try it out, we'll first need a vocal - and one good way to ensure an imperfect vocal is to record our own. It doesn't matter what the song is, just sing anything in. We're going for *I Could've Lied* by Red Hot Chilli Peppers.
- 2 > With the recording in place, add a Neptune to the Audio channel's Insert chain. Neptune is designed to work with monophonic material, so make sure you apply it before any other creative effects, like reverb or delay, that can add harmonic frequencies. For the same reason, apply it to individual parts, not grouped vocals.
- 3 > Let's start with some basic transparent pitch correction. Set the desired scale type (check the manual for more on the scales), then set the **Input** buttons to suit the material. For a deep vocal, choose **Low EQ**; for material with lots of vibrato, choose **Wide Vibrato**; and if you're using it live and want low latency, choose **Live Mode**.



- 4 > The **Catch Zone Size** slider adjusts the size of the 'window' centred on each active note (in the keyboard below) within which pitch correction will occur. Any notes that fall outside these zones will be unaffected. Try this now while playing back a section of singing, to get a feel for how it operates.
- 5 > Next, it's time to set the **Correction Speed** and **Preserve Expression** controls. The former adjusts how quickly retuning is applied - set it very fast for that distinctive jumping pitch effect that we all know and love/hate. **Preserve Expression** sets the amount of vibrato allowed through at high correction speeds.
- 6 > Spend a bit of time playing with **Preserve Expression** and **Correction Speed**. The two are intrinsically linked and you should get into the habit of tweaking them together. The relationship between these two parameters is the key to getting either a natural-sounding vocal or that distinctive stepped, robotic feel.

> Step by step

Transforming vocals with Neptune



- 1 > In addition to simply correcting bum notes, Neptune can also be used to utterly transform vocals. Set the **MIDI** section to **To Pitch Adjust** and manipulate the **Mod** wheel and **Pitchbend** wheels (bottom left) while your vocal plays back. Try setting the **Range** to lower and higher values, and tweak the **Rate** to vary the pitch modulation between realistic and stylised.
- 2 > Play back the vocal while playing some MIDI notes on your keyboard (locked to Neptune). The vocal will be pitchshifted to follow the notes you're playing. This can be used to either completely change the whole tune or simply adjust the odd note. It can be particularly effective when you play notes in quick succession.

POWER TIP

>Transposing vox

Neptune's a great transposition tool, so if you're remixing a track or using a sampled vocal and you want to change the key, it's finally possible. Another useful tip for getting vocals sounding better on energetic dance tracks is to try tuning them all up by around 10-20 cents. The slightly sharper tone often helps to give the vocal energy and bite. We find that most vocalists tend to sing slightly flat, rather than sharp, so that simple technique can make the whole vocal sound better, without the need to undertake full-on pitch correction.

[Home](#)
[Labels](#)
[Genres](#)
[Formats](#)
[News](#)

Latest Release

TRIBAL PERCUSSION 5PIN MEDIA

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

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



Best Sellers



Tropical Tech
Push Button Bang



Progressive House
& Future Tech



Wally Lopez



BHK
Fidget



Essential Minimal
Techno 2



Dark Matter
Experiments in Dubstep

Featured Products



Artist Series Download Packs



Sounds and inspiration from some of the world's best known music producers and artists directly to your desktop.



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



Featured Labels



WAV : REX2 : ACID : REASON REFILLS : LIVE PRESETS : APPLE LOOPS : AKAI MULTITRACKS : HALION : MPC : EMU : EXS : RMX : SFZ : MAC / PC

www.LOOPMASTERS.com

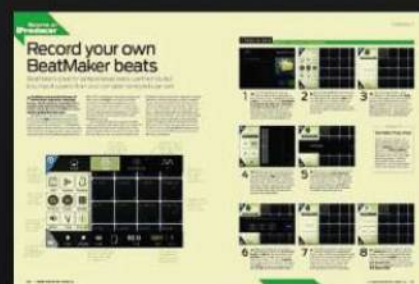
The source for sounds

Call +44 (0) 1273 692313 or visit the website



MUSIC ON THE MOVE!

Discover the 101 greatest music-making apps for iPad, iPhone, Android and Windows Mobile. It's everything you need to know to start making professional quality music on the move with your mobile device today!



All the best apps, accessories and step-by-step tutorials you need

> We meet techno pioneer Richie Hawtin and his incredible iOS software, Grid

> 15 sets of over-ear headphones get put through their paces for on the go production

> We test 10 of the latest netbooks to see which is best for mobile music-making

> The latest add-ons, accessories and battery-powered noise-makers for your entertainment

GET IT NOW!

Computer Music Special 43 is available from selected WH Smith, Barnes & Noble, Chapters and independent newsagents or  myfavouritemagazines.co.uk



MORE KOMPLETE THAN EVER.

KOMPLETE 7

INCLUDES
24 INSTRUMENTS
AND EFFECTS
10,000 SOUNDS
90 GB SAMPLES

THE KOMPLETE INSTRUMENTS AND EFFECTS COLLECTION

KOMPLETE 7 is the latest version of the ultimate software collection from Native Instruments. Now bigger and better, and featuring 24 KOMPLETE Instruments and Effects, this 90 GB package is bursting with more than 10,000 production-ready sounds for all styles and genres. KOMPLETE 7 includes renowned flagship products like KONTAKT, GUITAR RIG and the redesigned REAKTOR 5.5 plus all-new instruments and effects from Native Instruments and brands like Abbey Road and Scarbee. What's more, you also get a \$60 e-voucher to keep on expanding, making this best-selling bundle more complete than ever.

Get full details on all 24 KOMPLETE Instruments and Effects at:
www.native-instruments.com/komplete



NATIVE INSTRUMENTS

THE FUTURE OF SOUND

> Step by step Extreme vocal editing with Neptune



POWER TIP

> Crazy Neptune

Extreme formant settings can be used to create otherworldly, spacey effects. This can be helpful in the production of vocal fills to fit around a main vocal, particularly when healthy dollops of reverb and delay are applied. It can also be an amazing effect when brought to bear on spoken word material. In both cases, experiment with using Neptune as a send effect and layering the original and processed vocals together, or even placing it straight after a reverb or delay bus effect. Mental...

1 > Radically changing the pitch of a vocal has a much more profound effect than it does on most other types of sound, because as we sing different notes, the shape of our throat changes, which has a 'filtering' effect. Try pitching a vocal up by an octave to see what we mean. Now engage the **Formant** control. Hear how much more like the original vocal it sounds?

2 > Keeping **Formant** engaged, put the vocal back to its original pitch and turn the **Shift** control counterclockwise, then clockwise. The former, without changing the pitch, gives the impression of a deeper voice, while the latter is more like a chipmunk. Adjust the pitch up and down a few semitones, and try masking the effect using the **Shift** control.

> Step by step Using Neptune as a vocal synth



1 > Now it's time to get radical: Neptune can also conjure vocal harmonies out of thin air! Set **MIDI to Voice Synth** and play back your vocal while playing your MIDI keyboard. The vocal synth does its thing at the pitches you play on the keyboard. Record some notes and chords as MIDI information.

2 > With your recorded MIDI part playing, return to the Neptune interface. All of the **Pitch Adjust**, **Transpose** and **Formant** controls are handled automatically for the Voice Synth, but you can still employ the pitchbend and modulation wheels. Try applying those now to hear how they affect your synthesised vocal harmonies.

3 > The **Mixer** section is where you set the relative levels of the **Pitched Signal** (the original vocal) and the **Voice Synth**. Set the **Pitched Signal** to **0** and you'll only hear your vocals when you play some notes on your MIDI keyboard. We're in the same general territory as vocoders here, but with considerably more realistic results.



4 > Once we've got our rough harmonies together, we like to separate the **Voice Synth** and the **Pitched Signal**, as it enables much finer mixing control than just the two sliders in Neptune itself. To do this, simply hook the **Voice Synth Out** jacks to a pair of inputs on the main mixer.

5 > Anything that generates MIDI notes can be used to play Neptune. For an extreme example, add an RPG-8 or Matrix step sequencer and send its output to Neptune. Mute the **Pitched Signal**, play back the vocal as you tweak the arpeggio or sequence, and sit back in awe at the insane vocal lines you can now create.

6 > We've seen some of the creative and controlled carnage Neptune can bring to vocal signals, but what about other things? Why not try running a range of drum loops through it and repeating all of the steps above using those instead? Of course, any sound source works, but drum lines are always interesting.

Reason 5 tips

MONKEYING AROUND

One of Kong's best features is its powerful level-setting system, but another key point is its connectivity. Instead of mixing internally within Kong, try routing the pads out through a 14:2 Mixer and then back into Kong via the **Break-In** connections. This enables you to set levels and EQ with the mixer, and still use the powerful master output FX. Save your construction as a Combinator for future use.

STEP AND MOVE

With the spectacular introduction of Kong, our old friend ReDrum might seem a little redundant now. For many situations that would be a fair assumption, but since Kong has no onboard step sequencer, ReDrum still has a beat-making role to play. Connect its **Gate Outs** to Kong's **Gate Ins** and you have the best of both percussive worlds. It's like an MPC and a 909 rolled into one!



Capture the output of the ReGroove mixer using Reason 5's new sampling facilities

TAP TO WIN

A great new addition to the transport bar is **Tap Tempo**. Tap tempo functions always work better the more taps they receive, so tap your beat out in double time (eighth-notes; two taps per beat) for greater accuracy.

SWEEP THE PITCH

Kong includes a **Pitchbend Range** setting. If you've never tried sweeping the pitch of a funky electronic rhythm, now is the time, as it can be used to make energetic edits and variations. Try setting it to a full octave range, then flicking it right down to an octave below for the eighth bar of eight. Or start at -12, move to 0, then jump to +12 over three bars.

COMING OR GOING?

Roni Size was notoriously fond of the Roland S-760 sampler, praising its ability to play a sample forwards and then backwards seamlessly. Reason 5's sample editor enables you to do the same thing, and the instruction to do it will be embedded in the sample itself when you use it in a sampler.

ADD YOUR HARDWARE

If you want to use a favourite piece of outboard hardware with Kong, you can.



Hook Kong's pads up to ReDrum's step sequencer to create the ultimate Reason drum machine!

Round the back of the rack, you can take the audio signal out of Kong, then Reason, just before it gets to the master effects, then run it through your hardware and send it back into Reason, then Kong. Could be handy for live shows and studio sessions alike.

BUILDING WITH BLOCKS

Most people making electronic music tend to start their tracks with an eight-bar loop, which is then copied and tweaked to build an arrangement. Reason's groundbreaking new **Blocks** system caters for this approach beautifully. Start your track from within the blocks edit screen, building your basic eight-bar loop. Sequencing the rest should be a breeze (block).

GET GLITCHY

Good electronic music is all about the cool edits, but until you get your head into that slightly glitchy headspace that only great funk drummers and German minimal producers seem to have a natural affinity for, try making a copy of the last bar of your eight-bar loop, pasting it into a new block and playing with the start point. The resultant juddering and unexpected effect could be just the thing to get your listeners wiggling...

SAMPLE YOUR GROOVE

One of our favourite features that was introduced back in Reason 4 is the **Groove** window. This offers a **Note Length Impact** control when using ReGroove that affects all notes with groove applied, creating an awesome chopping effect. Now you can use Reason 5's sampling facility to route your main output back into an NN-XT sampler and capture those live sweeps for sequencing.

SHARE AND SHARE ALIKE

The ability to lock multiple MIDI instruments and controllers to specific instruments brings a whole new paradigm of playing to Reason. Now you can have several musicians playing one device simultaneously, or you can go the other way entirely and keep each locked to an instrument of their own. Set Reason to sample from a mic, too, and you can even record a vocal or guitar at the same time. A whole band could conceivably play a gig using just one instance of Reason! cm

ENTER THE WORLD OF KOMPLETE



JUST £79!

KOMPLETE 7 ELEMENTS

The all new KOMPLETE 7 ELEMENTS brings you 2,000 of the best sounds from Native Instruments' flagship KOMPLETE 7 for just £79. With 12 GB of instruments and effects, it's all you need to start producing music right away. Add the included 50 € (£40) e-voucher and you've got the most affordable way ever to enter the world of KOMPLETE.

www.native-instruments.com/elements



NATIVE INSTRUMENTS

THE FUTURE OF SOUND

KOMPLETE 7 and the KOMPLETE logo are trademarks of NI. All rights reserved. NI and the NI logo are trademarks of NI.

> on the disc / dvd contents

> Full contents of your 7.6GB dual-layer disc

cmDVD

PC MAC

1249 Time+Space samples, Martinic Combo Model V, the latest reader demos, DJ Fresh doing his thing on video, and more, all on this month's disc!

DVD contents Full software

Full software

Martinic Combo Model V (PC/Mac)
Martin Eastwood MVerb (PC/Mac)
g200kg RoVee (PC)
Full Bucket Music Mono/Fury (PC)

Demo software

112dB Big Blue Limiter (PC/Mac)
Artificial Audio Quartz (PC/Mac)
Expert Sleepers Spectral Conquest (PC / Mac)
MeldaProduction Total Bundle (PC/Mac)
Roger Linn Design AdrenaLinn Sync (Mac)

Tutorial files

cm Focus

Jamming In Live
Make It Funky
Off the Dial
Pushing the Envelope
Sound Essentials
The cm Guide to Reason
Totally Trackers

Samples

Time+Space samples

Construction kits, loops, chords, riffs, hits and more

The CM DnB Collection 2010

Beats, rhythmic loops, bass, drum hits, percussion hits and atmospheres

Reader Music

Advantage - *The Beat (Get Up!)*
JFM - *Illusion*
Our Mutant Friend - *I Saw Ten*
Shadow Mountains
Spooky Agenda - *Days Gone By*

MARTINIC COMBO MODEL V (PC/MAC)

This awesome organ emulation was painstakingly designed to produce as authentic a sound as possible. Read all about how it was done in our interview with its creators - turn to *Freeware News* on p18.

System requirements

PC VST host

Mac AU/VST host

Web www.martinic.com

FULL BUCKET MUSIC MONO/FURY (PC)

Get that Korg Mono/Poly sound with this software clone. It includes cross-modulation, hard sync and a "tweak section" for tinkering under the hood.

System requirements

PC VST host

Web www.fullbucket.de

MARTIN EASTWOOD MVERB (PC/MAC)

Algorithmic reverb from the developer of the cm Studio' CompressiveCM and Duet, MVerb sounds great, is easy to use and keeps things simple with a sensible and straightforward interface design.



Take your music to church with authentic organ emulation Martinic Combo Model V



Reverb and voice transformation with Martin Eastwood MVerb (right) and G200KG RoVee (above)



System requirements

PC VST host

Mac AU/VST host

Web martineastwood.com

KeroVee, RoVee delivers crazy vocal sounds with its pitch and formant controls, plus a totally bonkers Robotic mode.

G200KG ROVEE (PC)

A voice effect from the creators of freeware pitch-correction tool

System requirements

PC VST host

Web www.g200kg.com



Use Mono/Fury to get those lush Korg Mono/Poly sounds you've been after

Demo software

112DB BIG BLUE LIMITER (PC/MAC)

An analogue tube-limiting emulation, Big Blue Limiter is ideal for adding character to your busses and mixes. The demo license included on the disc allows you to use this trial version until 28 October 2010.

System requirements

Mac 1.2GHz CPU, 256MB RAM, OS X 10.4 or later, AU/RTAS/VST host

PC VST host

Web www.112db.com

ARTIFICIAL AUDIO QUARTZ (PC/MAC)

Mangle your sounds good and proper with this rhythmic multieffect, including multimode filters, waveshapers and delay among its sound-shaping tools. The demo version has its save functionality disabled and outputs silence every 30 seconds.

System requirements

PC 1GHz CPU, Windows XP or later, VST host

Mac 1GHz CPU, OS X 10.4 or later,

AU/VST host

Web www.artificialaudio.com

EXPERT SLEEPERS SPECTRAL CONQUEST (PC/MAC)

If you want to get freaky with your audio frequencies, Spectral Conquest is the plug-in for you. It's got a huge amount of potential, as you'll discover in our review on p109. The demo version times out after each 15 minute session.

System requirements

PC SSE2 capable CPU, Windows XP SP2 or later, VST host

Mac Intel CPU, OS X 10.5.8 or later, AU/VST host

Web www.expert-sleepers.co.uk

MELDAPRODUCTION TOTAL BUNDLE (PC/MAC)

This complete collection of MeldaProduction demos features a whopping 44 trial versions, including MmultibandChorus and MmultibandTransient, which we reviewed last month. These trial versions emit noise periodically, and will open the MeldaProductions website on launch.



Get started with our **BEGINNERS' GUIDES**
If you're new to computer music, our five *Beginners' Guides* will get you moving in the right direction. They're in the **CM Beginners** folder.



If you can get past the colour scheme, Spectral Conquest offers powerful scripting functionality

System requirements

Mac Intel CPU, OS X 10.5 or later,

AU/VST host

PC SSE2 capable CPU, Windows XP or later,

VST host

Web www.meldaproduct.com

ROGER LINN DESIGN ADRENALINN SYNC (MAC)

From the great Roger Linn, AdrenaLinn Sync offers the same synced modulation and effects as the AdrenaLinn III Guitar pedal, enabling you to create exciting dynamic filter, distortion and delay effects. The demo will expire after 14 days. Check out our review on p110 to read our verdict on this highly creative plug-in.

System requirements

Mac 1GHz CPU, OS X 10.4.11 or later,

AU/VST host

Web www.rogerlinndesign.com



Get your hands dirty with some sound destruction, using Artificial Audio's rhythmic multi-effect Quartz

USING THE DVD INTERFACE

- 1 Put the DVD-ROM in your DVD drive, let it spin up, and wait for the interface to appear. If it doesn't autorun, browse to it in Explorer/Finder and double-click **Computer Music for OS X or PC**, as appropriate. Read the disclaimer and click **Accept** when you're done.
- 2 The main interface will open. Mouse over the links for each section to get a brief description of their contents, and click on your button of choice - in our case, **Software**.
- 3 An Explorer/Finder window will open, showing you the contents of that folder. Any executable files can be run directly from the DVD by double-clicking them. Demos are generally presented as installer applications, but check any Readme text files for additional installation information.

PROGRAMS & PLUG-INS

Most of the programs on the DVD-ROM are presented as installers - simply double-click the installer icon and the application does the rest. However, plug-ins are often presented as .dll (PC), .vst or .component (Mac) files. To 'plug' the plug-in into your VST/AU host, just copy the plug-in file into your VST or AU plug-ins folder, as appropriate.

SAMPLES

Every month we give you a wealth of royalty-free samples! You can use them in your music in any way you see fit, without having to pay a penny, even if you end up commercially releasing your work. The only thing you *can't* do is redistribute them as samples - eg, by making a sample CD with them. To install our samples, simply copy them to your hard drive.

> make music now / time+space samples

>Exclusive full software!

Time+Space 1249 samples



Make your DAW sing with 1.9GB of loops, hits, FX and more in this exclusive sample pack from the biggest name in soundware, Time+Space

> *Computer Music* has teamed up with Time+Space, the UK's leading provider of sample libraries, to bring you a collection of samples taken from 52 of their latest and greatest sound packs. Weighing in at a battleship-sinking 1.9GB and totalling 1249 samples, this exclusive collection comprises tons of construction kits, hits, loops, chords, riffs, atmospheres and FX.

These sounds have been made by some of the most respected

sample production houses in the industry, including Zero-G, Sample Magic, Mutekki and Loopmasters, whose contribution includes sounds from the likes of techno hero A Guy Called Gerald, drum 'n' bass dons Drumsound and Simon 'Bassline' Smith, and reggae legend Mad Professor.

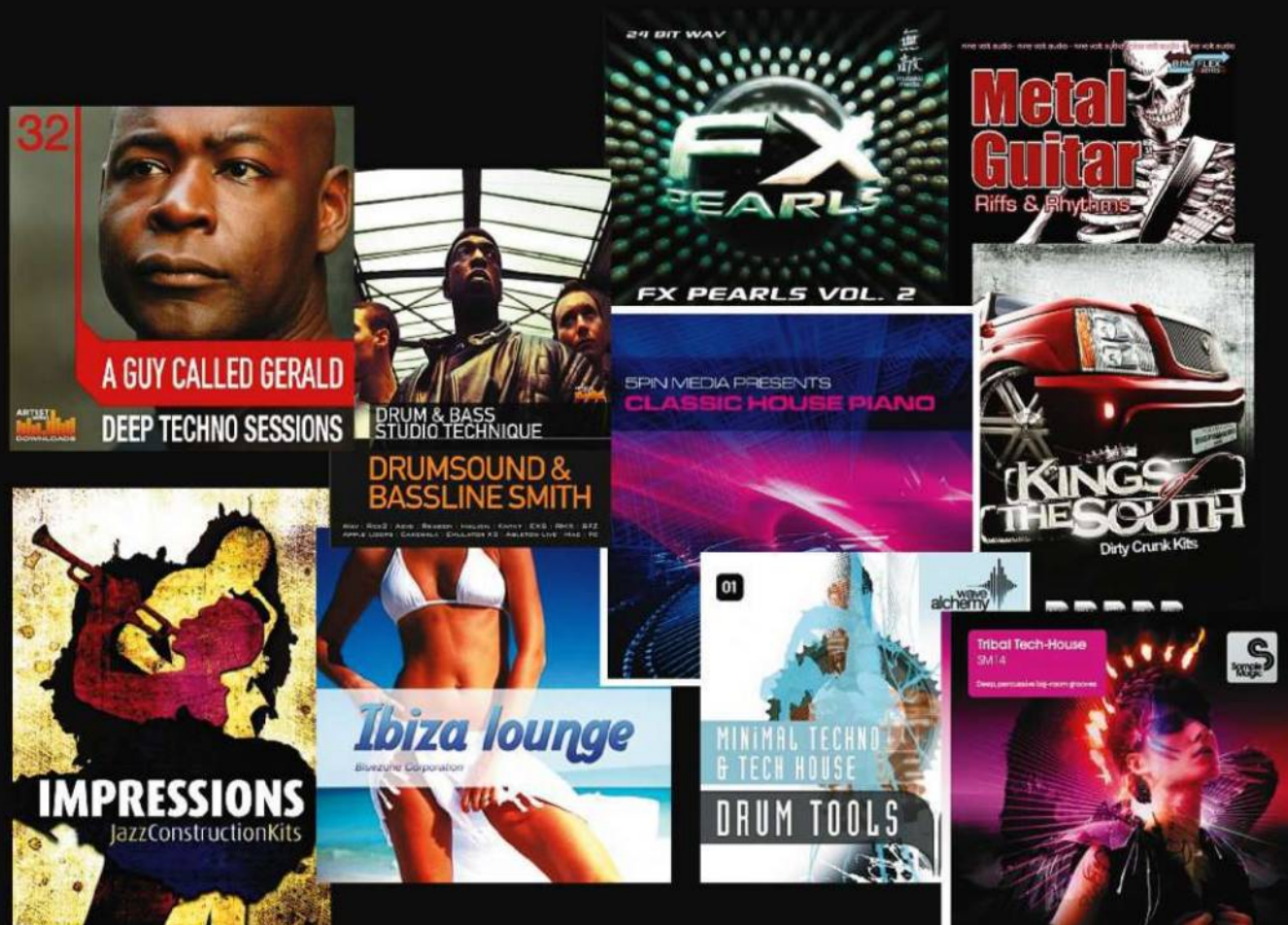
The scope of these sounds is huge: they cover an enormous range of musical genres, from traditional South American styles to cutting-edge minimal DnB and pretty much everything in

between, including chilled-out soundtracks, dirty south hip-hop, dubstep and all kinds of naughty experimental noises.

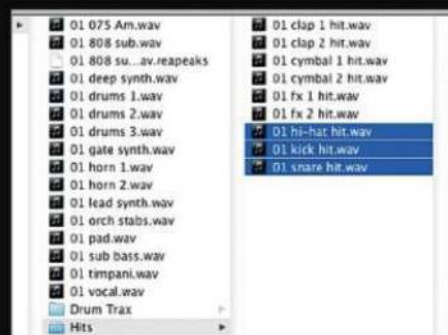
As well as being a valuable resource for experienced producers, these samples are also ideal for those new to computer music, as they make it easy to start creating your own tracks without requiring much in the way of technical knowledge. In this tutorial we'll show you how to quickly compose your own beats with the included drum sounds,

edit loops to fit your project, and layer up different sounds to create a complete piece of music. As well as the samples themselves, on the **cm DVD** you'll find the awesome shareware DAW Reaper, which is what we'll use in this step-by-step guide. However, these high-quality WAV-format sounds will of course work with any music software.

If you like what you hear, be sure to check out the hundreds of libraries, instruments and other music-making goodies available at www.timespace.com.



> Step by step Composing a track with our Time+Space samples



1 > First things first: open the **Samples** folder on the **cm DVD**, drag the **Samples/T+S Samples/T+S Samples.zip** file onto your desktop and double-click it to extract its contents. When you've done that, load up your DAW - we're using Reaper (which is also on the DVD), but any DAW with audio tracks will do.

2 > Let's start by making a beat using single hits on audio tracks. Some DAWs, such as Reaper and Ableton Live will automatically add volume fades to the start and end of samples. This isn't ideal when working with single hits and loops, so disable this feature if it's active in your DAW. To do this in Reaper, open the **Options»Preferences** menu and select the **Projects»Defaults** tab.

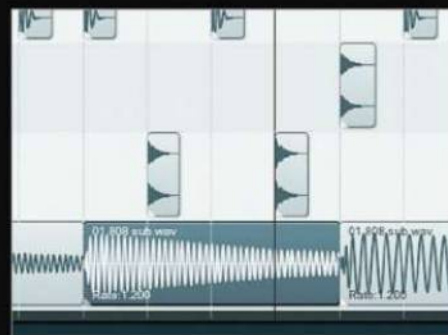
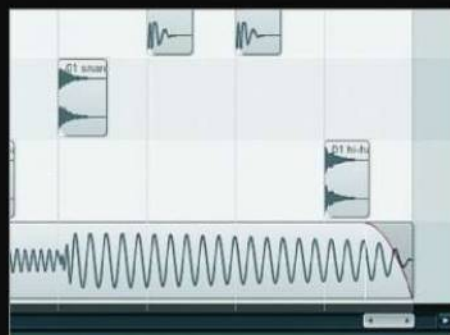
3 > Deselect the **Create automatic fade-in/fade-out for new items** option and click **OK** to close the **Preferences** window. Open the **T+S Samples/Big Fish/Kings of the South Demo/01 Bird Games 075 Am/Hits** folder. Drag the **01 Kit Hit**, **01 Snare Hit** and **01 Hi-hat Hit** samples onto an audio track in Reaper.



4 > Reaper will ask if you want to put each sample on its own track. Click **Yes**. Next, set the BPM to **90** and press **Alt+I** to bring up the **Snap/Grid Settings** window. Change **Show grid/line spacing** to **1/16th-notes** and close the window.

5 > Drag over a bar in the sequencer window to select it, then click the **Loop** button on the Transport bar to play that bar as a loop. To copy audio, simply hold **Cmd** (Mac) or **Ctrl** (PC) and drag it. Copy the pattern we've made above. This is a decent enough rhythm, but it's a little minimal. Let's add some more sounds.

6 > Open the **01 Bird Games 075 Am** folder and drag **01 808 sub.wav** onto an audio track. This sound is a loop, and it has embedded tempo information that enables it to fit the tempo of your current project. Reaper will ask if you want to import it at the original tempo, or stretch it to fit the project tempo. Select **Adjust Media To Project Tempo** and click **OK**.



7 > Reaper will import the loop and stretch it to play over a two-bar section. Select the single-hit drum pattern by right-clicking and dragging, then copy it over the second bar by holding **Cmd/ Ctrl** and dragging it. Set Reaper to loop over this two-bar section.

8 > You'll notice that the loop clicks at the end of the two-bar loop. This is where fades do come in handy. Hover the mouse pointer over the top right-hand corner of the loop so that the fade cursor appears, then drag left to add a fade.

9 > The loop works well with the existing beat, but we can make it a bit more individual using a bit of pitchshifting. Click the loop at the start of the penultimate note and press **S** to slice it in two. Click the end of that note and press **S** again to isolate it.

> make music now / time+space samples

> Step by step Composing a track with our Time+Space samples (continued)



10 > Now we've sliced out this note, we can process it independently from the rest of the loop. Click the note to select it, and right-click to bring up the menu. Select **Item Properties**. Change **Pitch adjust (semitones)** to **7**. This will pitchshift that note up 7 semitones, giving the bassline a different melody.



11 > This pitchshifting will create a click at the start of the note. Zoom in and fade the samples quickly to get around this. In Reaper you can change which algorithm is used to perform real-time timestretching in the **Item Properties** menu, but by default the excellent **elastique 2.1 Pro** is used, which does a great job for most tasks.



12 > We can play back samples chromatically using a sampler rather than an audio track. To do this in Reaper, create a new track and click its **FX** button to bring up the **Plug-in** menu. Locate Reaper's **ReaSampleOmatic5000** and double-click it to add it to the track.



13 > To load a sample, click the **Browse**. Load the **Mutekki»Audio Boutique Electric Elements»AB_Roland 13.wav** sample. Close the **ReaSampleOmatic5000** window and create a new MIDI item on the track by selecting **Insert»New MIDI Item**.



14 > Double-click the MIDI Item to bring up the MIDI grid editor, and copy the pattern shown here. To create new notes, double-click the grid. Notes can be moved by dragging, or resized by dragging either end. This pattern creates a funky interplay with the beat.



15 > We've got a beat, bassline and catchy hook now, but there's not much actual music going on. Let's remedy that. Open the **Loopmasters/A Guy Called Gerald Deep Techno Sessions** folder and drag **GCG_127_A_ML_09.wav** onto a new audio track. Select **Adjust the tempo of this loop to fit the project** when prompted.



16 > This loop is four bars long, so copy the two existing bars of beat, bass and hook to make a four-bar sequence. Next, before we start making a mini arrangement, select all the mixer channels and pull them down to **-6.35dB** to stop the master peaking.



17 > The easiest way to turn this simple four-bar loop into an arrangement is to copy it out three times, creating a 16-bar arrangement. You can then go through it, deleting parts as necessary. Start with the guitar riff, then introduce the beats, then the hook and finally remove the guitars when the bass line drops.

POWER TIP

>Sample magic

As we've seen in this tutorial, it's possible to manipulate parts of sampled loops to create something new and more individual. But that's just the tip of the iceberg. There are a huge number of ways in which you can transform samples and loops. Slicing them up into sections and reordering them is a classic sample-mangling technique from old school hip-hop, and it can be used to make samples fit better with an existing project as well as making them sound more original. Try playing samples back at different pitches, reversing them and applying plug-in effects to give them an endless number of new twists. **cm**

>Royalty-free, pro-quality sounds!

2001 cm samples

PC MAC



We reckon this is our best drum 'n' bass sample library yet. Drop a few of these into your latest roller and they won't know what's hit 'em!

The 24-Bit cm DnB Collection 2010

DnB is a constantly evolving style that tests the boundaries of what's possible with music technology. 2010's cm drum 'n' bass samples are our best yet, gifting you a huge library of loops, hits, effects and atmospheres that will prove indispensable to anyone interested in creating cutting-edge music.

100 atmospheres

Eerie and futuristic soundscapes, perfect for creating those atmospheric intros

401 bass hits

Full-bodied bass sounds ready to get twisted up in your sampler

50 bongo and conga hits

Exotic percussion for perfecting those tribal vibes

200 breaks

Funky breakbeat-style loops ripe for reprogramming

50 cymbal crashes

Splashy crashes ideal for creating impacts or layering with beats

50 Drum Loops

Full-on drum 'n' bass beats that can work both solo or as part of intricate layered patterns

100 FX

Risers, descenders, impacts and abstract noises, all designed to add interest to your tracks

200 Hi-hats

Synthetic and organic hi-hats for creating the rushiest of drum patterns

200 Kick drums

Huge kicks to help get your beats stomping

130 Pads

Sweeping chords and drones for those more musical moments

60 Percussion Loops

Funky percussive loops that will take your rhythm tracks to the next level

200 Percussion Hits

Off-the-wall percussive noises for spicing up your rhythm tracks

60 Rides

Crispy ride hits that'll get your beats rolling

200 Snares

Slammin' snare noises to complement those big beefy kicks



Sample and video playback

cm videos are presented in MOV format, which means that you need QuickTime, QuickTime Alternative or VLC installed on your system to play them. Macs feature QuickTime as standard, and PC owners who don't have QuickTime installed can use VLC instead. VLC is an open-source media player that can handle pretty much any format you can throw at it - you'll find it in the VLC Media Player folder on the cm DVD. VLC is also recommended to Windows users who find that 24-bit samples won't play back in their Windows Media Player. For the latest version, go to www.videolan.org



Producer Masterclass video

Artist **DJ Fresh**

He's one of the biggest names in DnB, with a string of anthems under his belt. In this exclusive video, DJ Fresh takes us through a work in progress in Live, demonstrating how he gets his big beats, bad bass and awesome effects. There's also a Max for Live patch created by the man himself on the DVD.

Web www.myspace.com/freshbadcompany



Rhythmic Envelope Generators tutorial

Find out how to get the most out of the complex envelope generators in today's soft synths with John 'Skippy' Lehmkuhl's exclusive video tutorial. Offering advanced

programming tips for Spectrasonics Omnisphere, u-he ACE and Native Instruments' Absynth 5 and Massive, this movie is essential viewing for synth lovers. www.PluginGuru.com

HAVING PROBLEMS?

In the unlikely event that you have trouble with your disc, send an email to support@futurenet.co.uk and they'll help you out. Please do not phone us, as we don't give technical support over the telephone!

If you experience a problem with your software, you should first refer to the software manual. This is often delivered with the software itself or is sometimes placed on your hard drive when you run the installer. If you find that you don't understand some of the features of the software, remember to read the manual first. Should you be unfortunate enough to run into any technical difficulties with the software, it is often best to get in touch with the developer of that software - they are probably better-equipped to offer you the support you need than we are.

BROKEN DISCS: If your disc is corrupt, cracked or otherwise inoperable, we'll send you a spanking new replacement within 28 days. Send the DVD to: Disc Department, Reader Support, Future Publishing, CMU156/October/10, Bath BA1 2BW. Don't forget to include your full name and postal address!

cm STUDIO

Our exclusive suite of applications, instruments and effects is on the DVD every month – it's quite literally all the software you need to make great music now!

APPLICATIONS

XT Software energyXT2.5 Core cm Edition (PC/Mac/Linux)
VST host and sequencer with modular routing

Outsim SynthMaker CM (PC)
Create your own VST synths and effects

INSTRUMENTS

PowerFX Hütkins CM (PC)
Sample-based electronica synth

Ummet Ozcan Genesis CM (PC)
Another amazing virtual analogue synth

Muon CMplay (PC/Mac)
Powerful ROMpler instrument

Dominator (PC)
Virtual analogue synth with a classic feature set

u-he ZebraCM (PC/Mac)
Amazing virtual analogue synth

LinPlug AlphaCM (PC/Mac)
Subtractive synth with ring and amp modulation

Homegrown Sounds Astralis CM (PC)
Modulation-heavy 'soundscape' synth

Homegrown Sounds Astralis Orgone CM (PC)
Flexible sample-based synth

XT Software EnergyCM (PC/Mac)
Analogue-style sequencer

FabFilter One 2.01 (PC)
Beautiful-sounding single-oscillator synth

Kotkas Paax 3 CM (PC)
Feature-packed soft sampler

Odo Synths Unknown 64 CM (PC)
C64 SID chip-emulating VSTI

Krakli CMorg (PC)
Vintage organ instrument

AlgoMusic ElectraBass Rack CM (PC)
Easy-to-use bass synth that's packed with presets

Humanoid Sound Systems Scanned Synth CM (PC)
Create abstract noises and haunting instruments

Muon CM-101 (PC)
Analogue-style VST synth

Muon SR-202 (PC)
16-pad VST drum machine

Muon CM-303 (PC)
Emulation of the classic Roland TB-303 synth

Muon DS-404 (PC)
Powerful 16-part multitimbral VST sampler

LinPlug CM-505 (PC/Mac)
Analogue drum synthesis made easy

Big Tick RhinoCM (PC)
Amazing hybrid synth with cool FM capabilities

Synapse Audio Junglist (PC)
Effects-packed virtual analogue synth

EFFECTS

KResearch KR-Delay cm Edition (PC/Mac)
Dual delay lines with filters and sync ability

START HERE
Get the **cm Studio** installed with our easy-to-follow PDF guides! They're on the DVD in **The CM Studio/CM Studio Tutorials** folder.

KResearch KR-Reverb cm Edition (PC/Mac)
Easy-to-use, algorithmic reverb effect

Blue Cat Audio FreqAnalyst CM (PC/Mac)
Sophisticated stereo spectral analyser

NuGen Audio Stereoizer CM (PC/Mac)
Useful mixing tool for control over your stereo spread

Sugar Bytes Artillery2 cm Edition (PC)
Multi-FX with internal sequencer

Image-Line CM Vocoder (PC)
Special **cm** version of FL Studio's FL Vocoder

Aixcoustic Creations Electri-Q CM (PC)
Sweet-sounding and flexible equalisation

Martin Eastwood Audio CompressiveCM (PC/Mac)
Compressor/limiter with sidechain input

Audio Damage Pulse Modulator (PC/Mac)
Wild, stompbox-esque modulation effect

Betabugz Audio Vascillator (PC)
Semi-modular feedback delay multi-effect

Image-Line CM WaveShaper (PC)
Flexible wave distortion effect

PSP Springverb (PC)
Authentic VST spring reverb effect

SimulAnalog Guitar Suite CM (PC)
Plug-ins modelled on classic guitar effects and amps

Ohm Force Ohmygod! (PC/Mac)
Crazy resonant/comb VST filter

Camel Audio CMFuzz (PC)
Quick and dirty distortion

Intelligent Devices MegaDelayMassCM (PC/Mac)
Sound design-orientated delay module

Sanford Phaser-CM (PC)
Phaser effect with advanced modulation abilities

Martin Eastwood Audio Duet (PC)
Easy-to-use double tracker



Bring some crazy echo action to your productions with KR-Delay cm Edition

EnergyXT's new features

The **cm** version of this agile DAW has been upgraded with new export and timing options

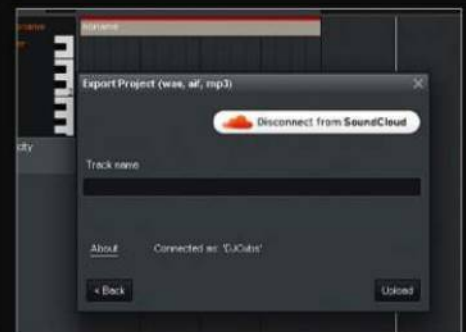
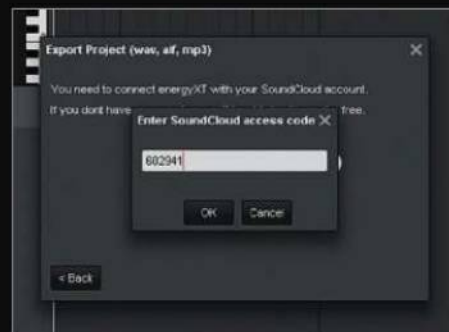
PC MAC



1 > The latest **cm** Studio software to receive an update is our energyXT 2.5 Core **cm** Edition DAW. v2.5.3 includes a few cool new features, so let's check them out. Go to the **CM Studio** folder on the DVD. You'll find energyXT in the **PC, Mac** and **Linux Software** folders. PC users, run the EXE file to install.

2 > Mac users, open the DMG image file and copy the **energyXT** folder to your **Applications** folder. Linux users, install the tar.gz as usual. Once you've installed the software, run the energyXT application. At the welcome screen, the Default project will already be selected. Click **OK** to open it.

3 > EnergyXT 2.5.3 **cm** Edition offers some clever new export options. You can now export your tracks to audio hosting site SoundCloud from within the software. If you've got a SoundCloud account then you can use this feature right away. If you haven't, go ahead and register for free at www.soundcloud.com.



4 > In energyXT, select **File»Export Project** and the Export window will appear. Click the **Share** button to open a window with a link to SoundCloud. Click this link and a browser window will pop up, prompting you to log in to your account. Enter your username and password.

5 > The site will display a code, which you should make a note of. Bring up energyXT again and type the code into the **Enter SoundCloud Access Code** field. Click **OK** when you're done to give energyXT the authorisation to access your account directly.

6 > On the next screen you'll be presented with a **Track Name** field. Enter the name of your track, click the **Upload** button and your track will be rendered and uploaded directly to your SoundCloud account. If you need to add information about the track, click the **Edit** button in the player on the site.



7 > It's now also possible to render out only selected parts of a project. To do this, select the parts you want to render in your project, and hit **File»Export Project**. Click **Selected Parts Only** in the **Selection** panel and click the **Save** button to render just those parts.

8 > EnergyXT now permits the creation of time signature markers, enabling you to change the time signature throughout your track. To display the time signature track used to do this, select **Options»Show Time Signature**. The track will appear above the timeline.

9 > To add a time signature change, click the timeline in the appropriate place, then click the small **+** button on the left hand side of the time signature track. You'll be prompted to add a value, and the change will be added to the nearest bar. To delete a change, simply right-click it and select **Delete.cm**

Reader music

Another four readers submit their tracks to the judgement of our expert producers and engineers



Send us your music

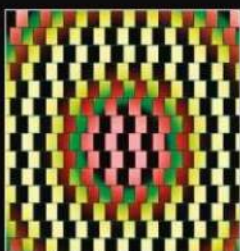
For the chance to be featured in *Reader Music*, simply send us your track via the SoundCloud DropBox on our website (see the walkthrough below for instructions), along with a description of your act, an image (sleeve art, photo or logo that you own the copyright to), and your equipment list. Be absolutely certain that no copyrighted samples have been used! The best tracks we receive each month will be reviewed here and featured on the **cm** DVD, so send yours our way today!

Rules:

1. Send no more than two tracks
2. Submit your track(s) via the SoundCloud DropBox on our website
3. The audio and MIDI files used must all be original and/or royalty- and copyright-free

JFM Illusion

Artist John Moran
Contact jmoransligo@hotmail.com



> This is a house track with sonics to wallow in: warm pads, fat kick and ambient claps. It's deep house with melodic interest and feels like a warm duvet on a cold night. At the heart of the track is a huge pad that sets up the big stage. It's wide and deep, and, with the kick sidechaining to it, provides a rhythmic offbeat to the

four-square bass drum. The sidechain release time creates a pulsing effect that's crucial to the organic feel of the tune.

The warmth of the pad also leaves space for higher frequency sounds. Synth melodies shrouded in reverb well up from it, some of which are more interesting than others. High-frequency percussion provides lift and drive before and after the middle drop. It's a simple and highly effective composition, helped by a great mix balance.

There's no bassline, but the size of the kick and the depth of the pad mean that this element isn't missed, though there is room for one if it was deemed necessary. This foundation is great, and with a bit more consideration for melodies, hooks and arrangements, *Illusion* could be prime musical estate.

What the artist says

"This track took on life while I was experimenting with chord progressions. I liked the simple one featured here and felt it would work well in an ambient house track. Sylenth 1 provided the perfect housey stabs and pads, so I worked from there, sequencing the arped melodies manually in FL and using Zebra2 to program the sounds."

Equipment used PC running Windows XP, Novation Nocturn 25 Keyboard, Behringer BCF2000 Midi Controller, FL Studio 9, Sylenth 1, Zebra2, Arturia Minimoog, Rob Papen Blue, MrRay73 Mark II electric piano

OUR MUTANT FRIEND I Saw Ten Shadow Mountains

Artist Shaun Kemp
Contact spiderkemp@hotmail.com



> Combining elements from all sorts of genres and featuring nods to a diverse selection of influences, this track is way out there on a planet of its own. But what a great planet it is!

Where to start? The vocal, perhaps. It wouldn't pass muster on *The X-Factor*, but with shades of Jim Morrison and a sound straight from 80s indie that

doesn't force itself down your ears, it's got a lot going for it. Its off-centre, unfocused nature might mess with a few heads, but you can't deny its effect.

This track's got the funk, too. There's a great groove between the big kick and bassline in the chorus tag, washed down with left-field glitch beats and a detuned synth. We're not so sure about the big beat sections (the verse and synth solo): the bottom end of the kick is a bit ugly, taking up too much space at the expense of an absent piece of genius akin to the chorus. The crusty percussive sounds are good, as is the synth sound, though that could do with a bit of effecting to bed it in. Our biggest gripe is that the intro chords, with their stalled glitching, only happen once! What a waste.

What the artist says

"Part of the bass was recorded on bass guitar, then reversed and put through various effects to produce a sound not unlike a trumpet. Distortion was added to the bass, and sampled drum hits were used for the percussion. The whole thing was put together in Ableton Intro."

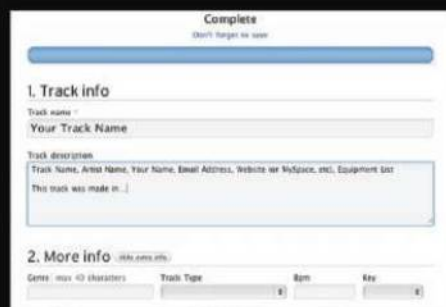
Equipment used MacBook Air, Ableton Live Intro, Tascam US-122 audio interface, GForce impOScar, cm samples, Shure SM58 mic, M-Audio AV30 monitors, kitchen table



SoundCloud makes sending and receiving music easy. Anybody can sign up for a free account and start sharing tracks straight away, although you don't even have to do that to submit your track to *Reader Music*...



1 > Go to www.computermusic.co.uk and look on the right-hand side of the page for our SoundCloud DropBox widget. Click **Send me your track**, then **Choose a file** and select your track.



2 > Enter *all* of the following in the **Track description** box: track name, artist name, your name, email address, website (or MySpace), equipment list and a brief description of how your track was made.

ADVANTAGE The Beat (Get Up!)

Artist Willis

Contact advantage.music@live.co.uk



> This would have been described as 'new wave' in the heady days of punk, but then so were Dire Straits! It has a lot more going for it than said band, although sadly it's unlikely to sell as many records.

Stylistically this isn't the sort of thing we're used to receiving here at **cm**, but these days you can do almost anything with a

computer - bar getting a convincing brass section sound perhaps, or 100% real-sounding guitars. And here's a good reminder of how far apart human- and computer-generated sounds actually are. The energy of this song could only come from a bunch of people playing together in a room - and the infectiousness of that energy, with its high tempo and hint of ska, is what makes you want to get up and dance.

You can easily imagine how much better Advantage are as a live act than a recorded band. This is well produced and arranged, and it sounds excellent, but it's hard to see where it fits into today's musical climate outside of a sweaty pub gig or wedding reception. Sad but true.

What the artist says

"The Beat is a song all about the infectiousness of music and how much it can move you - whether you're listening to it, playing it or editing it. Our individual backgrounds created this track: punk guitars, disco basslines and jazzy horns. We don't compromise our music to fit genres, we play what we enjoy - and to be honest, that's all this song is about."

Equipment used Quad-core Intel processor PC, M-Audio Delta 1010 soundcard, Propellerhead Reason 2, Audix SX2 mics, sE mics, Shure SM57, Fender Telecaster, Fender SG, Fender bass, flugelhorn, trumpet

Video file: YouTube, Vimeo, Google Video and other videos will appear in an on-line player

Artwork: You can upload jpg, png, gif, tiff images up to 2 megabytes
Upload new artwork

Licensed as All Rights Reserved (Copyright) (i)

3. Your contact info
Your email address

A confirmation email will be sent to this address before we send your track

4. Terms of Use
I agree to the Terms of Use of SoundCloud

Cancel Send Track

3 > Click **Upload new artwork** and choose an image. Confirm that you agree to SoundCloud's **Terms of Use** towards the bottom of the screen, hit **Send Track** and you're done!

What's wrong with my mix?

Veteran producer Marco Migliari has worked in every genre from prog rock to experimental electronica. What will he make of this month's featured demo?

Producer Marco Migliari



Formerly Senior Engineer at the Peter Gabriel's Real World Studios, Marco's production career has seen him work on a rich variety of jazz, progressive rock and contemporary experimental projects. He's currently developing a local talent, mixing, mastering and about to delve again into the Irish and Breton folk scenes.

SPOOKY AGENDA Days Gone By

Artist Steve Jones

Contact steve@spookyagenda.co.uk



> This is essentially an electronic tune, based on a programmed groove and vocals. The song begins with a simple acoustic guitar riff and vocal intro, then a reversed guitar effect brings in the groove. There are two verses, each followed by a drum break, then a chorus, another drum break and a bridge. After another break, there's a verse immediately followed by the second chorus. An instrumental section links

into a double verse, which ends with a fade-out. This arrangement would work better if the tempo was slightly faster in the choruses and the song ended abruptly at 3:38 with a concise drum fill.

The instrumentation is very simple: electronic drums, a synth bassline, a synth guitar line and a monophonic synth vaguely reminiscent of the 8-bit SidStation. The only real instrument is the acoustic guitar on the intro, and although it links well into the body of the song, it would work much better if it carried on throughout the track. I would ditch the intro given that neither the guitar nor the vocal line resurface anywhere else, unless it was turned into a short (four-bar), quirky affair with one of those record deck slow-down effects on the end to cut into the body of the track.

The lead vocal is lyrically quite busy: the style is somewhere between Happy Mondays and a rap. The verses are almost monotonous, so I would redo some line-endings with more colour. Choruses and bridge are on a higher octave and feel more exciting. Backing vocals feature throughout, a female vocal doubles up most ending words, and a male vocal adds some chorus uhs/aahhs. Some vocals are pitchy but the arrangement works well.

The electronic drums are very clean and 80s, but they lack character. They could use some grunting up so that they don't sound like a preset from a Casio keyboard. I would also distort the pokey hi-hat and bring it down in the mix to make more room for the snare. The bassline is well arranged but it's too Moog-y and doesn't groove as well as it could if the sound had more attack and was less legato. The song sounds desperately monophonic, too. Synth guitar stabs could pan more dramatically across the speakers, and other elements could occasionally poke out on one side.

What the artist says:

"The track was made up from several bits that I'd thought about and eventually put together. The intro was the first piece written; I worked on the music and then added lyrics at the end."

Equipment used Dual-core AMD 64 X2 6000+ 3GHz processor, Windows 7, Cubase Studio 5.5, AT 2020 mic, Samson C-Valve preamp, various VST plug-ins. **cm**



cm Producer Masterclass

DJ FRESH

The drum 'n' bass veteran and ex-Bad Company man walks us through the making of his new track *Ultramagnetic*



ON THE DVD



See DJ Fresh doin' his thing in our exclusive video on the disc!



System addict – the many apps of DJ Fresh

> As part of Bad Company (the DnB outfit, not the 70s rock band), Daniel Stein, AKA DJ Fresh, created some of the scene's most influential tracks, including *The Nine*, *Planet Dust* and *The Pulse*. Since leaving the group in 2002 he's remained a prominent figure in the world of drum 'n' bass, co-founding one of the genre's biggest labels – Breakbeat Kaos – with Adam F and producing for pop acts including the Pet Shop Boys and Pendulum, as well as releasing two solo albums. We caught up with Dan to get the inside story on his game-changing production secrets, and find out what software and hardware he uses to get his big, banging sound. Before we get into all that, though, why did he start making music in the first place?

"When I was about five I started messing around on my parents' piano, and they kindly got me some music lessons," begins Dan. "When I was about 12 I started

"Live was a massive revolution for me: once I got my head round it, I was bowled over"

getting into making demo music on an Amiga. My first vinyl release was done in OctaMED! I spent my student loan on an Akai S2000 sampler, and then I met some guys who had a set on pirate radio – so I started playing on the radio with them. This was what led to me meeting people like MC Moose, Clayton from Trouble on

Vinyl and eventually the other members of Bad Company: dBridge, Maldini and Vegas."

Early productions

In 1999 Bad Company released their debut single, *The Nine*, which had a massive impact on the DnB scene. How were early tracks like that made?

"That stuff was done on an old Atari and a bunch of outboard gear, including an E-MU 6400 sampler, a couple of synths and lots of guitar pedals for the basses. We moved over to Mac a couple of years later, so then it was just a Mac, the outboard and a Spirit desk, which has quite a crunchy, warm sound. *Planet Dust*, which I did on my own, was when we were just starting to move over to audio. I did some bits and bobs for that in audio but it was still mainly the computer triggering MIDI.

"In 2003 we were using a Pro Tools system a lot, which we bought because we were working on our live project, Digital Nation. I started to make a lot of stuff using Pro Tools plug-ins in Logic, which is how I really started getting into the audio stuff. I was still using the E-MU, but it was being routed through plug-ins and stuff in Logic, and Pro Tools for mixing. In about 2004 or so I started going totally onboard."

Hooked on Live

It sounds like Dan might have a bit of an equipment addiction...

"I'm definitely really obsessed with gear!" he admits. "I spend a lot of time checking out sites like KVR Audio and reading magazines, and I'm always really interested in whatever the next potential tool for making music is. I've been through phases of using most of the DAW platforms: Pro Tools, Logic, Cubase, Nuendo, Live, Digital Performer, Sonar, Reason and Fruity Loops. If something new pops up, I'll try it out and see if it fits."

Anybody experimenting with such a wide range of equipment usually finds a favourite at some point. Has that happened for Dan yet?

"Live was a massive revolution for me: once I got my head round how it worked I was completely bowled over by it. I haven't found anything since that's come anywhere close to it. I did a show called Sound Weapon for about a year, which was all controllers and Ableton. I had all my tracks broken down into stems and would control plug-ins over them and remix all the tracks live using a Lemur and a Codanova VMX that was custom-built for me. Eventually I thought, 'Wouldn't it be great if I could use the same software in the studio?' – so that's what I do. I'm the biggest Ableton disciple!"

In this *Producer Masterclass* Dan reveals his current production process by showing us a work in progress, *Ultramagnetic*, in Ableton Live 8. On the **cm** DVD you'll find the accompanying video of him in action in the studio, as well as an exclusive Max for Live patch created by Dan himself.

Web www.myspace.com/freshbadcompany

Selected Kit List

HARDWARE

Apple Mac Pro
Native Instruments Audio Kontrol 1
Pro Tools HD
Trident 8T 16-Channel Analogue Console
E-MU Xboard 61
Native Instruments Maschine
JazzMutant Lemur
Codanova VMX
Mackie HR 824 monitors
Yamaha HS-50Mx monitors

SOFTWARE

Ableton Live 8
Max for Live
Sonnox Oxford TransMod

> Step by step Making *Ultramagnetic* in Ableton Live



1 > The track started out life as a chord progression created late one night in Adam F's studio. Dan then continued work on it in his own studio weeks later. The basis of the chord progression is a part played back via Ableton Live's Operator synth using the **Saw D** sawtooth wave.



2 > This chord part is then layered with a similar Operator patch run through a Phaser to give it a lush sweeping movement. This layer has a couple of the bottom notes taken out, so that it fills out only the top end of the mix.



3 > Another Operator layer with a stronger Phaser effect is added, and the three layers are bussed to a group. This enables Dan to add effects to the combined synth part as a whole, doing away with the hassle of adding the same effects to each channel individually.

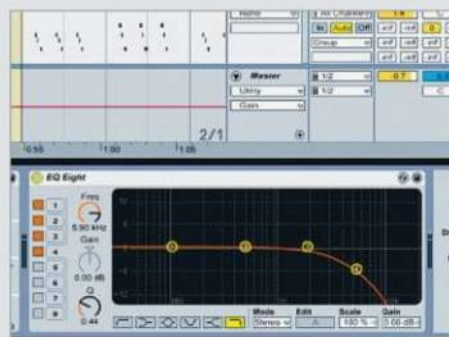
> Step by step Making *Ultramagnetic* in Ableton Live (continued)



4 > This sawtooth group is EQ'd to bring out the highs and compressed to make the volume more consistent. Dan then adds a low-pass filter that gradually opens over the breakdown. He's using Live's EQ Eight effect for this. One of the bands is used as a low-pass filter, and the cutoff frequency is automated to open up slowly.



5 > The next part to be added is a staccato, square wave-based synth line that contrasts nicely with the sustained sawtooth sound made earlier. This part is also made using layers of Operator synths. The first layer is a short-attack, short-release Operator patch that employs the **Square D** waveform.



6 > This is layered with a duplicate of the first part that plays on a lower octave and has some of the top end filtered off with Live's EQ Eight plug-in. This action is automated over time to give the sound some depth and prevent it from sounding the same every time it plays.



7 > These two square wave-based Operator parts are then duplicated. Dan changes the waveshapes of the copies to white noise, which gives the sound more bite and a lo-fi feel. Another square wave Operator with a longer decay and release is also introduced to create a 'call and answer' riff.



8 > Next, Dan adds Compressor plug-ins, feeding the kick drum channel into their sidechain inputs, so that the synth groups duck out when the kick plays, making more space for the percussion. The synths are also sent to a return channel with a short stereo delay on it.



9 > A chopped-up vocal from an acapella plays during the breakdown. Dan timeslices this using Live's **Complex** algorithm to keep it sounding as close to the original as possible, and parts of it are tuned to different pitches using the **Transpose** function, to create a new melody.



10 > When the track drops, the chord progression changes, repeating just the first two chords. This continues until the last bar of each section, where it switches up to a different chord. The EQ changes on the drop, to help the synths fit in with the added elements.



11 > The bass sound on the drop comes from two Operator synths, one playing a sine wave and the other playing a triangle. The latter's volume level is modulated slightly by one of the LFOs, synced to **1/6** notes, while the former plays an octave higher.



12 > Dan routes both bass Operators to a return channel set up to add distortion to the sound. This is provided by an Overdrive effect, after which the flabby low end is removed with EQ, leaving just the crunchy harmonics at the top end.



13 > To add interest to the sawtooth part, Dan creates a duplicate version that only plays on a few of the notes. The filter cutoff settings on both parts are modulated with a sine wave LFO. When run through the phaser, this creates an interesting vocal-style effect.



14 > High-passed white noise from another Operator is used to fill out the top end of the track. Dan automates the filter cutoff frequency to move between 3kHz and 6kHz, and the area above 8kHz or so is filtered out so that it doesn't interfere with the hi-hats. This sound is sidechained to the snare so that it ducks out when the snare plays.



15 > Dan uses a horn sound from reFX Nexus to beef up the sawtooth part on the drop. This is run through his own Noise Jet effect, which he built using Max for Live. This creates a delayed copy of the signal, and the delay time is automated to create a jet engine-style sweeping effect.



16 > The vocoded vocal hook is a recording of Dan himself, run through Live's Vocoder effect. ("I only ever sing when I've got loads of plug-ins over the top!" he admits.) The carrier input is fed by a copy of the main sawtooth riff. This is run through delay and reverb, and boosted at 2.5kHz to make it more intelligible.



17 > To lead up to the drop, Dan uses a simple pitch riser sound. This is another Operator synth, using a sawtooth wave, with the pitch modulated by an LFO. This patch has a pitchbend range of 17 semitones and slowly pitches over a four-bar period as the drop approaches.



18 > As well as the important single-hit drums (see boxout, right), a variety of drum layers are required to create that full and busy feel. Dan uses a crash cymbal, hi-hat, ride, mid-range kick and high-passed beat from another track over the top of the kick and snare sounds. **cm**

DJ Fresh's fat kicks and snares

Dan's library of drum sounds has been tweaked to perfection over the years.

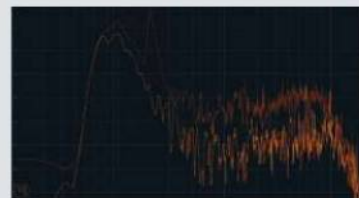
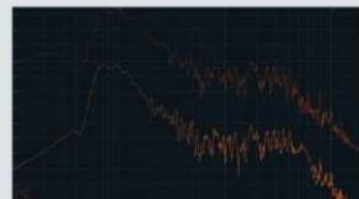
"For a lot of DnB stuff, you want the snare to be peaking around 200Hz, then have a higher range that has fairly consistent frequency content, almost like white noise," he explains. "The most important frequencies to boost are around 10kHz for the top-end sparkle, 5kHz, between 2 and 3.5kHz, and again at 1kHz and 800Hz. There are loads of different parts of the frequency range that are important for snares."

So what did he do with the snare for *Ultramagnetic*?

"I probably did a lot to this snare when I made it. The low element would have had a particularly tight sounding 200Hz part, so I would have filtered it so that it had just the low end. Then I would have found another snare that had good 800Hz content, done that for two higher regions and then compressed them all together. I'd probably have used Sonnox Oxford TransMod on one or two of those bands within the snare, just to give it some more attack and help it to cut through in the mix. Those would all have all then been compressed into this snare. This particular snare also has a hi-hat on top of it, which I left in because it gave it a nice sound."

The kick isn't as complex, but getting it right is no less important.

"The kick peaks between 80 and 100Hz, and there's a lot of energy between 1 and 5kHz, but it's generally quite flat from 700Hz to 4kHz and drops off after that. Sometimes you might want more energy around 10kHz just to help it blend with the rest of the beat, but because I've got other patterns going over the top, they provide that part of the frequency range."



Getting the frequency content of your kick (top) and snare (bottom) sounds right is imperative when aiming for that big beat

Inside the London Music Show 2010

We're planning a collection of seminars and masterclasses at this year's LMS that are going to be utterly unmissable for anyone producing music on their PC or Mac!

Meet the Pros



John 'OO' Fleming



Tommy D



Steve Levine

Not only will the **cm** team be in attendance, there'll also be a galaxy of star producers and musicians on hand, and a list of music industry exhibitors as long as your arm.

See top live acts • Meet iconic musicians • Learn new techniques • Try the latest gear and buy it at the show

BOOK YOUR TICKET ONLINE TODAY:

www.londonmusicshow.com

*See www.londonmusicshow.com for full ticket details.

www.londonmusicshow.com

Demo the coolest kit... Buy the latest gear... Intimate masterclasses... Exclusive seminars... 100s of exhibitors... 1000s of products...



Masterclasses

Get indispensable advice and production tips from Grammy-winner **Steve Levine** (Culture Club, The Clash, Ziggy Marley, Mis-Teeq, Honeyz, 911), producer to the stars **Tommy D** (Kanye West, KT Tunstall, Kylie Minogue, Michael Jackson) and trance heavyweight **John '00' Fleming**.

A host of interactive features

Inside the Sound & Recording Technology zone we'll be running a series of seminars. Topics will include mixing, effects, synthesis, making it in the industry, mastering, DJing and much more.

And that's not all!

The show's four zones, specially designed to suit your interests - **Sound & Recording Technology Theatre, Rhythm Live, Guitar Zone** and **Unplugged** - will be packed with the latest gear from hundreds of exhibitors. Plus, don't miss the chance to pick up tips from the experts, see top live acts, meet iconic musicians, and take part in interactive seminars and intimate masterclasses.

Book your tickets to London Music Show 2010 now!

London Music Show tickets are on sale now - buy them in advance and save a cool 25% on the regular price! At London Music Show 2010 you can look forward to interactive lessons from famous musicians, invaluable advice on how to make it in the music industry and unmissable masterclasses from a lineup of very special star guests.

Opening times are 10am-5pm on Friday and Sunday, and 10am-6pm on Saturday. Tickets are on sale at www.londonmusicshow.com and via our 24-hour hotline on **0871 620 7059**. We'll be bringing you further details in *Computer Music* next month, but keep an eye on our Facebook page (www.facebook.com/computer.music.mag) and Twitter feed (www.twitter.com/computermusicuk) for updates as they happen.

facebook



**TICKETS
ON SALE
NOW
FROM £15***

Intimate masterclasses • Exclusive seminars • 100s of exhibitors • 1000s of products

OR CALL OUR TICKET HOTLINE:

0871 620 7059

Loopmasters

The Sample Boutique
Royalty-free sounds for producers worldwide

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](http://LOOPMASTERS.COM)



Atjazz Deep & Analogue



Samplify



Essential Minimal Techno 2



Dark Matter

GU
GLOBAL UNDERGROUND

Global Underground encapsulates dance music's international explosion and restless creativity.

[MORE PRODUCTS AT LOOPMASTERS.COM](http://LOOPMASTERS.COM)



Wally Lopez



Nic Fanciulli



Sultan



Egostereo

push button bang

At the cutting edge of electronic music production, bringing loops and sounds that will inspire you.

[MORE PRODUCTS AT LOOPMASTERS.COM](http://LOOPMASTERS.COM)



Tropical Tech



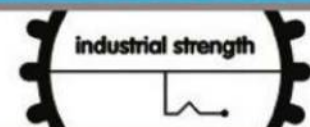
Rise



Twist



Tribal Tech



Brooklyn's ISR bring you new electronic and drum 'n' bass samples from around the world.

[MORE PRODUCTS AT LOOPMASTERS.COM](http://LOOPMASTERS.COM)



BHK UK Mashup



Audio Injection



Analogue Explorer



BHK Fidget

PRODUCERLOOPS
Glue your music the edge

Great sounds at reasonable prices from one of the new labels at Loopmasters.com

[MORE PRODUCTS AT LOOPMASTERS.COM](http://LOOPMASTERS.COM)



Ambient Glitch



Trance Elevation



Dubstep Constructions



Subtractive House Grooves

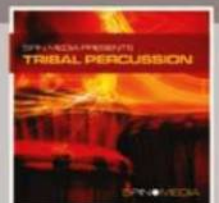
SPINO
MEDIA

Using General Midi standard allows endless combinations of sounds & patterns with space for experimentation.

LOOPMASTERS.COM



Minimal Tech Vol 1



Tribal Percussion

DUBDROPS

Bringing real legends to your desktop recorded lovingly with 2" tape machines.

LOOPMASTERS.COM



Dubstep & Grime Vocals



Soundsystem Vocals 3
Dennis Allapone

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

JAMMING IN LIVE

Learn how to turn Ableton's endlessly adaptable DAW into a powerful instrument of improvisation

> Until relatively recently, digital musicians had very few options when it came to live performance and improvisation, aka jamming. However, the times they are a-changin', and we now live in a very exciting age for this particular branch of computer music, with plenty of viable tools available, including Ableton Live, Reaktor, Max/MSP, JazzMutant's Lemur, Akai's APC performance controllers, Apple's iPad et al. Such systems continue to redefine our approach to performance and improvisation.

Improvisation requires a very different mode of thinking and way of doing things to 'planned' compositional methods, as well as numerous specialised techniques of its own. One of the primary distinctions between sequenced compositions and improvised music is the need for generative systems and interactivity. These two elements are vital to any improvised performance, and they need to be finely balanced. On the one hand, we can only do so much at one time, so the setup needs to be sufficiently generative. On the other, it should be sufficiently interactive to ensure that we aren't left twiddling our thumbs while the computer cooks up a storm.

In this tutorial we aim to address all of these things and walk you through the fundamental techniques of computer-based improvisation. Think of these projects not as specific methods of creating a song or track, but rather as techniques for building an 'instrument' that can be used again and again, producing different sounds each time.

Although it is entirely possible to improvise solo, it's much more fun to jam as part of a group. Successful group performances often yield more interesting results, as performers interact and react to the changes that others make in the composition, and individuals are able to duck out of the action for a moment to load up another instrument or reconfigure parameters. In a group situation your own instruments and sounds form only part of the performance, of course, so always consider the bigger picture when preparing your setup.

So, with all of that in mind, let's get down to the serious business of jamming...



Synchronisation

Ableton Live is ideal for group jams, but how do you stop everything descending into chaos? If you're working with a group of four musicians or more, you should put rules in place to ensure that everyone has a specific role in the performance. Keeping everybody together can be an issue too, and at some point the question of synchronisation will crop up. There are many ways to synchronise computers. Should you do it automatically using MIDI clock/timecode, manually synchronise everything or just go 'free-tempo'?

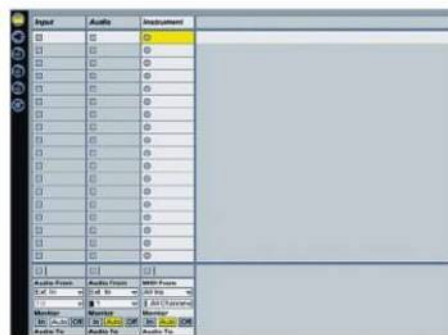
In the context of improvisation, it's best to take the last option, because each performer should have the freedom to alter any aspect of their performance as they see fit. For example, playing/stopping the sequencer can be used as a compositional tool, and setting the clip and master tempos to their extremes can often be very effective for sound design. These techniques wouldn't be possible if everyone was sync'd up.

There will inevitably be times when everyone needs to be in sync, though. This is easily achieved through manual synchronisation. Decide on a tempo and have each performer set their project to it. Then, use the **Tempo Nudge Up/Down** buttons to bring the sequencers in line with each other. Keys and MIDI controllers can be assigned to these buttons, making constant manual sync a cinch.

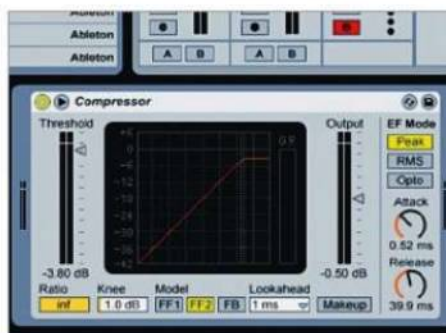
> Step by step Setting up your environment



1 > To begin, let's set up a template project that we can use as a starting point for all the other walkthroughs in this feature. First, create a new Live project and add five tracks: two audio tracks named **Input** and **Audio**, one MIDI track named **Instrument**, and two Return tracks named **Effects** and **Dry**.



2 > When jamming, you'll have greater flexibility if you route your tracks to sends rather than directly to the **Master** output. Change the **Audio To** settings of your audio and MIDI tracks to **Sends Only**. Be sure to add an instrument to the **Instrument** track, otherwise you won't hear anything. You can remove it after you've changed the output if you like.



3 > Next, it's a good idea to add heavy compression/limiting to the **Master** output. Ableton's open architecture is great for improvisation, but such freedom can lead to sonic trouble if you're not careful. Add Ableton's Compressor to the **Master** channel and select the **Brick Wall** preset. The default settings are a little too harsh, so bring the **Threshold** up to **-3.80dB** and turn off the **Makeup** gain.



4 > Finally, let's assign MIDI controllers to the volumes of each track. While it is possible to perform without MIDI controllers, doing so dramatically limits your ability to improvise and react to changes quickly. At the very least, you should have a controller assigned to the volume of the **Master** track. Once this is done, save your project as **Jamming Template** or similar.

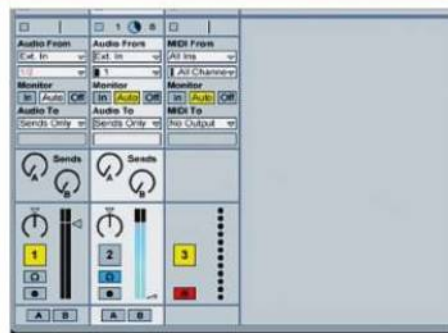
> Step by step Adding a cue output



1 > A cue output enables you to listen to what you're doing through headphones without sending it to the master output. You'll need an audio interface with multiple outputs for this. First, ensure the necessary outputs are active. In Live's preferences, go to the **Audio** tab and select **Output Config**. Here outputs 1 and 2 will be the main output, while 3 and 4 will be the cue output.

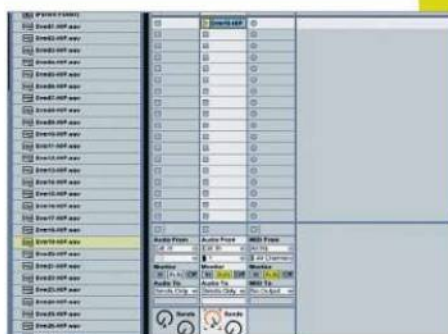
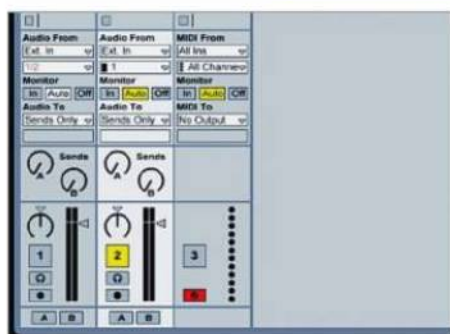


2 > On the **Master** track, change the **Cue Out** setting to **3/4**. Now the metronome and audio auditions in Live's sample browser will play through the cue output. Being able to monitor via the cue output can be very useful when you're adjusting the tempo or previewing a clip, as it means you can be sure you're about to play the right thing.



3 > You can also cue any audio, MIDI or Return track before dropping it into the mix. To do this, click the **Solo** button on the **Master** track. It'll switch to say **Cue**, and the **Solo** buttons on each track will switch to headphones icons - clicking these sends tracks to the monitor/cue output. This DJ-style monitoring setup is hugely useful when jamming.

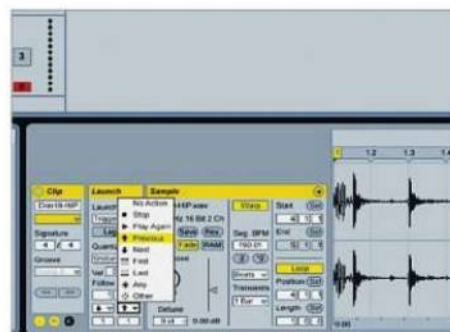
> Step by step Creating rhythmic variations



1 > Load up the template created in the first walkthrough, with or without cue output. Since we'll only be using the **Audio** track for this tutorial, mute the **Input** and **Instrument** tracks. You should also mute the **Dry** Return track. It's worth getting used to the practice of muting any unused tracks, as this can help you avoid problems both when creating instruments and performing.

2 > Drag a four-bar drum loop into the first slot of the **Audio** track and turn up **Send A**. This will send the audio to the **Effects** track. We're using the **Drum19-HIP** loop from the Ableton Live Library - it's in the **Drums/Hip-Hop** folder.

3 > When jamming with drum loops, you need to be able to quickly create rhythmic variations. An easy way to do this is to create multiple copies of the loop and edit the loop start and end points of each one, and possibly the start markers. Playing these clips in different orders will give you many rhythmic variations - all from one four-bar clip.



4 > By default, everything that you do in Live is synchronised to the project tempo and snapped to the global quantisation setting. Changing the global quantisation enables you to create a greater range of rhythmic variations when playing clips. Be careful, though: the finer the division you set it to, the greater the chance for rhythmic error!

5 > Live's Warp settings are also handy for creating variations. Copy a clip into a new clip group (ie, leave an empty slot between the previous clips and the new one) and assign it its own colour. Loop the first bar and double the clip's original tempo. Using the **Beats** Warp mode, experiment with the **Transients** setting to create a range of rhythmic variations.

6 > Tired of constantly clicking to sequence your drum loops? Use Follow Actions! Using the clip created in step 5, set **Follow Action A to Next** and **Follow Action B to Previous**. Next, set both **Chance** settings to **1**. Copy the clip four times and move the loop markers along one bar each time. Try altering each clip's tempo and playing around with the **Transients** settings for greater variation.

POWER TIP

>Complete repeat

Beat Repeat's **Repeat** button gives you even more control over your rhythms. It captures the current drum pattern and plays a repetition of it, rather than creating new variations. Found a pattern that you like? Hit **Repeat** to stick with it! This works particularly well with the **Repeigh** preset. Be aware, though, that using the **Repeat** button while in **Ins** or **Gate** mode can sometimes result in silence!



7 > Now you have both manual and automated sequencing options. The blue clip group can be sequenced manually, while the orange clips will automatically sequence themselves, leaving you free to improvise elsewhere. These two techniques afford you a quick and effective way to build a semi-automated structure.



8 > Live's Beat Repeat effect is great for jamming, as it can create endless variations on the fly and keep your beats sounding fresh and interesting. To get started with the plug-in, add these three Beat Repeat presets to the **Audio** track in the following order: **Repeigh**, **Fill In The Gaps** and **Microfillz**.

> Step by step Creating rhythmic variations (continued)



9 > The Beat Repeat effect gives you many to create new drum patterns. One of the simplest and most effective is to change the output mode. You have three to choose from: **Mix**, **Ins(ert)** and **Gate**. Simply altering the output modes of our three Beat Repeats will produce all kinds of rhythmic variations.



10 > You may be wondering why our Beat Repeat effects are on the **Audio** track and not the **Effects** track. This is because while Beat Repeat sounds great on drums, overuse of it on other elements could easily become overwhelming. For our other processing, we add Sugar Bytes' Effectrix to the **Effects** track.



11 > Effectrix is a great example of a multieffects sequencer. These plug-ins are built for jamming, with numerous effects combined in one unit. They also usually feature dry/wet mix control and enable you to switch between 'sequences' using MIDI controllers. Assign MIDI controllers to Effectrix's **GlobalWet** and **PatternKeys** parameters.

Performance effects

One of the biggest criticisms of laptops as improvisation and performance tools is that the audience generally has no visual references that they can relate to what they're hearing. Assigning MIDI controllers to effects is a great way to add 'hands-on' visual appeal, and the benefits of being able to mangle sounds at the touch of a button are enormous in the time-sensitive world of improvisation.

Since live electronic performance has become accessible and popular, a plethora of effects plug-ins have been released with it in mind. Live itself has several great examples, including Auto Pan, Beat Repeat, Frequency Shifter, Grain Delay and Looper.

Beyond that, the list is endless and there are some excellent free ones available, including Glitch by DBLue (www.ilformed.org), Buffer Override by Destroy FX (destroyfx.smartelectronix.com), Livecut by MDSP (mdsp.smartelectronix.com), SupaTrigga by Bram (bram.smartelectronix.com) and Memory by White Noise Audio (www.whitenoiseaudio.com).

On the commercial front, there's Native Instruments' The Finger (based on Tim Exile's Reaktor performance patches) (www.native-instruments.com), and Sugar Bytes' Effectrix and Artillery (sugar-bytes.com). That's by no means an exhaustive list, and you'll find most 'regular' effects can also be used, given the appropriate MIDI controller assignments - so get creative.

> Step by step MIDI mapping



1 > Take hands-on control of your effects by using appropriate MIDI controller assignments. Add Live's Auto Filter effect to the **Effects** send channel. You can add this before or after adding the Effectrix plug-in from earlier, though adding it before might well give more interesting results.



2 > The Auto Filter effect can be used to add variation at the touch of a button. Change the filter to high-pass mode and bring the cutoff **Frequency** down as low as it'll go. You could also add a touch of resonance here to emphasize the effect. A **Q** of **1.2** should do nicely.

C	Note/Control	Path	Name	Min	Max
1	CC 32	A-Effects Effect...	GlobalWet	0.00	1.00
1	CC 6	A-Effects Auto ...	LFO Amount	0.00	30.0
1	CC 33	A-Effects Auto ...	LFO Frequency	0.01 Hz	10.00 Hz
1	CC 6	A-Effects Effect...	PatternKeys	0.00	1.00
1	CC 28	1-Input Mixer	Track Volume	-inf dB	6.00 dB
1	CC 29	2-Audio Mixer	Track Volume	-inf dB	6.00 dB
1	CC 30	A-Effects Mixer	Track Volume	-inf dB	6.00 dB
1	CC 31	B-Dry Mixer	Track Volume	-inf dB	6.00 dB
1	CC 36	Master Mixer	Track Volume	-inf dB	6.00 dB

3 > Assign a MIDI button or key to the Auto Filter's **On/Off** button. Live helpfully lets you assign one MIDI controller to two different parameters, which will be handy when performing. In this project, you should assign one MIDI controller to both the **Frequency** and **LFO Amount** parameters.

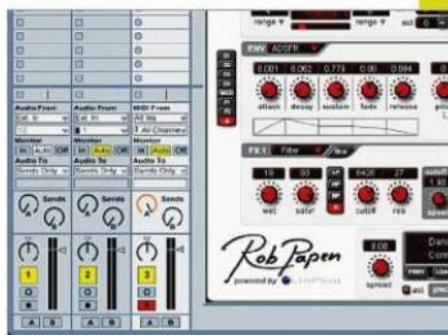
C	Note/Control	Path	Name	Min	Max
CC 24	A-Effects Auto ...	Device On		64	127
CC 33	A-Effects Auto ...	Frequency		20.0 Hz	2.50 kHz
CC 32	A-Effects Effect...	GlobalWet		0.00	1.00
CC 6	A-Effects Auto ...	LFO Amount		0.00	30.0
CC 33	A-Effects Auto ...	LFO Frequency		0.01 Hz	10.00 Hz
CC 6	A-Effects Effect...	PatternKeys		0.00	1.00
CC 28	1-Input Mixer	Track Volume		-inf dB	6.00 dB
CC 29	2-Audio Mixer	Track Volume		-inf dB	6.00 dB
CC 30	A-Effects Mixer	Track Volume		-inf dB	6.00 dB
CC 31	B-Dry Mixer	Track Volume		-inf dB	6.00 dB
CC 36	Master Mixer	Track Volume		-inf dB	6.00 dB

4 > The Auto Filter is almost inaudible at the top of its frequency range, so let's limit it. In MIDI Map mode, click the Auto Filter's **Frequency** setting to highlight the assignment in the MIDI Mapping window. Limit the upper range to **2.50kHz**. The idea is to limit the range of the effects' parameters so that you can operate them within 'safe' boundaries.

> Step by step Jamming MIDI



- 1 > Load up the template and add a synthesiser to the **Instrument** track. We've opted for Rob Papen's Albino 2, loaded with the **CombiDance** preset from the **Dance Leads** bank. Whatever synthesiser you use, choose a sustained sound with a short attack, so that short notes can be played as well as long ones.



- 2 > Now that we've loaded up our synthesiser and chosen an appropriate sound, we need to twiddle with a few settings. Change the project tempo to **110bpm** and check that the output of the **Instrument** track is set to **Sends Only**. Finally, turn up **Send A** so that you can hear the synthesiser.



- 3 > Next, add Ableton's Chord MIDI effect. Set **Shift 1** to **+3 st** and **Shift 2** to **+5 st**. Then add the Arpeggiator MIDI effect to the **Instrument** track. Hold down a single note and listen to how the Chord and Arpeggiator effects work together.



- 4 > The arpeggiated melody sounds a bit too robotic for our liking, so let's create some dynamic variation. On the Chord MIDI effect, change the **Velocity** of **Shift 1** to **0.40** and the **Velocity** of **Shift 2** to **0.70**. Next, add the Velocity MIDI effect to the **Instrument** track, using the **Add some Random** preset. This will make the sequence sound more 'human'.



- 5 > We can randomise pitch, too. Add the Random MIDI effect to the **Instrument** track and choose the **Chaos** preset. This is probably a little too mental, so decrease the **Chance** setting to **60%**. We now need to ensure the random pitch sequences generated make musical sense. Add the Scale MIDI effect to the **Instrument** track and choose the **C Minor** preset.



- 6 > We've now created a semi-automated note generator that we can develop further into something more interesting. Add a Note Length MIDI effect to the **Instrument** track. We are going to use both modes, so first ensure that **Mode** is set to **Time**, then check that the **Length** parameter is something very short: **40ms**, for example.



- 7 > Change the Note Length mode to **Sync** and set the **Length** parameter to **1/16**. Setting up the plug-in's two modes differently like this will give us two contrasting note lengths that we can change between to create rhythmic and melodic variations. Have a go at changing between the two modes to hear the improvisational possibilities.



- 8 > Let's spice things up a bit by adding some effects. A filtered delay works particularly well with this setup, so drag the Filter Delay effect onto the **Effects** track. Record a MIDI clip and let it play back in Loop mode. Live randomly generates new improvisations based upon the sequence you recorded.



- 9 > Now that you have several elements in place, there's a lot you can do to adjust the sequences generated. Try using the Random MIDI effect in **Alt** mode and changing the **Chance** setting to **100%**. With this setup, playing a series of short, repeated notes results in the output of a run up or down the scale, as well as other interesting melodic themes.

Feedback

Live's architecture features routing options that enable you to feed back audio signals. This is usually done by routing the audio signal from a return track back into itself. While it's possible to feed back a return track without using any effects, this technique is mostly used in conjunction with effects that have feedback systems of their own, such as reverb, delay and flanger. The advantage of using Live's internal routing like this is that you can control the level of feedback at any given moment, creating many unique sounds.

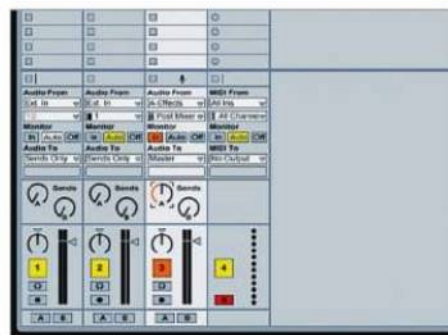
Setting Live up to do this is fairly straightforward. A new audio track is set up so that its input receives a return track. Its output is then sent to the same return track, creating a feedback loop. The amount of feedback is determined via two controls: track volume and send level.

Feedback is a disruptive procedure, and it should be implemented with care. As a safety measure, you must limit your output. You should also limit any of the tracks that are affected by the feedback: this includes the return track and the audio track. The greater the signal going through the send track, the more feedback will occur, so you should raise the send level slowly until you find the point at which the signal begins to feedback. Above all, if you don't fully understand the concept, research feedback and its effects before attempting to implement it in Live.

> Step by step Setting up a feedback loop



1 > We need to make some changes to the original template in order to get Live's internal feedback going. First, create a new audio track and rename it **Feedback**, then copy the Compressor found on the **Master** track onto the **Feedback** track and the **Effects** track.



2 > Set the **Feedback** track's input (**Audio From**) to the **Effects** track and switch **Monitor** to **In**. That's it - you've created a feedback loop! Turn **Send A** up to about halfway. You'll use this dial to control the amount of feedback being created.



3 > Next, drag an audio clip on to the **Audio** track and turn up **Send A**. Now drag the Simple Delay effect onto the **Effects** track and choose the **666** preset. Hit **Play** and let the clip play for a few seconds before pressing **Stop**. You will hear the delay continue to feed back.



4 > While the feedback continues, slowly increase **Send A**. Don't let it get too loud! Turn down **Send A** if things start to get out of control. To play with the sound, try moving **Send A** up and down quickly, altering the **Feedback** track's pan and changing Simple Delay's delay times.

> Step by step Using Grain Delay feedback



1 > The Grain Delay effect is an unwieldy beast, but it's capable of harmoniser effects, detailed textures and glitchy lo-fi distortion, among other things. Load up the project from the feedback walkthrough above and drag an audio clip onto the first slot of the **Audio** track. Select a pitched instrument or synth sample and loop a small section of it, creating a constant pitch.



2 > Delete the Simple Delay on the **Effects** track and replace it with a Grain Delay effect set to the **Grains** preset. Set the **Spray**, **Frequency** and **Rand Pitch** settings to minimum. Set **Pitch** to **-12.0** and **Dry/Wet** to 70%. This will create a harmoniser effect, with different **Pitch** settings creating different harmonies.

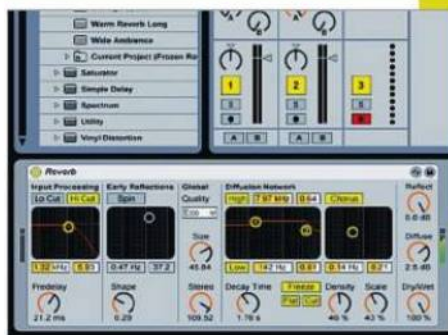


3 > Play around with the different controls on the Grain Delay effect, bringing the **Spray**, **Frequency** and **Pitch** settings right up to the tops of their ranges. This will create waves of lo-fi distortion. Feed back the signal using the **Feedback** track, and mess with the **Spray**, **Frequency**, **Pitch**, **Rand Pitch** and **Delay Time** settings to create a wide range effects.

> Step by step Adding frozen reverb



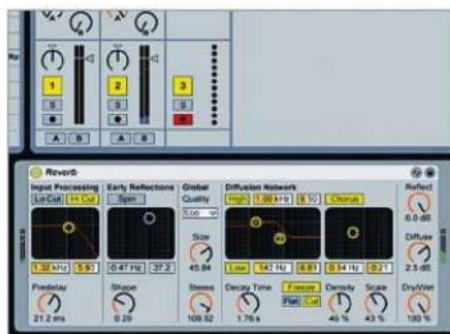
1 > Load up the template we made earlier and drag an audio clip onto the first slot of the **Audio** track. We've gone for the **Horn06.wav** sample from the Live Library, in the **Horns** folder.



2 > Add a Reverb effect to the **Effects** track, and call up the **Halluzinatione** preset. Click **Freeze** on the Reverb and play the audio clip. You won't hear anything until you turn off **Cut**, so do that briefly, then turn it back on again.



3 > The current settings will keep the reverb in this frozen state indefinitely. However, you can alter the rate at which it decays. Deactivate the **Flat** button and the reverb will diminish according to its **Decay Time** setting.



4 > For the sound we're after, we need the reverb to decay at a quicker rate. In the **Diffusion Network** section, set the **Frequency** of the high shelf to **1.0kHz** and the **Q** to **0.50**. The reverb decay will now sound much duller: this is because only the mid-range frequencies are being held for a long period.



5 > The input processing features offer plenty of sound design possibilities. Turn on the **Lo Cut** setting and drag the **X/Y** pad dot to a new position. Then briefly turn the **Cut** off and back on as before. Adjusting the **X/Y** controller leads to many different sounds, from a deep boom to screaming high-frequency sweeps.



6 > For the next part of the project, we need a constant source sound. Drag a new audio clip onto the **Audio** track and increase the clip tempo by a factor of two or three, so that it plays back very slowly. Then loop a section of the sample, making it as small as you possibly can.



7 > Add a Resonator effect to the **Effects** track, after the Reverb, and increase its **Dry/Wet** to **70%**. Leave Resonator 1's **Note** setting at **C2** and then adjust the **Pitch** setting of Resonators 2 to 5 to the following values: **+3**, **+5**, **+7** and **+12**.



8 > Add the Flanger effect to the **Effects** track, select the **Hearing Voices** preset and place it in between the Reverb and Resonator effects. On the Resonator, adjust the pitches and experiment with the filter **Frequency** to create some very evil-sounding drones.



9 > At this point it's good to mess around with Reverb's **Input Processing**, **Diffusion Network** and **Chorus** settings as well as all of the Flanger's controls. Creating a feedback loop is also effective. Once it's set up, try adjusting the Resonator pitches to create rhythmic feedback patterns.

The next step

Hopefully you now have an understanding of the principles of improvisation and jamming in Ableton Live. Instruments that successfully combine generative techniques and interactivity will allow you to perform beyond an on-the-fly remixing approach.

Many of the techniques discussed in the resampling walkthrough, right, can also be applied to sampling. Use the **Input** track to sample audio through any input. If you are performing in a group, try sampling the audio that the other performers are creating. This recycling of audio can be very effective, particularly when combined with effects.

Once you've built a working instrument, it's worth moving all of the effects involved into a rack and saving it as a preset. You can combine audio and MIDI effects inside their own racks and design a front end featuring user-defined effect parameters.

This tutorial has focused on building one 'instrument', but in reality, you're likely to want a few different ones in your project, so incorporate more as and when it feels comfortable to do so.

Most importantly, experiment with your Live performance setup and explore its compositional possibilities. Find out what works, change the order of the effects, add new ones and build custom instruments. Improvisational skills aren't easily mastered, but as with all things, practice makes perfect.

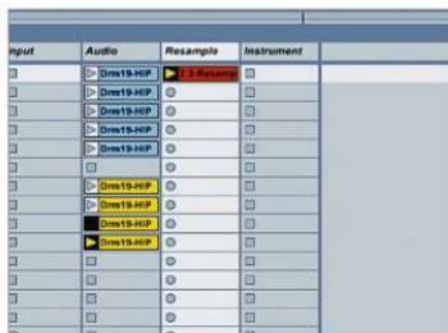
> Step by step Resampling a jam



1 > There will be times when your jamming results in something so awesome that you want to sample everything going on and repeat it. Easily done! Load up the project created earlier in the *Creating rhythmic variations* tutorial. We're going to resample the drum patterns being generated.



2 > Create a new audio track and name it **Resample**. Change the input (**Audio From**) to **Resampling** and the output (**Audio To**) to **Sends Only**. Next, set **Monitor** to **Auto** and record-enable the track. Any sound currently playing through the master output will be routed to this track for resampling.



3 > Choose which of the drum loops you want to record and click its **Play** button to get it going. When you're ready, click **Record** in the first clip slot on the **Resample** track to begin sampling a clip. Record a few bars, then click the button again to stop sampling. You'll hear the clip play back in a loop.



4 > Ensure that the **Dry** track is muted, then turn up **Send B** on the **Resample** track to send the audio to the **Dry** track. Assign a key or MIDI button to the **Mute** buttons of both the **Effects** track and the **Dry** track. Press both keys/buttons at the same time to switch between generated and resampled drum patterns.

> Step by step Resampling a single track



1 > At other times, you might only want to sample a single track, rather than the whole project. Load up the project created in the *Jamming MIDI* walkthrough. We're going to resample audio directly from the synthesiser, before it gets to the delay effects.



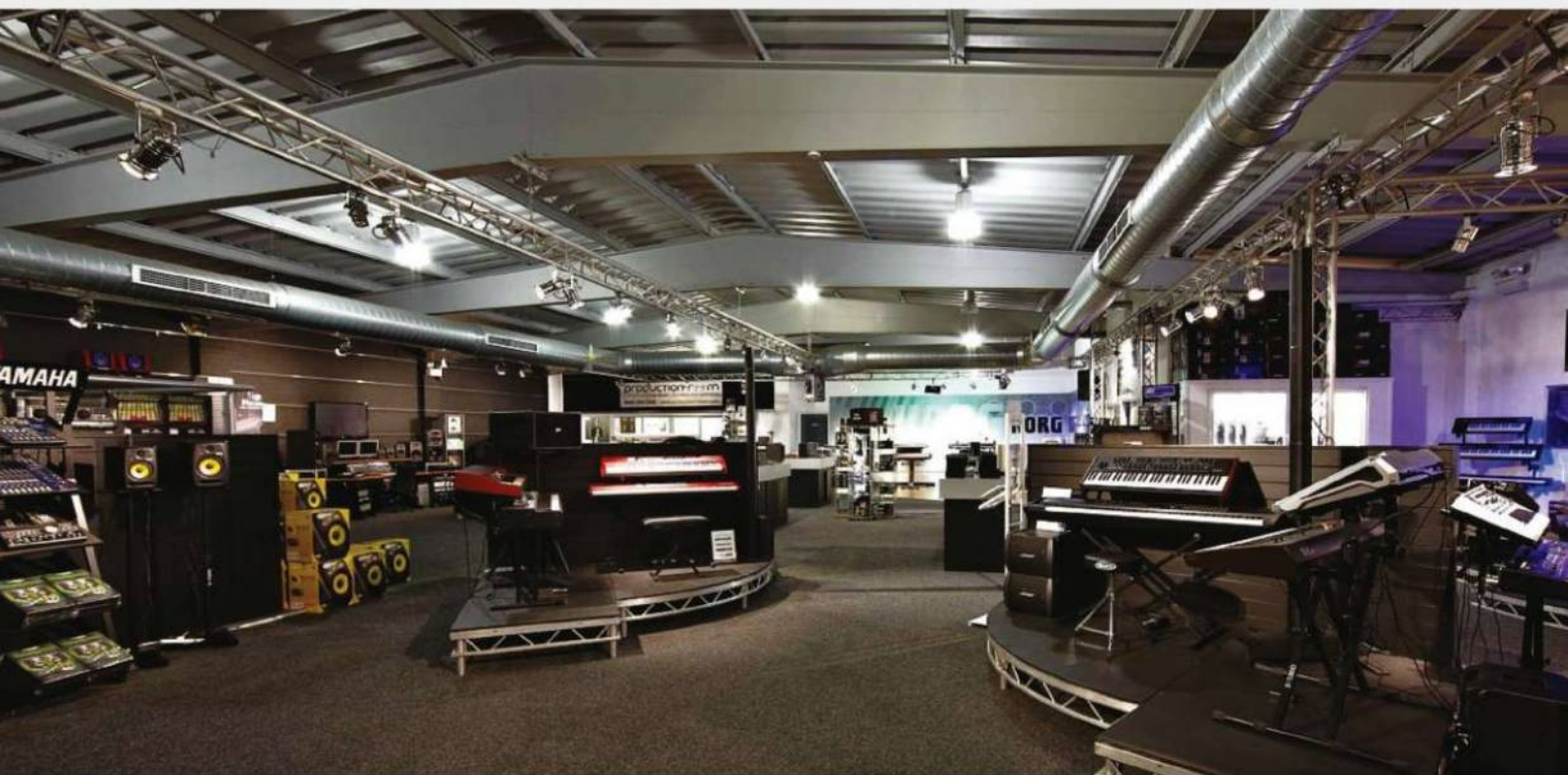
2 > Turn down the **Send A** dial on the **Instrument** track, then create a new audio track and name it **Resample**. Change the input to **Instrument** and output to **Sends Only**. Set **Monitor** to **Auto** and record-enable the track. Next, turn up the **Resample** track's **Send A** dial. Audio from the **Instrument** track will now go via the **Resample** track before being sent to the **Effects** track.



3 > Play one of the clips on the **Instrument** track. You're now ready to resample and play back clips. When playing back, stopping the clip or setting the **Monitor** to **In** will play the generated audio from the **Instrument** track. **cm**

On-line: www.production-room.com
Phone: 0113 246 7985
Email: info@production-room.com
Showroom: 85 Roseville Road, Leeds, LS8 5DT.

production room
THE MUSIC TECHNOLOGY EXPERTS



Little Synth. **Big Sound.**



Akai Miniak
Deal of the Decade
at Production Room
Was £379
Now £229

MINIAK
VIRTUAL ANALOG SYNTHESIZER

Introducing **MINIAK**, a professional analog modeling synth chock full of everything you need for world-class composition, production and performance. Full-sized keys. Phrase and step sequencing. A built-in drum machine. A flexible arpeggiator. A 40-band vocoder. Stereo effects. All combined with a powerful virtual analog synth engine capable of producing the sounds of yesterday, today AND tomorrow. Put it all together, and you've got an instrument that sounds much bigger than it looks.

AKAI
professional

ORDER HOTLINE 0113 246 7985

WIN WIN WIN

Production Room and our friends at KORG have teamed up again to give you an unbelievable chance of winning an amazing KORG MicroSAMPLER Synthesizer worth £379.

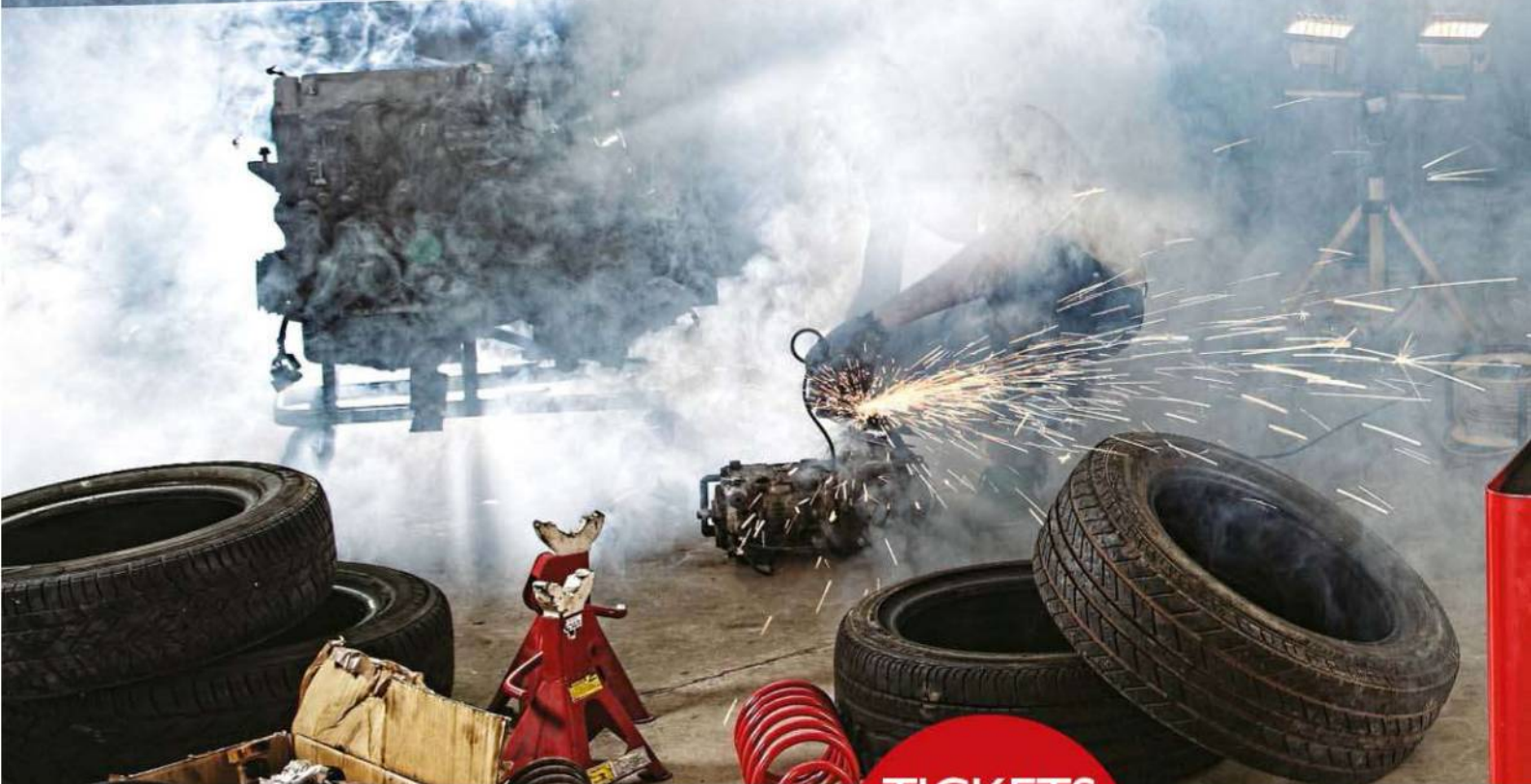


The compact and powerful Korg micro series is now joined by an incredibly fun-to-use performance sampler. Introducing the Korg microSAMPLER, a keyboard sampler that lets you enjoy easy-to-use full-featured sampling, a loop sequencer, and internal effects - all with an intuitive interface that's designed for realtime performance. Our unique sampling method allows you to record, edit and map as you sample - directly from the keyboard.

Enter online at -
www.production-room.com

FROM THE MAKERS OF **musicradar.com** Guitarist **Guitar** GuitarTechniques **music** FutureMusic **RHYTHM**

CAN'T STOP PLAYING?



The London Music Show is the UK's most EXCITING and INTERACTIVE music show custom-built for the musician in you. It's UNMISSABLE.

Guitars | Drums | Sound technology | Music production | Unplugged |
See top live acts | Meet iconic musicians | Learn new techniques |
Buy the latest gear | Demo the coolest kit | Beginners' workshops |
Exclusive masterclasses | 100s of exhibitors | 1000s of products

**TICKETS
ON SALE
NOW
FROM £15***

www.londonmusicshow.com

BOOK TICKETS ONLINE OR CALL 0871 620 7059

*See www.londonmusicshow.com for full ticket details.



Bringing music to life

 **London
Music
Show** 2010
8-10 October / ExCeL London

THE ART OF SIMPLICITY



STEINBERG'S RANGE OF PORTABLE MUSIC STUDIOS
For further information see www.steinberg.net



PUSHING THE ENVELOPE

Modern soft synths offer envelopes way, way beyond the standard ADSR models of old. Bring some serious movement to your patches with our step-by-step guide, complete with video on the DVD

> **September 2000 was a landmark month in the history of synthesis, due to the release of Brian Clevenger's incredible Absynth, now owned by Native Instruments and at version 5. While Absynth brought more than a couple of new twists to synth design, it was without doubt its real-time multi-breakpoint envelopes that were the most ground-breaking development. The ability to easily apply complex multi-stage envelopes in real-time was nothing short of a sound design revolution.**

Instead of being limited to a set envelope structure (ranging from the basic ADSR to more complex but nonetheless 'fixed' models), Absynth made it possible to click within a graphical timeline interface to add individual envelope segments, then edit their shapes with ease. Suddenly it was easy to make complex, evolving envelopes or intricate, pulsing, rhythmic ones. It wasn't always a fast process, but this new concept heralded the beginning of the 'anything you can think of' era in synthesis.

Evolving envelopes

A year after the release of Absynth, another indie developer by the name of Green Oak Software released the free Crystal, which brought additional enhancements to the multi-breakpoint envelope

concept. Features such as syncing envelopes to the host tempo and assigning unique shapes to each segment were huge advances, and other companies soon began building similarly spec'd envelopes into their soft synths.

Fast forward to 2007, when Native Instruments released a brand new soft synth called Massive, which took a different approach to the design of rhythmic patches. Instead of using envelopes, Massive used a modulation source called the Performer. This enabled the user to paint unique pulse shapes with the mouse, creating complex groove-based patterns. Rhythmic patches became even easier and quicker to build!

Bringing the development of the envelope right up to date, at the 2010 Frankfurt Musik Messe, Spectrasonics unveiled version 1.3 of their stunning flagship synth, Omnisphere. Creating your own complex rhythmic envelopes in Omnisphere is now as easy as dragging a MIDI file from your desktop to the Envelope window. What used to require potentially hours of work now takes no time at all - anything you can sequence can be instantly turned into a rhythmic envelope.

In this tutorial, we're going to show you just some of the ways in which you can make rhythmic patches using some of the finest soft synths available today.



> make music now / pushing the envelope

Envelopes and beyond

One of the most important things to do when deploying multi-breakpoint envelopes is think of them as being much more than just envelopes. For example, if you set up a multi-breakpoint envelope with a couple of fade-in and fade-out segments (and the envelope loop parameter turned on), you're now really describing a simulated custom LFO shape. Or, if you create a bouncy, pulsing groove with sync to host and envelope loop on, it might well sound like you're using an arpeggiator or step sequencer. The lines between LFOs, envelope generators (EGs) and sequenced arpeggiators have become seriously blurred – in a good way.

With today's synths, we can easily conjure up custom EG shapes and assign them just as we would LFOs – except that while an LFO has a defined, regular waveshape, we can modify the segments of this EG-created LFO in any way we

see fit. This freedom simply isn't possible with preset LFO shapes.

Track attack

The attack portion of a synth patch – that really important first 250ms that can give a lead or bass sound its unique personality – is another area in which multi-breakpoint envelopes can be used to great effect.

One technique is to zoom in as far as you can on the very beginning of the envelope and add three or more breakpoints. By carefully making a jagged up/down/up/down sawtooth shape, you'll add bite and character to the attack of your sound, which might help your lead synth or bassline to stand out more in the mix. Move the envelope segments around both in time (left

"The lines between LFOs, envelope generators and sequenced arpeggiators have become blurred"

to right) and level (up and down), and listen to how even small movements change the attack.

Some synths also offer a range of preset shapes that you can assign to each segment of the envelope. In Spectrasonics' Omnisphere and Trilian, nine different shapes are available, including very useful three- and four-pulse segments that can be used to make very complex attacks easily. This sort of segment shape can also be very useful for making intricate embellishments in rhythmic patterns.

> Step by step

Setting up a rhythmic envelope in Absynth 5



- 1 > First, load up Absynth 5 in your DAW (get the demo at www.native-instruments.com if you don't own it). Switch to Absynth's **Patch** pane (top centre) and, from the top left, select **New Sound** to call up an initialised (ie, blank) sine wave patch.



- 2 > In the **OSC A** box, click where it says **Sine** to pull up the waveform list and choose **Saw_smooth**. Hit **OK** at the bottom of the waveform select window. Next, click the small staircase box to make it a smooth line. This switches the oscillator to a higher-resolution, smoother-sounding model.



- 3 > Now switch to the **Envelope** pane and change the mode to **Loop**. Click **Sync** to make the EG sync to the project tempo. You'll notice that two of the envelope segments now have a red symbol attached to them. The red **c** is the Loop Start marker, while the red **+** is the Loop End marker.



- 4 > Select **Generate AR Pulse...** from the **Transform** menu. This will open up the editor window, in which you select exactly what type of regular, pulsing envelope shape you want to start with. Here's a handy tip: in the **Available Envelopes** list on the left, you can apply the same shape to every envelope generator in the list!



- 5 > Now modify the pulses to make your own shape. Play a note and you'll hear what the default settings give you. **Beat dur** is the timing duration of each pulse – **0.5000** is an eighth-note, while **0.2500** is a 16th-note. If **Min amp** is **0.000** then no sustain is heard. **Slope** is the curvature of each pulse – the smaller it is, the sharper the attack and the shorter each pulse. Hit **OK** when you have a shape you like.



- 6 > Turn on **Grid** and the movement of segments will be quantised (**1/8**, **1/16** or **1/32**). **Lock** keeps later segments from moving, while **Slide** makes them, well, slide. Finally, there's the **Edit** menu, which is where you'll find the envelope **Copy** and **Paste** functions. Try applying your envelope to Absynth's various parameters (click **+new**). Much sonic mayhem awaits!

> Step by step

Making a rhythmic envelope from a MIDI file in Omnisphere 1.3



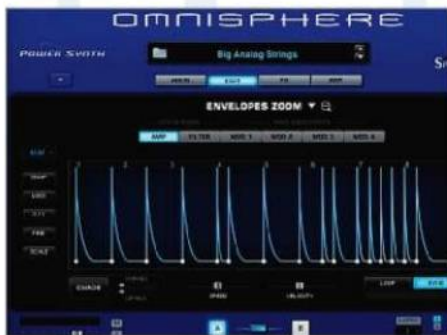
1 > Spectrasonics' Omnisphere can use the timing of MIDI parts to generate envelope shapes. We've taken a percussion groove from Stylus RMX (a simple bongo pattern - **85-Bongos 1**) and dragged its MIDI file to the desktop. Any MIDI file will do, but the idea is to make something more rhythmically interesting than just straight 16th-notes.



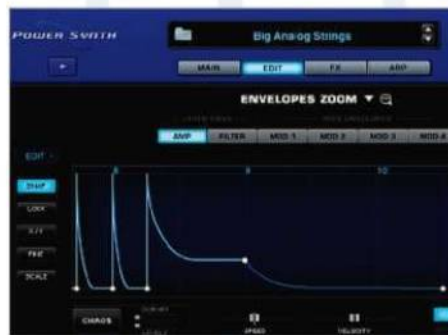
2 > Load Omnisphere's **Big Analog Strings** patch (type 'Big Analog Strings' into the **Patch Search** box to quickly locate it), switch to the **Edit** page and activate the blue **Link** button. This means that whatever we do to Oscillator A will also be applied to Oscillator B.



3 > In the **Envelope** section (on the lower right), select **Amp** and click the magnifying glass button to open the Envelope Editor. Make sure **Loop** and **Sync** are activated in both the **A Amp** and **B Amp** pages.



4 > Drag the MIDI file from your desktop into Omnisphere's graphical **Envelope** display and there you have it: your hand-made rhythmic envelope is assigned to both oscillators! If it doesn't work, check that your MIDI file has the **.mid** extension at the end of its name.



5 > The **Release** is currently assigned to the Step shape, which has no curvature option. So, zoom in on the last segment. Turn on **Snap**, right-click the breakpoint at bar 9 and choose **Curve 1**. Drag the breakpoint to the right, to half way through bar 10, and down to the zero line, as shown. Finally, drag the curve itself down, so that it bends downwards.

POWER TIP

>Bit-crushing envelopes

Omnisphere's effects roster doesn't include a bit-crusher, but you can make all sorts of gritty, 'aliased' sounds with a short, looping EG. Activate the **Envelope** loop and set the loop start and end points a very short distance apart. Changing the number of segments, the length of the loop, the segment shapes and the **Speed** slider will all help to mess up the sound. This generally works best on 'darker' tones (try **Blue Ripples** from the sound source browser), but it can give brighter leads and basses a cool, trashy sound, too. Trilian, Absynth 5 and other synths with looping EGs can also do this.



6 > Click the magnifying glass button to exit back to the **Edit** page. In the **Filter** section, turn **Cutoff** down to **0.828kHz**, **Res** up to **0.650** and **Env** to **0.350**. Now right-click the **Cutoff** knob and select **Modulate>Modulate with Envelope**. Have a play: you'll hear the filter moving with the default **Mod 1** envelope settings.



7 > Let's change the **Mod 1** envelope preset. Click the magnifying glass in the **Envelopes** section, select **MOD 1** and click the small triangle in the centre of the window. Navigate to **Rhythmic Envelopes** and choose **Dingo Groove**. You've loaded a new preset envelope! Now we're going to use it to modulate effect parameters.



8 > Hit the **FX** button. You should see the **A** effect rack, and it should be blank. Click the triangle at the top left of the rack and select **Pro-Verb**. Set the **Mix** slider to **0**, then right-click it and choose **Modulate>All Mod sources>Mod Envelope1**. Now the reverb mix for Oscillator A follows the same modulation as the filter.

> make music now / pushing the envelope

> Step by step

Creating a rhythmic pattern using ACE's Mapping Generator



1 > If you don't own u-he's amazing ACE synth, get the demo at www.acesynth.com. Once it's downloaded and installed, hit the **Patch** button, select **Local** and find the patch named **Initialize**. Load it up to start your session with a brand-new, blank canvas.



2 > Click the **Tweak** button to open the **Tweak** page. Right-click the **Mapping Generator** display and select **16** steps instead of the default 128. To the right, change the **Ramp Clock** from 0-20 sec to **4/4 sync**. Set up the Mapping Generator steps to look similar to those in the screenshot (you can come back after Step 4 and customise them if you like).



3 > Click the **Synth** button and locate **LFO2** on the left-hand side. Click the **Waveform** box three times, until it reads **Tap map** - this means the LFO is now using the Mapping Generator for its waveshape, rather than its built-in sine, triangle, square or sawtooth shapes. To all intents and purposes, LFO2 is now a step sequencer.



4 > Set up filter (**VCF**) 1 as follows: **Cutoff 30**, **Resonance 45.00**, **LFO2 90.00** and **Keyfollow 50.00**. LFO2 already has a **Modulation Depth** knob in the VCF section, so we don't need to create a cable to make it modulate the cutoff. When you play a note, you'll hear the Tap map wave modulating the filter cutoff.



5 > Let's get the Ramp involved. In the **Ramp** section at the bottom right, set the **Hold** knob to **50.00** and the **Rest** knob to **0.00**. Click and drag from the black socket to the left of the **Up** knob to the grey socket in the **VCF** section, just under the **ADSR2** knob, and set the **ADSR2** knob to **34.00**. Finally, at the far left, change the **Stack** box from 1 to 4, so that we're now playing a four-note unison patch.



6 > Go back to the **Tweak** page. The knobs labelled **Voice 1** to **Voice 4** change the pitches of the four unison voices. Set **Voice 3** to **+12.20** and **Voice 4** to **+19.05** (click and hold **Shift** for finer resolution). Turn the **Crosstalk** knob up to at least **25.00** for some attitude.



7 > At the upper right, click **Delay off** five times, so that it reads **4th Groove**. Lower the **Feedback** setting to **25.00**. Click **Chorus off** three times so that it reads **Chorus 3**. Set **Rate** to **70.00**, **Bass** (top right) to **50.00** and **Treble** to **25.00**.



8 > For a fatter sound, turn the **VCO mix** down to **0**, **Sub osc** to **60** and **VCO 2 Semi** to **+12**. If you find that the sound starts to distort, reduce the **Output** to **80**.



9 > One of the coolest things about ACE (besides its 100% convincing analogue sound) is that its LFOs can oscillate in the audible range. Go to the **LFO 2** section and set the **multiply** knob to **50.00**. Play a note and adjust the **Sync** knob to **24.00**. For smoother graduation, click **Sync** so that it changes to **Semi**.

> Step by step

Getting rhythmic with Massive's Performer



John 'Skippy' Lehmkuhl demonstrates all these techniques and more

1 > Here's how to get the Performer generator working on any Massive patch. Load Massive in your DAW (grab the demo at www.nativeinstruments.com if you don't own it), switch to the **Browser** and select the factory patch **Detune Pulse**. Hit the **Synth View** button and select the green modulator tab named **8 Step**.

2 > Click the **Stepper** button and select **Performer**. The difference between the two is that Stepper is a step sequencer, more suitable for pitch and other stable, 'step-shaped' duties. On the other hand, Performer generates pulses that start at one value and 'slide' to another.



Envelopes in motion!

On this month's **cm** DVD you'll find over half an hour of exclusive video by noted sound designer John 'Skippy' Lehmkuhl. It's in **MOV** format and at 1280x720 resolution, so you can play it back using QuickTime, VLC or just about any other media player.

After an introduction, John begins with a look at Absynth 5, the pioneer of multiple-breakpoint envelopes. As well as bringing to life the walkthrough from this tutorial, he goes a layer deeper by adding a rhythmic envelope generator to the filter, as well as some waveshaping, two additional oscillators and some effects processing.

Next, we head into the future with an exploration of Omnisphere 1.3's envelope generators. If you haven't yet seen Omnisphere's ingenious envelope MIDI file import in action then you're in for a bit of a shock. John further develops the patch from the walkthrough by adding a second rhythmic EG that's assigned to modulate both filter cutoff and the reverb wet/dry mix.

Finally, the tutorial takes a different route to beat bliss by looking at how u-he's ACE Synth and Native Instruments' Massive use their own specialised tools to make rhythmic patterns. Additional steps demonstrate how to bring the patches from the walkthroughs closer to being finalised creations that you can use in your work.

John has been producing music for two decades and making tutorial videos for about a year now. His tutorials support the various custom patch banks that he sells online. Check out his current selection (**FM8**, **Stylus RMX**, **Massive** and more), download free demo banks and watch hours of video tutorials at www.plugginguru.com

3 > At the left-hand side of the panel, turn **Sync** on and **Pos** off (so that the generator works without requiring playback in your DAW) and activate **Restart**. Change the bottom **Ratio** setting to **16** (16th-notes). Push the **XFade Seq** slider fully up. Massive has two Performers going, and this control sets the balance between them. Turn the **Amp** knob all the way up.

4 > Click the 'target' icon to the right of the green **8 Perf** button - your mouse pointer will become a green **8**. In the **Amp** section above, click the **SC** box - a green **8** will appear. This routes the Performer to the amp volume - now you'll hear the pulse take effect when you play.



5 > Activate **Load Curve** in the **Performer** window. This opens up a variety of selectable curve shapes on the left-hand side of the envelope display. Have a go at selecting different shapes and applying them to the segments in the top Performer.

6 > Click **Load Curve** to dismiss the preset curve list. While playing a note, move the **XFade Seq** slider down to the bottom of its range - now you're applying it to only the bottom Performer. As you can see, the modulation possibilities are immense.

There's an app for everything

Get the ultimate guide
to the world's
most-wanted apps

PLUS How to get the most from
your smartphone



The Gadget Magazine

ONLY IN THIS MONTH'S T3 ON SALE NOW

Make it funky

Learn how to get your drums and horns sounding slick and sexy, as we walk you through the finer points of mixing a jazz-funk band in your DAW



Audio examples from the walkthroughs are in the Tutorial Files folder

> **Initially an offshoot of jazz, funk established itself as a genre in its own right by developing into a groovier and often grittier sound than that of its big brother. While many funk tracks make extensive use of synthesisers and samplers, there are plenty of modern bands that play funk using only non-electronic instrumentation.**

Mixing a funk track comprising live instruments isn't as hard as you might think. You don't have to have super-pricey hardware and magical powers to get a top-notch sound - although either would help, of course. Mixing funk is like mixing any other genre: all it takes is practice, a good ear and knowledge of what to listen for. That's where we come in.

Although you'll need a decent space of some sort to get your band recorded, once the tracks are in your DAW, there's plenty you can do at home to improve your mixing setup.

Funk can take in all manner of different instruments and styles, but here we're dealing with a jazz-funk number and focusing primarily on the drums and horns. We'll show you how to create a solid drum mix that sits perfectly with other instruments, emphasising the hi-hats and snare to add character to the track while maintaining that all-important groove. The horn

section (which can contain any number of trumpets, saxophones, trombones, cornets, etc) can be tough to mix. But whether your band features a single horn or a dozen of 'em, we've got you covered. We'll look at panning and separating brass in the mix, and processing instruments to enhance their natural character.

The space that a live instrument is recorded in has a major effect on its sound, and it's important to emphasise the natural reverb and space of your tracks to get them sounding warm, full and distinctive. We'll explain how to do that, too, and provide some disaster recovery tips, including how to add reverb to a flat recording and how to deal with audio spill from other instruments. Finally, we'll explain the importance of A/B comparison when mixing and why you should think carefully about whether or not to use compression.

Sadly we don't have our own funk band stashed in the back of a drawer in the **cm** office, so we called up the good folks from London's 12tone Brass Band, who very kindly provided their track *You'd Better Watch Your Back* (recorded by Jesal Padia) for us to tinker with. The full version of our mix (and various separate parts) are on the DVD. Thanks, fellas - the beers are on us. Let's get the funk on with it!



Try a classic hardware emulation plug-in, like Waves' Puigchild 670, when compressing funk

The question of compression

Compression is a hot potato in both funk and jazz production, and the question of whether or not it should be used has been the subject of much debate since compressors first became ubiquitous. On the one side, there are those who insist that any software or hardware compression affects the music negatively. The argument here is that the sound and texture of a jazz or funk track is highly dependent on the dynamics of the music - more so than most other genres - and to artificially control those dynamics in any way detracts from them.

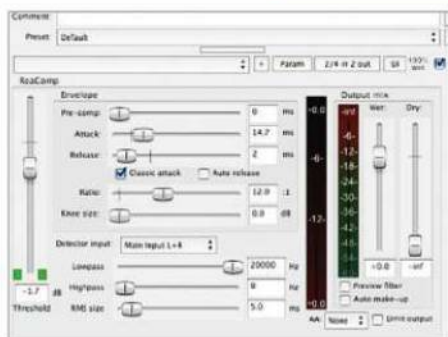
Those on the other side of the debate say that compression helps to bring out the inherent character of each instrument and the track as a whole. Although there are exceptions, this tends to be the position of the majority of engineers, and you're likely to hear compression on most contemporary funk and jazz-funk tracks. All of this only really applies to live instruments, incidentally, as few would debate the need for a bit of compression on electronic sounds.

Although there are no concrete rules, the general idea is that if you do use compression in this genre, you should do so as sparingly as possible. You might like the sound of a trumpet squeezed through a really intense ratio, but for the most part when mixing funk, you'll find that you only need to apply compression gently to get good results. Try using a little parallel compression on top of your drums; it may help to give them more spark, which is handy if you're trying to make them a bit more prominent in the mix.

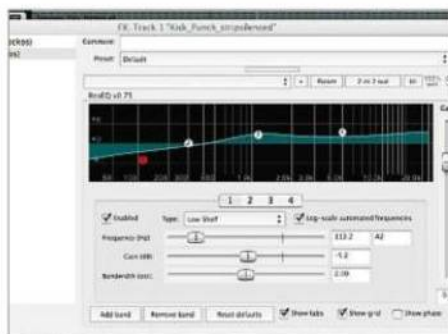
So what sort of compressor should you use for funk-style music? We'd recommend getting one that emulates classic analogue hardware, such as the Waves Puigchild 670 (www.waves.com). If that's too pricey, there are plenty of less expensive examples out there, such as de la Mancha's excellent Sixtyfive compressor (www.delamancha.co.uk).

> Step by step

Give the drummer some



1 > Our kick drum comprises two tracks (batter head and 'body') - and both of them sound a little anaemic. Let's apply some compression to give the kick some oomph. We've gone for a quick **Release** and a moderately fast **Attack**, and although we want the compression to be evident, we don't push the **Threshold** or **Ratio** too hard. (Audio on the DVD: **KickComp.wav**.)



3 > The snares and hi-hats have been recorded via the one shared mic, and we need to separate these elements from each other as much as we possibly can. Some very, very light compression and a bit of boosting in the upper frequency ranges helps. We also add some low-end shelving to clear some room.



5 > Don't be afraid to keep your drums relatively low in the mix compared to the other instruments. In our jazz-funk track, they're very much playing a supporting role (despite a short solo), so as long as the groove is there, they don't need to upfront. Consider sending all your kit elements to a stereo bus so that you can raise and lower the volume of the whole kit together from the one fader.



2 > The same settings work on both kick drum tracks (which are labelled **Weight** and **Punch**). Using EQ, we boost both tracks in the lows and the mids, with a precision cut at just under 300Hz to add clarity. When mixing the two together, we give more emphasis to the **Weight** track, as this won't impact the upper frequencies of our horns too much. (Audio: **KickDuo.wav**.)



4 > When you're mixing the whole drum kit, try to emphasise the parts that give the track its rhythm. For example, you might raise the hi-hats a touch, at the expense of the snares and kicks. Here, because the snare and hi-hats are pretty busy (and not recorded on separate mics), we elect to elevate the kick, maintaining a solid groove. (Audio: **DrumSubMix.wav**.)

POWER TIP

>Panning the drums? Really?

Yes, really. While in most cases your drums will sit just fine at the centre of the soundstage, some subtle panning often works surprisingly well. For example, if your kick drum is at the centre and your hats and snare are a little bit off to the sides, you'll not only make room in the middle for other instruments, but also create a really unusual effect. It's almost never a good idea to pan the whole kit to one side, though, unless you're after a deliberately weird sound or are going for an *extremely* retro vibe.

> Step by step

Separating the horns



1 > 12tone have a full horn section, which means we can go wild creating a massive soundstage. Let's start with the sousaphone (also known as the bass tuba). We're going to keep it dead centre: its bassy sound and prominence in the mix pretty much demand it. It'll also need some fader riding later on.



2 > We also have a soprano sax, a tenor sax, a trombone and a trumpet. The last two are the focus of the track, taking up the exciting high frequencies. We pan them over to the right of the track. We don't EQ or compress these sounds at all (they already sound great), but a little reverb makes for a good addition. (Audio on the DVD: **TrumpetTrombone.wav**.)



3 > We put the saxophones on the left, a little further out than the trumpet and trombone, giving us a nice, wide soundstage. The reverb on the 'outer' instruments can, in general, be a little wetter than it is on the centred ones, as their sound would take a fraction of a second longer to reach you if you were sitting in the audience in the real world. (Audio: **Saxes.wav**.)



4 > Once we've got a good static mix in place, we apply a bit of automation. The sousaphone has a couple of solos, so we made it a little louder at those points. You would do this with any solo instrument, but be careful not to raise the volume too much if it's a particularly high-pitched one, such as a trumpet. (Audio: **FinalBrass.wav**.)

12tone Brass Band

12tone Brass Band are funkier than your average ensemble, rooting their output in both traditional jazz and new-age funk rhythms, and coming from a singularly live background. You can hear this in their music, which seems tailor-made for a party-ready crowd aching to get funky. The band comprises six members, with a heavy bias towards brass. Two saxophonists (Edward Cawthorne and Wayne Francis) get together with a trumpeter (Nick Walters), a trombonist (Ahmad Dayes) and a sousaphonist (Ben Kelly). Underscoring them is drummer Yusef Dayes. They've only been together since August 2009, but judging from the material they've been putting together, this is a group with serious potential. We particularly like *Latin Tune*, which matches live-as-hell drums with a great horn riff.

If you're in London, you can often find the band busking on the South Bank, among other places. Find out more and hear tracks at www.myspace.com/12tonebrass. Parp!



12tone Brass Band aim to get you shaking your thang on the... roof?

> Step by step

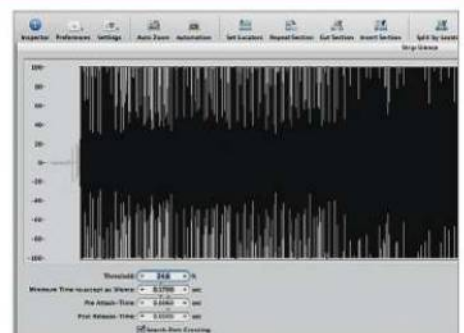
Mopping up audio spill



1 > Just like any other 'live' genre, jazz-funk recordings are susceptible to spill (instruments being picked up by other instruments' mics). This is a problem best fixed at source, but you can work around it in your DAW. Low-frequency instruments like our kick drum are the easiest to fix: just insert a high-pass filter and perhaps include a small boost at the low end. (Audio on the DVD: **KickSpill.wav**.)



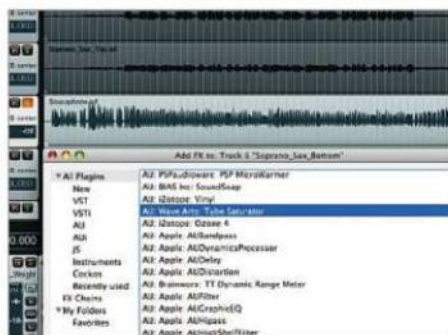
2 > Recordings of instruments at the higher end of the frequency spectrum - the trumpet, for example - can be tougher to fix, as spill tends to be more present in higher frequencies than lower ones. Using some precision cuts with a very high Q value, though, you should be able to clean the sound up to a certain extent. (Audio: **TrumpetSpill.wav**.)



3 > If all else fails, you could always manually edit out the spill and leave the original notes intact. Don't do this if your track isn't a particularly busy one, though, as it can sound extremely unnatural. If you're tearing your hair out and do choose to go down this route, something like Logic's Strip Silence function (with its variable sensitivity) or a gate plug-in is your best bet.

> Step by step

Adding reverb and space



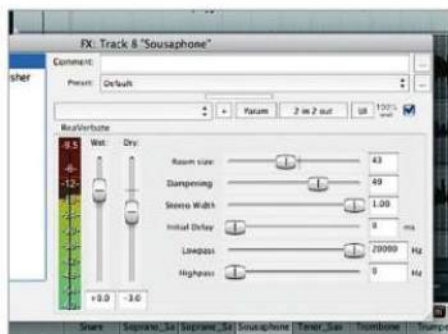
POWER TIP

>Don't back off

When a player finishes a solo, you'll often see them back off from the mic or lower their instrument. If this is done intentionally to make room quickly for another player, that's fine, but sometimes it can result in the sound dropping out too fast with no 'tail'. To rectify this problem, insert a reverb plug-in set to a short reverb time and automate it to bypass until the very last moment of the performance. When it kicks in it'll replace the missing tail, which doesn't have to be that long to be effective.

1 > Great funk tracks go out of their way to present the instruments at their most natural. When mixing a track, you never want to insert anything that's going to mask or detract from the sound of the instruments. *You'd Better Watch Your Back* contains loads of great natural reverb, so our goal is to enhance it and use it to add character to the mix.

2 > One good way to enhance the feel of the sound is to warm it up a little with a saturation plug-in. You don't have to add a huge amount; by fattening the sound in this way, you'll be bringing up the room it was recorded in and the natural reflections captured while the instrument was playing. Here's our sousaphone without any warming. (Audio on the DVD: **SousaphoneDry.wav**.)



3 > Our sousaphone sounds good, but it could still be better. We insert Camel Audio's Camel Crusher and turn it up a little. The difference is immediately apparent: the sound is fuller, more alive and has more character. The effect is still subtle, but it means you can hear the room - which is just as important as hearing the instrument itself. (Audio: **SousaphoneWet.wav**.)

4 > Enhancing what's already there is almost invariably the guiding principle, but a touch of artificial reverb can go a long way if your instruments still sound a little lifeless. Like saturation, it's something that needs to be subtly applied. Unless you're going for a very specific effect, the listener shouldn't be consciously aware of it.

5 > Although any reverb unit applied delicately will inject some life, it's a good idea to go for something that lets you choose between Plate and Spring models. We like PSP's Easyverb, from www.pspaudioware.net. Plate reverbs are fairly dense and can add a lot of life to a weak instrument when used correctly. (Audio: **TrumpetPlate.wav**.)



POWER TIP

>Different effects

While keeping things natural is the goal, there's no harm in experimenting with unusual reverb and delay tricks - particularly if your track is fast and busy. Try some reverse reverb just before a trumpet solo, or just before the end of your track intro. Play with the settings on your saturation or reverb units; pre-delays can often enhance the sound of brass in particular, and giving the bass a slightly crunchy sound works wonders in the right circumstances. These tricks aren't the kind of thing you want to overdo, but they might just help your mix to stand out.

6 > Spring reverb, while sounding slightly more artificial, has its uses too. Let's say you've got a trumpet solo that requires some bright, hard reverb to really bring it out in the mix. Applied with care, a little spring reverb can be just the ticket. As with any effect in this kind of mix, though, keep things as soft and low-key as possible. (Audio: **TrumpetSpring.wav**.)

7 > If you recorded the whole room through an overhead mic or mics, you're all set in terms of room ambience and space. Apply some heavy compression to the recording and gradually blend it in while mixing. This will add serious air and life to the mix, even at low volumes. (Audio: **Overhead.wav**.)

Getting from A to B

One of the best tips we can give anybody getting started in mixing is to use a commercially released track you like the sound of as a reference point, listening to it periodically while you mix to help guide your sound in the right direction. This 'A/B referencing' is especially important when you're mixing a genre like jazz-funk because the overall atmosphere is absolutely essential to the track.

Let's say you're working on a minimalist funk track with just a few instruments. The balance is good, but there's something missing; it feels anonymous and samey, and although there's nothing technically wrong with it, it could be better. Dig for a classic funk track - try The Ohio Players' *Skin Tight* - and A/B it with your own.

Now, you don't have the same equipment or setup the Players had, but that doesn't mean you can't use *Skin Tight* as a reference point. The song is fairly calm and controlled, and the mix is built gradually, starting with the bassline and moving onto the drums, which are kept fairly low. The horns don't dominate things either, and are panned across the soundstage with a tiny bit of compression to keep things tight. If you were shooting for this kind of sound, you would start by adding a touch more reverb to your horns and a little more panning. It's best not to create unrealistic expectations by thinking you'll be able to match the sound of *Skin Tight* exactly, but using it as a reference will help you to craft a better sound for your song. What are they doing that you're not?

Pick up the pace

Referencing becomes trickier when you're mixing a very busy track. If it's fast-paced and heavy, and involves lots of different instruments and tracks, it becomes



Decent monitors are essential for mixing in any genre, and doubly so for a dynamic instrumental style like jazz-funk

tougher to achieve a specific sound. Artists like Johnny Griffin revelled in lightning-fast, crowded tracks, and on an in-your-face song like *It's Alright With Me*, it's a little trickier to isolate why each instrument - and the track as a whole - sounds so good. There's not as much space for each part, so the mix engineer would have had to make decisions as to which ones to elevate and which to relegate.

Listen to your loud and fast reference track and try to pick out which instruments are the most prominent. They will have been made that way for a reason; if you're struggling to get space in your own song or worrying

about giving your key instruments enough visibility, then working out what your reference track is doing with them might be helpful. There are no free lunches in mixing: if you raise one thing, chances are you'll need to drop something else. In *It's Alright With Me*, the piano has been lowered to make room for the sax.

Magic monitors

A couple of other reference-related points to bear in mind: First of all, make sure you're mixing on a quality pair of monitors - and equally importantly, make sure you listen to your reference track on them, too. You need to be able to pick out the finest details in the

mix and hear what the engineer was doing behind the scenes in order to make your track sound better.

Our second point is slightly unorthodox: Use high- and low-pass filters to hear parts of your reference track in isolation. Although this will fundamentally change the sound of the song, isolating areas in this way can be helpful if you're having trouble working out exactly what's going on at the bottom or in the highs. Just remember that this technique is unwieldy and shouldn't be used by itself; you should still be listening to the track as a whole when making any changes.

How we made our final mix

You'd Better Watch Your Back presented a few mixing challenges. It's a fairly busy piece of music, so working out what to bring down and what to raise with automation was tricky. Before we did that, we got rid of some extraneous bits: pieces of noise, excess spill and even whole chunks of audio. The drums needed space to breathe during their manic solo, so we cleared some room there.

The climax of the track presented its own problems. When you have every instrument

going absolutely nuts for a few seconds, you have to make some choices. Ours was to drop the searing trombone and tenor sax, raise the trumpet a little and lower the massive volley of kick drums.

We started mixing with our master fader low, at around -11dB. This proved perfect, as when we'd finished balancing everything out we were getting consistently good levels without clipping. This isn't really an issue for many jazz-funk tracks, as some can be quite

soft and gentle, but here it was imperative to maintain a decent volume.

We boosted the upper frequencies of the track slightly and added a soft limiter on the master output. Initially we were in two minds as to whether to use any more compression, but some lengthy A/B comparison resulted in us applying a tiny bit to keep things together. All that was left to do was set some markers and export the tune. (Audio on the DVD: **You'd Better Watch Your Back (CM Mix)**.)

> make music now / make it funky

Funk mixing tips

WARM IT UP

Analogue warmth and saturation are great for enhancing individual instruments, but generally speaking, this sort of processing can be applied more aggressively if used on the master output, rather than on specific parts. Old jazz and funk tracks were recorded to tape, so if that's the sound you're aiming for, look for a tape saturation plug-in like PSP's VintageWarmer (pspaudioware.com) to get a head start on recreating it.

LESS IS MORE

The less you do to a live instrument recording, the better it will sound (assuming it's been competently recorded in the first place, of course!). If you find that you're spending hours fiddling with EQ or compression settings to no end, step back and think about what the instrument really needs. Remember, you're trying to present it as naturally as possible, so all it might really need is a tiny bit of reverb and a small level tweak.

BASS HEAVY

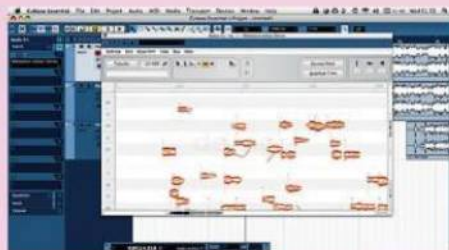
If your band features a double bass, there are a couple of things you can do to make it stand out. Double basses respond well to very light distortion, so use a distortion plug-in to enhance the instrument's character. If there are drums on the track - particularly a boomy kick drum - you might need to lower them a little to make room for the double bass. This shouldn't hurt the mix; rather, it'll bring out the full sound of the bass without compromising the rhythm.

NOT SO LOUD

Funk is one of the few genres to have returned from the loudness wars unscathed. This genre doesn't usually require a huge overall sound and certainly doesn't need to push the limits of clipping. Don't worry if you're having to turn up your speakers a little bit while mixing; that lack of volume will help you to preserve the dynamics of the mix. If you're really worried that it's too quiet, don't be: you'll be able to fix it at the mastering stage without fear of messing up the dynamics.



Grab a tape saturation plug-in like PSP VintageWarmer to recreate the warmth of old funk recordings



Melodyne does an amazing job of fixing tuning problems and errant notes, but don't go mad with it

BUM NOTES

Jazz and funk musicians are never perfect, and because live playing is usually based around large amounts of varying instrumentation rather than repeated loops, there's more potential for mistimed or bum notes to creep in - and they might not always be obvious until it comes to the final mix. If you have pitch-correction software like Celemony's Melodyne (www.celemony.com), use it sparingly to correct, lengthen or shorten dud notes. We emphasise 'sparingly': each instrument will have its own distinctive character, and it's not hard to overcorrect a note and make it sound out of place. Go easy.

PIANO MAN

Big pianos are often a nightmare to mix into a track. They can play havoc with the panning as the player moves around the keyboard and the mics struggle to keep track of where the strings are hitting. If this is happening in your track, pan the piano to the space you want it to call 'home' in the mix, then write in some automation whenever you feel it's getting out of position. Use automation on other instruments if you feel they're getting a little haphazard too. For example, you might want to adjust EQ settings to compensate for a player hitting their instrument harder than usual on a downbeat.

MONO MASTER

Although we've exported our 12tone mix in stereo, there's an argument for exporting your final mix in mono, too - a tactic that's catching on again in jazz circles. Many earlier recordings were in mono, and it gave the music a certain immediacy and punch. So if you've got a big, heavy track without a lot of panning and you want it to hit extra-hard, it might benefit from the mono treatment.

EXTRA EXTRA!

Your recordings might contain artefacts from the instruments themselves, like the subtle pumping of a piano's dampers, or the squeaking of the sousaphone on our 12tone track. You could get rid of these sounds entirely, but leaving some or all of them in can actually enhance the atmosphere and texture of the track - as long as they aren't too overt and don't conflict with any notes. Get rid of the sound of your horn section expelling saliva through the spit valves on their tubing, though: nobody wants to hear that. **cm**

If your track includes double bass, it might need some assistance in making itself heard in the mix

Professional productions with Clickproduce & Ableton Live...



Clickproduce offers a comprehensive range of sample packs fully compatible with Ableton Live, and all other major DAWs.

To help you find out how Clickproduce can inspire your music, we are offering Computer Music readers an exclusive discount. To save £3 on your next purchase simply enter promo code '2ex3w' at the checkout.

FULLY DOWNLOADABLE
INSTANTLY AVAILABLE



Clickproduce is an amazing source for producers, I love the wide selection and variety of what's available. Why would you need to go anywhere else?!

Filthy Rich

CR2 / Stealth / Control Freq / Ministry of Sound / Glasshouse

It's easy to use and navigate around. Especially great for new producers!

Seamus Haji

Big Love / CR2 / Club Azuli / Blanco y Negro

Good to see a website that works similarly to most music download sites. The best thing about Clickproduce is when I'm stuck in the studio I can spend time hunting for an 'inspirational' sample to kick things into gear.

Oliver Lang

Azuli / Toolroom / Cosmo / Loudbit / Bora Bora

Fun in the Sun

Get a grip on SunVox, the powerful multi-platform modular tracker for Mac, PC and mobile devices



> The excellent **SunVox** is a free tracker for **Mac OS X, Windows, Linux, Palm OS and Windows Mobile**. Get it at www.warmplace.ru/soft/sunvox. **iPhone, iPod touch and iPad users can get their version on the App Store for a piffling £2.99.**

When you first launch SunVox, you'll see three modular boxes connected to one another inside the **Synths** area. The Generator goes into the Echo, which is routed to OUT. This means that our first instrument is already set up, so when you click the music keyboard above this

area (or use your QWERTY keyboard), you should hear a sound straight away. You also enter notes in this way when in Record mode.

There are two ways to link these modular machines together: one is to click (or tap) the first machine, press the **Link** button on the right (turning the **Synths** area green), then click the machine you want to link to. If you're on a Mac or PC, hold down **Shift** and drag a line between the two machines you want to link together. Repeat either method to unlink the machines. Links can work in either direction, so make sure

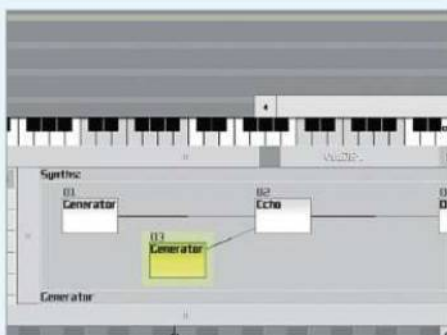
you link generators to effects - the black half of the line flows towards the grey half.

Before we get started, here are a few essential keyboard shortcuts: **F9** plays your song, **F11** plays a single pattern and **F12** stops playback. Alternatively, use the transport controls below the music keyboard to control playback. You can also enter note-off commands using **Caps Lock** or **-**.

As we have a sound ready and waiting (the default one when SunVox is launched), let's get to work on our tune straight away.

>Step by step

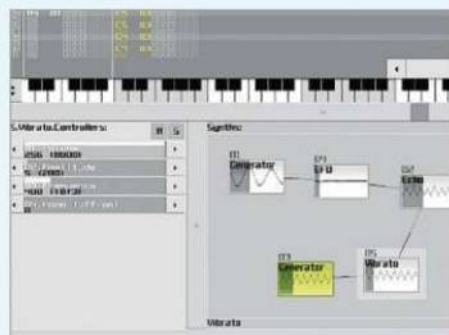
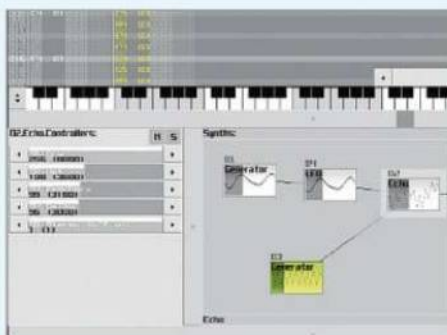
Making a tune in SunVox



1 > Click the **Record** dot at the top right of the Pattern Editor (or press **Spacebar**) to enter SunVox's edit mode. Enter a note at position **000**. Next, use the arrow keys (or swipe on the screen) to move down and enter three more notes at positions **008**, **016** and **024**. If you make a mistake, use the **Delete** key. (File on the DVD: **CM_trackers_tutorial_29a**)

2 > Let's create a new sound for an accompanying melody. Click the **Menu** button in the **Synths** area (or right-click the area itself), choose **New Synth**, create a Generator and connect it to the Echo machine. Choose **Additional synth properties** from the **Synth** menu or double-click it to change its colour. (File: **CM_trackers_tutorial_29b**)

3 > Save your song and load it back into SunVox again. You'll see that any channels without note information have disappeared. Click the **Pattern** menu, choose **Pattern properties** and change the number of channels to **2**. Swipe or use the arrow keys or **Tab** to navigate to the second channel and enter a faster melody. (File: **CM_trackers_tutorial_29c**)



4 > Let's change the character of our sounds a bit. Highlight the original machine (**01 Generator**) and adjust the second parameter to **Type 5 (sine)**. Now highlight our new machine (**03 Generator**) and set parameter **08 (Sustain)** to **0**. Now bring the **Release** (parameter **05**) up to around **70**. (File: **CM_trackers_tutorial_29d**)

5 > Highlight the **02 Echo** machine and bring the **Wet** and **Feedback** parameters down a touch. Reduce **Delay** to **96** to radically change the character. Call up a new machine - an **LFO** this time. Disconnect **01 Generator** from Echo, then reconnect it to the LFO and then to Echo again. Change the LFO's frequency to suit. (File: **CM_trackers_tutorial_29e**)

6 > Finally, let's give our new melody some movement. Just as we did in the last step, insert a **Vibrato** machine between the **03 Generator** and the Echo. Adjust the **Amplitude** of the Vibrato to around **5** and set the **Frequency** to around **400**. You should now have a rather pretty-sounding tune! (File: **CM_trackers_tutorial_29f**) **cm**

Chromatic notes

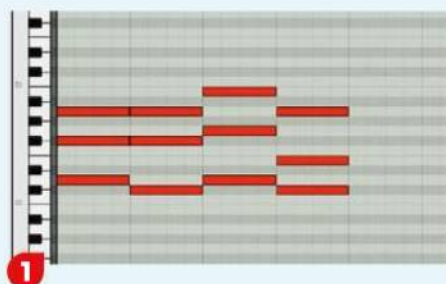
Add some unexpected colour to your composition by including notes and chords outside the prevailing key

> Our ongoing quest across the galaxy of music theory has recently seen us considering how scales, chords and the notes used in tunes and riffs interact. We're shortly going to start thinking about how these considerations apply to modes and minor scales, but before we leave majors, let's look at the idea of including a few out-of-key notes without actually leaving our established tonal centre. Er, that was out-of-key, not out-of-tune, by the way...

The inside track

First, a caveat: we've spent some time explaining major scales in different keys, so we're not going to go over the explanations again here. If this is all new to you then fluency may be still on its way: if so, have some earlier issues to hand, starting with **cm151**.

We've already considered how introducing one or more notes outside the prevailing scale may bring about a key change (and, complementarily, how a move into a different key might be thought of as requiring some of the notes of the scale to be raised or lowered), but in reality tonality can be a bit looser than that. The introduction of notes outside the original scale doesn't always mean that the

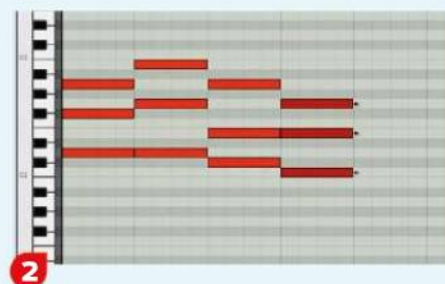


music is changing key. Once a tonal centre – a key or scale – has been established, you can indulge in a few 'colourful' notes outside that scale, yet still keep the piece in the original key.

Consider a piece that uses melodies and chords derived from D major. This kind of music is described as 'diatonic', which means that it's all in one key. Here, by way of illustration, is a short diatonic sequence in D:

D F#m G A

Fig 1 shows some inverted voicings for the chords that make them easier to play if you're pianistically challenged (D is the only chord in root position here). Play the sequence over with your left hand and doodle above it with your



1 A set of handy voicings for our diatonic sequence...
2 ...and a similar set with one chord out-of-key

right hand until you come up with a tune – you can use any or all of the notes of the D major scale, but some will sound better than others at different times. For example, you will soon discover that G sounds pretty foul if dwelt upon over the D or F#m chords, but fine over the other two. Likewise, D sounds good over D (of course!) and G but disagrees with F#m and A. These 'avoid' notes can be used fleetingly, as long as you keep moving. Why do you think they disagree so much with their respective chords? (The answer's at the bottom of the page.)

Staff notation special: Key signatures

So far in our musical examples we've put a sharp or flat before every note that needs raising or lowering. If you're notating a longer piece, writing in the same symbols over and over will quickly get tiresome. Instead, for pieces that stay in the same key for any length of time, musicians use key signatures. A selection of sharps or flats is placed at the beginning of each line, right after the clef, so that the instrumentalist knows to raise or lower all the notes at that pitch, creating the desired scale.

This may initially seem somewhat taxing on the player's mental powers, but reading musicians practise scales regularly and memorise all the key signatures. When an experienced reading musician sees a key signature, they immediately start thinking in that key, accessing appropriate hand positions or fingerings on their instrument.

Some examples of the more common key signatures are shown below. We'll provide a comprehensive list after we've investigated the mysteries of minor keys.

F major	F major with key signature
Bb major	Bb major with key signature
Can you figure out what notes are in these scales – and what key they are?	
Some common key signatures – and a little challenge	

Stretching the boundaries

You've just created a diatonic melody over the chord sequence. Now let's try adding the odd colourful note. Musicians call such notes 'chromatic' (as contrasted with diatonic), which means that they're notes that don't belong to the prevailing scale. Let's stick in a lowered seventh: C instead of C#. This note sounds lovely when added over the D chord (making a D7 sound), but not so great with other chords, so use the diatonic seventh (C#) for everything else.

Now let's go a step further and change the sequence a little to really accommodate our outside note:

D G A C

In this variation of the sequence (see **Fig 2** for voicings) the first three chords lead the listener to expect a progression in D, so the out-of-key C chord comes as a pleasantly mild shock. That's where you'll be using your chromatic C natural in the melody. Keep using the diatonic note C# over the other chords. As long as the sequence repeats, the tonality will still be heard as D, despite the chromatic notes.

The reason that we chose C as our first chromatic note is to do with its relationship to D major. One of D's next-door keys is G, and this scale features C. This idea of borrowing notes from close neighbour scales is the best place to start in your exploration of chromatic notes and chords. We'll look at that subject in more depth next issue. **cm**

Avant Downtempo

Move beyond safe composition and push electronic genres to their limits with rachMiel's guide to creating boundary-breaking avant tracks

rachMiel



rachMiel has spent the better part of a decade studying composition in America and Germany. A recovering atonalist,

his musical influences range from Frank Zappa, Karlheinz Stockhausen and North Indian classical drumming to 60s pop, horror movie soundtracks, avant electronica and, above all, silence.

> Welcome to the first of six Off The Dials on creating avant variants of popular electronic music genres. I'm going to kick things off by 'avant-ifying' downtempo music. The other genres I plan to avant-ify are hip-hop, dubstep, techno, drum 'n' bass and house. Together, these represent a cross section of contemporary electronic music.

Before we dive in, let's nail down two key terms: 'avant' and 'genre'. Merriam-Webster defines genre as: "A category of artistic, musical or literary composition characterised by a particular style, form or content." So, a genre is a set of pieces similar in one or more parameters: style, form, content, tempo, sound, feel and so on. Some genres are fairly homogeneous: house always sounds like house, no matter what the subgenre. Others are quite heterogeneous: downtempo draws from jazz, ambient, dub, IDM, electronica, glitch, trip-hop and even new age.

Genre is a bit of a loosey-goosey term, but 'avant' is even more so. The French 'avant garde' - from vanguard, meaning the leading edge of soldiers marching into battle - indicates newness, invention and innovation. But avant goes further, implying boundary-thwarting experimentation with highly unconventional results. So 'avant genres' are out-there (de)interpretations of established musical genres. How cool is that?!

The essence of downtempo

You could choose to avant-ify the surface trappings of a genre: its characteristic hooks, idioms, turns of phrase. Or you could strive to

go beyond the surface and avant-ify the very essence of the genre. To do the latter, you must first divine the genre's essence (see boxout below). I used my patented HAL process - History, Attributes, Listening - to get at the essence of downtempo electronic music.

Downtempo arose in the 90s as a low-energy, laid-back foil to high-energy, in-your-face 80s electronic dance music (house, techno, trance and so on). Club dwellers would retire to the chill-out room for the three up's - resting up, lighting up, hooking up - to a background of chilled mood/head music. Downtempo's roots include trance, electronica, ambient, reggae, dub, soul and jazz. Its key attributes include slow(ish) tempo, low(ish) energy, a cool, relaxed vibe, sensuality, broken beats, relative sparsity and appeal to the head more than the body.

In terms of listening, chances are you've already heard a ton of downtempo music. But to broaden (and hone) your palette, check out the classics: Pink Floyd, Popol Vuh, Brian Eno, Balearic Beats, Orb, Enigma, Deep Forest, William Orbit, DJ Shadow, Massive Attack, Portishead, Thievery Corporation, Kruder & Dorfmeister, Fila Brazillia et al.

Avant-ifying downtempo

Once you've divined the essence of a genre, the real fun begins: avant-ification! (For inspiration on how to avant-ify, see *Avant-ifying a genre*, right.) I begin by compiling a list of what I feel to be the most essential aspects of downtempo: low(ish) energy; slow(ish) tempo; laid-backness; chilled mood/head music; roots of trance, ambient, dub, soul, jazz; relaxed vibe; sensuality; broken beats; relative sparsity. Next, I push (and at some points shove) these elements beyond their genre-conventional limits.

"Avant goes further than avant garde, implying boundary-thwarting experimentation with highly unconventional results"

Divining the essence of a genre

One of the crucial steps in avant-ifying a genre is divining the essence of that genre. Don't underestimate this process: it's a real challenge to get at the essence of something as diffuse as a musical genre. Hence I call this practice 'divining', because it's as much an act of magical insight as scholarly research.

There's no right or wrong way to divine a genre's essence; you must find your own unique approach. After mulling it over for a

long time, I've decided to take a three-step approach in this series of tutorials: research the genre's history, learn its characteristic attributes, then listen to a broad sampling of songs in the genre (and related subgenres).

Historical research will give you a sense of the genre's ancestry - its stylistic roots. This is particularly important for genres, since they exist almost solely in relation to their musical forbears. After you've understood

how the genre was born, coming up with a list of its characteristic attributes lets you home in on its core musical personality. But most important of all is the last part: listen! Steep yourself in music of the genre (and related subgenres) for a period of time. Get the sound, the feel, in your head and body. That's the HAL approach to genre-essence divination: History, Attributes, Listening. Give it a try!



Audio examples from the walkthrough are in the Tutorial Files folder

>Step by step

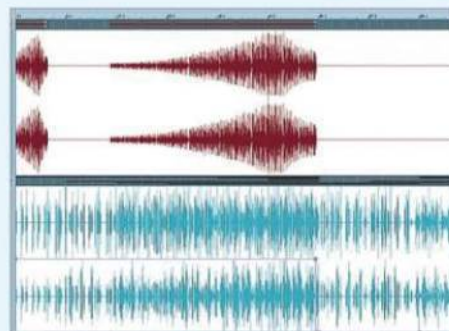
Composing an avant downtempo track



1 > I begin my avant downtempo piece by creating a kinky little multi-layer beat (**Beat.wav** on the DVD). I use a customised perversion of the Reaktor ensemble Massive (not the NI synth of the same name) to generate each of the noise-rich layers. In keeping with my divined downtempo essence, this beat is slow(ish), sparse, broken and very cerebral.



2 > To warm up the rather icy beat, I create a jazzy bass part by taking an acid jazz-plucked upright bass sample and avant-ifying its meter, pitch and playback direction. I end up with two loop variants, each in the meter of 6/4 (sort of). The only difference between them is that the second half of the second loop is played in reverse: **Bass.wav**.



3 > The bass loops are quite conservative. Sure, the second one has a cool reverse segment and the melodic rhythm is a bit odd, but that's about it for avant-ification. To fix this, I decide to go polymetric and have the 6/4 bar of the bass loop play in the time of 5/2 with respect to the beat. Here's the result from the final mix: **Beat+bass_mix.wav**.



4 > After listening to the beat 'n' bass mix many times, I decide that the piece needs a foreground lead-ish layer. Not a testosterone-gushing guitar/synth lead, but something in keeping with the fragile beat 'n' bass edifice. So I turn to my Reaktor ensemble LazyBoy and create a set of variants on a Renaissance ditty sung by soprano Bess Phillips: **Voice_components.wav**.



5 > Next I take the nine LazyBoy-ed fragments of wonderfully sensual soprano voice, loop them and arrange them in what I feel is a compelling sequence. I like the sound of Bess's voice playing with itself, so I overlap the beginning of each loop with the fading-out tail end of the previous one. Here's the result: **Voice_mix.wav**.



6 > After mixing down the three layers (beat, bass and voice) in Acid, I turn to my favorite set of mastering plug-ins: the Wave Arts Power Suite. In this case, the final mix needs very little mastering: just a bit of EQ (ultra-low frequency cut, slight boost at around 7500Hz) and limiting (to increase volume/presence). Take a listen to the final avant downtempo track: **Dessicate.wav**. Enjoy!

Experimentalists' corner: Avant-ifying a genre

Once you've arrived at the essence of a genre, you can dive into the delightfully perverse act of avant-ifying it. How do you proceed? Well, pioneers, that's up to you! You can take the left-brain approach: list all of the aspects of the genre that you want to avant-ify, use your powers of compositional reasoning to figure out methods/techniques to do this and then have a go at it. Or you can take the right-brain approach: feel

your way through the avant-ification process; rely on your compositional instincts. Alternatively, you can go for a hybrid, a mix of intellect and intuition.

What does it mean to avant-ify a set of musical attributes - ie, a genre? The textbook definition of avant (as in avant garde) is: new, inventive, innovative. But that only hints at what deep avant-ification entails. The real thrill of the avant lies in its

extremeness. It's not merely new, it's shockingly new; not merely inventive, but monstrously inventive. It's music not of this world, a transmission picked up from a distant galaxy: Krell music. The French have a beautiful word, *outré*, which means beyond the boundaries of convention, fashion and taste. For me, avant music dwells in the realm of the *outré*. So push yourself; make 'safe' a distant memory.cm

Modulation misappropriation

Want to design otherworldly noises like the sonic adventurers of the 70s? Install a modular synthesiser and get creative



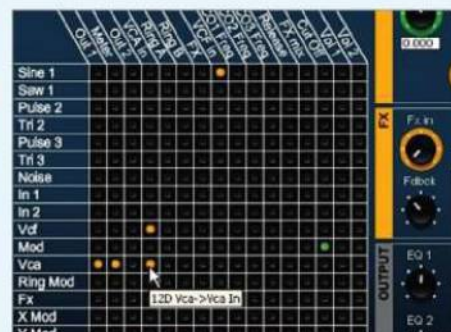
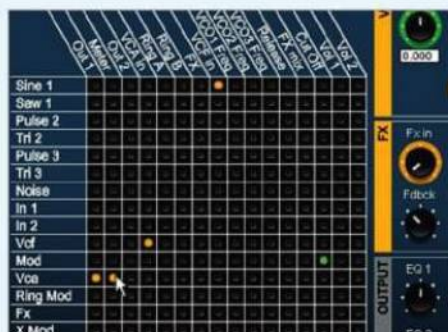
> Longtime readers will already know of my fondness for the legendary EMS VCS3. That diminutive modular marvel was at the heart of some of the very first electronic music that I heard. From the spacey bleeps, whizzes and roars in Malcolm Clarke's groundbreaking soundtrack for the *Doctor Who* serial *The Sea Devils* to the groaning gasps during the fadeout of Roxy Music's *For Your Pleasure*, the soundtrack to my youth and my interest in electronic music was forged on a push-pin matrix.

If only I had known how very important that matrix actually was to the sounds of my imagination! You see, my first synths were all of the hardwired variety. I had Rolands, Moogs, Ensoniqs and more, but no truly modular instruments. The signal paths were set in stone and followed the standard set forth by the venerable Minimoog: a couple of oscillators through a low-pass filter, modulated by an envelope or two and one or more LFOs. Most of the sounds one expects from a synthesiser could be generated with this

standard arrangement, but some of my favourite sounds were impossible to achieve. Only later, when I bought my first modular synthesiser, did I find out why that was.

It turns out that some of the sounds I found most exciting were made by modulating oscillators using unlikely sources. Most of the synthesisers I had used previously offered little in the way of modulating pitch. Fortunately, you don't have to splash your cash on a vintage EMS instrument in order to get the same kind of sounds! Grab a plug-in for nothing instead.

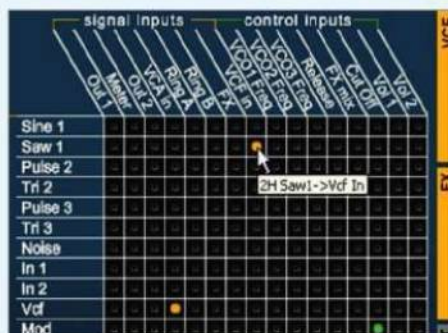
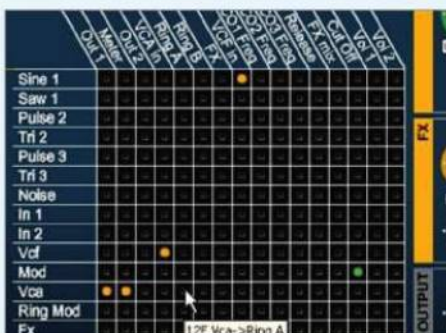
>Step by step Making noise with a modular synthesiser



1 > You can get the next best thing to the original VCS3 for free in the form of KX-Synth-X16 (available for download from kx77free.free.fr). As it happens, the waveforms used in the plug-in were resynthesised directly from my very own VCS3! Once it's installed, fire it up and call up the preset **POLY-INIT**.

2 > The synthesiser isn't making a very exciting noise, but this is just a starting point. There are a few patch points in the matrix. Outputs ('sources') are represented vertically, while inputs are arranged from left to right. As a quick example, locate the **VCA** output and patch it into the meter. When you play a note, the VU meter's needle should move.

3 > Note that the **VCA** is still patched into **Out 1**. Part of the matrix's power is its ability to patch multiple sources and destinations together simultaneously. You can even patch a source into itself! This is the secret to the sounds I had heard in my youth and failed to create with fixed-signal path instruments. Try patching the VCA into itself to hear what I mean.



4 > Have a play around with the sound. You're not going to get this kind of thing from a Minimoog. A modular or semi-modular synth offers all sorts of interesting possibilities. Do be careful when experimenting in this way: volumes can jump suddenly, potentially damaging your speakers or ears. Once you're done, disconnect **VCA** from the **VCA in** input.

5 > Now that we've got a basic idea of what we can do with the matrix, let's get to work on a tuned-noise musical effect. We're not going to use noise, though: we're going to use the mod matrix to patch something a lot more flexible. Currently, we can hear a sine wave from VCO 1. Disconnect the **Sine 1** output from **VCF in** and patch **Saw 1** through it instead.

6 > If you try to play a note now, you won't hear anything at all. That's because KX-Synth-X16's oscillators offer control over the gain level and waveshape of each waveform, just like the real deal. You'll have to turn up the volume of the **Saw** waveform in the **VCO 1** section to hear it. I've turned mine up to **6.60**. This produces a much richer sound.

PRO TIPS

LOOK FURTHER

The technique I describe in this tutorial can make a fine substitution for white or pink noise; I find it more interesting than the average noise generator. It can also create some nice tuned-noise patches and even serve as the basis for whooshing wind and surf sounds, burbling liquid tones and a lot more.

RECOMMENDED LISTENING

VINTAGE DOCTOR WHO!

The 70s saw the show's soundtracks filled with EMS sounds, from spaceship doors to futuristic weapons. The *Sea Devils* serial is well worth watching.

ROXY MUSIC: ROXY MUSIC

Self-described "non-musician" Brian Eno created sonic adventures on the VCS3. Let your ears loose on *Sea Breezes*, *The Bob*, *Ladytron* and *Remake/Remodel*.

BUSTING JARGON

LFO

Short for Low Frequency Oscillator, an LFO is exactly that: an oscillator pitched below the lower threshold of audibility. You can't hear it playing as a distinct tone - rather it works as a periodic modulation source that can be applied to filter cutoff, pitch or amplitude to create rhythmic effects such as tremolo, vibrato or wah-wah.

PIN MATRIX

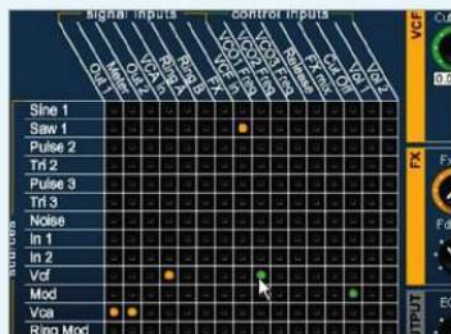
I keep referring to the grid-style modulation matrix as a pin matrix. That's for a very simple reason: the original EMS synthesizers had a push-pin matrix. Looking very much like the one we're using in this tutorial, the actual EMS matrices came bundled with a handful of push-pins, each with a different resistance. A pin would be inserted into the matrix to make connections between modules.

Scot Solida



Scot bought his first synth over a quarter of a century ago. A synthesist, sound designer and audio engineer of international repute, he's provided factory presets for many of the music software industry's most

acclaimed synths, samplers and drum machines, not to mention the **cm** Studio. On rare occasions, he manages to find time to make records for Beta-lactam Ring Records under the name Christus and the Cosmonauts.



7 > While the VCS3's oscillators are unique when put under the oscilloscope, most modular synths can produce similar if not exactly the same sounds. It's what you can do with them that makes this kind of instrument so cool. Note that the VCO is routed into the VCF. Let's get a little strange: route the **VCF** output into the **VCO1** input.



8 > As you can hear, the result bears some resemblance to noise, but it's not anywhere near as uniform as the sound produced by a noise generator. It's not terribly dynamic, either. Let's look to the **VCF** (filter) section to solve this problem. Turn the **Cutoff** up to **4.82** and the **Res** up to about 3 o'clock. Things should now sound a little more controlled.



9 > Any adjustment of the VCF is going to affect the frequency of our oscillator. This adds some unpredictability to proceedings, but that's one of the things I like best about the VCS3! While you're messing about in the filter section, turn the **Kbd** knob down to around **0.059**. This reduces the effect of the incoming MIDI note pitch on the cutoff.



10 > Let's turn to the **MOD ENV** section and adjust the envelope that's modulating the VCF. It's already properly routed in the matrix. Set the **Attack** to **0**, **Decay** to **5.21**, **Sustain** to **4.77** and **Release** all the way up. This will cause the filter to open instantly, then reduce to a median steady-state level after the decay period. This sounds a lot more interesting than plain white noise!



11 > I want to create a more percussive effect, so it's off to the **VCA ENV** section. Reduce the **Attack** to **0** as before but this time set the **Decay** to **9.43**, **Sustain** to **0.000** and **Release** to **8.61**. This creates a cool sound that would make an ideal backbeat. The patch itself is quite flexible, too. Try different **Cutoff** and **Kbd** settings for drastically different effects.



12 > For the ultimate retro sci-fi sound, route the VCA through the **FX** section and apply a very short delay with lots of feedback to the signal. You'll have to turn the **Fx In** knob up to hear the effect. While you're there, set the **Fx Mix** to about 11 o'clock for a decent balance between wet and dry signals. And that's it - a seriously out-of-this-world sound! **cm**

LORN

Championed by Mary Anne Hobbs and influenced by Aphex Twin, the enigmatic Lorn is hitting the big time with his distinctive, brutal and epic electronica. We meet a man making music with his demons

> Lorn is an uncompromising artist whose debut album *Nothing Else* treads dark and varied paths across several electronic music genres. The BBC described it as “a pain unique to the darker corners of contemporary electronica” while *Dusted* called it “a symphony of wow, flutter and wrenching crescendos of noise – so deep and detailed, you’ll want to respin it in slow motion.”

We can conclude, then, that this is the darkest of matter – but such is the force of the Lorn sound that it’s already invaded the more mainstream media. Tracks have been appearing in *Little Big Planet 2* and *Top Gear* while his remixes have graced the likes of *Splinter Cell: Chaos Theory*. It just goes to show that we all enjoy a trip to the dark side once in a while...

Below the radar

Lorn got into music very early on and still cites – get this – a children’s Rapmaster 3000 keyboard as an early inspiration. “I still own it” he says, “and I’m guessing that whole experience really stuck with me.” While living in Chicago he got into turntablism – but as you might guess from his sound, he didn’t follow an obvious path.

“Hip-hop was disappointing to me then, so I started making my own beats with Microsoft Wav Recorder, Hammerhead, ACID Pro, FruityLoops, Reason, then Logic, in that order. At the time I was very much inspired by the sounds of drum ‘n’ bass (Technical Itch, Dom & Roland), techno (Drexciya, UR) and IDM (Aphex Twin).”

Nowadays, nearly every artist has a page where fans can listen to tracks for free, but when Lorn was looking for his big break, such sites didn’t exist. He found success through file-sharing, but had to do things a bit differently:

“When I was 14 there wasn’t Facebook, Twitter, SoundCloud and YouTube, and if MySpace was around, it definitely wasn’t big,” he says. “But I’ve given out my songs for years now: short ideas, loops and so on. You had to do a bit of digging back then, so I put them on web forums, linked to them in chatrooms, sent them through instant messengers and posted the occasional physical demo. File-sharing really started to boom and I gained a worldwide following early on with lots of support from French DJs and musicians. Eventually I reached out further and gained support from The Gaslamp Killer, Mary Anne Hobbs and guys who were also coming up at the time a few years back, like Nosaj Thing and Low Limit (Lazer Sword). Then Flying Lotus signed me to Brainfeeder.”

As sharing his music got him his break, it’s no surprise that Lorn is adamant we should all follow suit. “Just do it,” he says. “The technology is here and easier than ever to access. After that, just learn it in your own way and run with it. Share your productions, meet other musicians, reach out, fail, keep going... You really can’t go wrong. It is all an endless process. I love this shit; you might too. Start now so that we can share some 40oz malt liquor before the gig we’re both billed for down the road.

“Listen to your gut, follow your heart, trust your instincts – whichever of those clichés works for you,” he continues. “I used to dream of holding a disc with my sound literally carved into it. I can only speak for myself, but I’ve believed in music and my ideas through ups and downs, financial terror, creative plateaus or lulls and internal violence for nearly a decade – and it is starting to pay off monetarily. In summary: work hard, take chances, and be patient.”

Which brings us to *Nothing Else*, Lorn’s debut for Brainfeeder. Why is it so dark? “I wrote the first version over a span of three years while living in Manhattan, Brooklyn and up north in Wisconsin,” he says. “There are a lot of troubling things buried in my past and frankly I just started giving a shit about it. There’s a lot of conflict in the record – a lot to overcome, disconnect, uncertainty and a bit of sheer awkwardness.”

One influence giving Lorn’s sound a unique twist is impossible to emulate: his ears. “I’ve got very little low end in my left ear and hardly any high end in my right ear, so my sound, as I’m told, has a bit of a curve to it in terms of the sonic range.” Surely he must use some really high-end kit to compensate for his hearing problems? “My album was written on a pair of discount computer speakers that I found at Wal-Mart in Wisconsin! I A/B’d it between those, a broken pair of Bose Quiet Comfort 2 headphones and the system inside of a GMC Envoy.”

Deliberate mistakes

Now that the subject of tech has come up, it’s time to get into the nitty-gritty of how Lorn produces his sound. He’s used a lot of different DAWs in the past – has he settled down yet? “For the past five or so years I’ve been using Logic Pro alongside Soundtrack Pro,” he says. “Both are essential workstations for me.”

Lorn identifies his favourite plug-in as IK Multimedia SampleTron. “It’s a great synth that draws me in the most because of its immense, fully editable sound library that features old, new and rare recordings from the Mellotron,” he explains. “Everything has such character, and the plug-in itself lets you control layers, speed, harmonics, EQ, portamento and much more.”



"I've believed in my music through ups and downs, financial terror, creative lulls and internal violence for nearly a decade - and it's starting to pay off"

Every time I open the thing I get inspired. Another one of my favourites is AudioRealism's ABL Pro - a suite of great-sounding generators and filters that can churn out some nasty stuff."

He has favourite effects, too, including Audio Damage Kombinat. "I use it low in the mix, layered under drums and/or bass for the most part, and it adds some great character," he reveals. "It has a simple interface but there's also plenty to mess around with if you're looking for a specific flavour of distortion. In the same vein, iZotope Trash is another one of my favourite distortion plug-ins that lets you target specific frequencies and layer them - perhaps even more comprehensively than Kombinat. What I use it for more consistently is mic placement and separation, which really helps when I want to spread something out in the stereo field."

But for Lorn, the best part about using different plug-ins is experimenting with settings and getting creative with a new set of tools. "I won't even bother with a manual," he says. "I just open it up and start making changes upon changes. It's like a Lego set, I guess - there are basic shapes and sizes and different colours, some fit and some don't, and you could build whatever ship/creature is pictured on the box or you could completely flip it and build your own grenade. Experimentation has always been a big part of my musical history and process, and I think it stems from organic learning. Trial, error and mistakes make software exciting for me."

His strategy for composing tracks echoes this interest in trial and error. "I've never really had a formula [to making music], but if anything strikes me or holds my interest at the time I'll run with it and see where it goes," Lorn explains. "I go back and build upon some tracks weeks, months or even years down the road. Because I'm constantly curious about the DAW and the internal/third-party plug-ins that I use, I'm always experimenting and making 'good' mistakes. There are tracks I've made that still leave me wondering what I even did, like *None an Island*. I can listen to it, break it down and even look at the project but the outcome remains pretty foreign. My computer, along with two external hard drives,

"There are so many possibilities that it can be distracting and overwhelming. I make better music when my resources are limited"

is pretty much a graveyard of dead ideas and failed realisations. I'd say that for every track I finish, there are 25 that I won't. Ever."

The low cost of technology nowadays is what has ultimately enabled Lorn to work in this way. Does he think today's tech is better than that of the past? "To produce, absolutely yes," he says. "As far as realising ideas, it's still a challenge. Either way, the personal computer is pretty ridiculous when I think about it. It's relatively cheap and so are the applications available. I've jumped around a lot between DAWs, and none of them were too painful to understand and build a workflow with. PC or Mac, the fact that I can turn on a machine and draw my ideas into sound is still baffling to me. However, there is a drawback. I think that the computer is an enabler. It lets you doubt and undo, and create new versions and edits until - personally - I get fed up with an idea and abandon it, keep it going, or simply let it rest as it is. Computers remember and sometimes I just don't want to..."

Battle of the mind

Perhaps Lorn isn't always happy with having so much power available at his fingertips? "It's pretty ridiculous," he confirms. "There are so many possibilities that it can be distracting or even overwhelming at times. Personally I think I make better music when my resources are limited, so my next goal is to stick to the essentials and let it rip. Having five projects

open, loaded to the gills with plug-ins, audio recordings and automations alongside iChat, Skype, a DVD and a browser running in the background is not all that productive."

While Lorn might not always find it easy to work with a complicated setup, does he see it as a good thing overall that music technology is now available to all? "Absolutely. It's easier than ever to access, learn and exploit technology. There's a lot of noise to shuffle through: garbage products, gimmicks and derivative music. But I guess as long as people are making music, whether I like it or not, it can't be a bad thing."

It could be this idea about the inherent goodness of music production that makes the future according to Lorn less bleak than most of the industry sees it. While he used file-sharing to promote his own sounds, Lorn believes that saturating the market with free products could change the landscape and tilt it backwards...

"No matter what, as long as there is commerce, there will always be money to be made in music, art, film, theatre and anything else humanly crucial. In terms of free or illegally distributed/obtained music, there's nothing really to stop it except itself. I think that fully available content will reach such a point that it's completely removed of its romance and becomes, frankly, perverse. 1s and 0s squashed through speakers, images flashing on a screen - an alien 'must-have-it-now', intangible thing. I think that's why vinyl is still alive, tapes are being made, even CDs are in regular production - we still quietly understand the romance of something that can bend, break, wear or lasts with care: something that is real."

Lorn is just about to release a follow-up EP to *Nothing Else* and is also working on a second Omega Clash EP, his collaboration project with Adoptahighway. "Further in the future," he adds, "there's lots of focus and energy to put into my second album in 2012, plus writing a few theses on music and sound. And then [I want to] establish myself as a musician who scores full-length films, then go onto directing and scoring a few that I've already started writing over the years. Music never ends." **cm**

Nothing to declare

Some people fear taking computers on stage because they think they're unreliable; some perform PC-less because they're scared of breaking them; and some, er, don't even manage to get them to the venue...

"Honestly, the biggest challenge of all is getting my computer, controller, power supplies, cables and adaptors through airport security while I'm on my way to a gig. Nine out of ten times I get stopped to have my bag searched after the agent monitoring the X-ray machine spots a row of machines with buttons, knobs, screens and dozens of cables and adaptors packed inside some clothing. They either panic and call out for their supervisor or they whisper secretly to their closest colleague - who always, every single time, without fail, looks at me with their best 'stern' face and asks, verbatim: 'Is this your bag, sir?' Then they dig through it, rescan stuff and wipe it down. But that's just part of it all, I guess."



Lorn's gear

Ableton Live
24" Apple iMac, "with about 3TB in storage"
Apple Logic Pro 9
Apple Soundtrack Pro 2
Akai MPD24 controller
EDIROL PCR-50 MIDI keyboard
IK Multimedia SampleTron
M-Audio Ozone2 MIDI keyboard
Native Instruments Maschine controller
Propellerhead ReCycle
Tapco Blend6 mixer
Shure SM58 microphone,
JVC TD-W106 and TD-W305 cassette decks and now two
KRK RP8 G2s monitors (to replace the Wal-Mart ones!)
Plus "way too many plug-ins..."

Inspiration time

Lorn can be dark, but his music contains humour and honesty, too. Just check out what inspires a typical track...

"A lot of buried memories," he says, "but a lot of the music comes from places I have yet to fully realise or even understand. For example, with the track *Automaton* [which appeared on *Little Big Planet 2*], it came from a dream where I was looking through the sliding viewer of a large steel door, watching some man plummet down some endless pit. He kept falling and falling, but appeared still as I was watching him - so stationary. At times I could see the terror in his eyes, and sometimes I'd take a step back to find these giant grinning automatons drumming away, either to scare the shit out of him or to be his guide down the abyss. For that track, and many others that are based on my dreams, I worked to recreate both the scene and experience."

> make music now / win u-he software

\$1650

of u-he gear
up for grabs!

Win Zebra, ACE, Uhbik,
Filterscape and MFM2!



COMPUTER music

> competition

You-he, we-he - we all love u-he! Heck, man, we just can't get enough of Urs Heckmann's software, and it could all be yo-urs with this issue's competition, whereby two winners will each receive every u-he product!

Zebra 2.5 (10/10, **cm108**) is u-he's best known effort, being a 'wireless' modular synth with subtractive, FM, additive and wavetable synthesis, 19 filter types, 16 effects and more. If Zebra's wireless nature unnerves you, why not turn to **ACE** (10/10, **cm149**)? With this synth, virtual cables can be patched just about everywhere, oscillators used as LFOs, and a whole lot more.

How about some effects with that? **Filterscape** is a semimodular monster with EQ, delay and filtering, while **More Feedback Machine 2** (9/10, **cm123**) stuffs bonkers effects into delay feedback loops. Last but not least, there's the **Uhbik pack** (10/10, **cm139**), comprising nine world-class effects plug-ins.

HOW TO ENTER

To enter, send a text to **87474** containing: the keyword **UHE**, followed by a space, then **A**, **B** or **C**, then another space, then **your email address**. Alternatively, you can go online and use the form at www.futurecompetitions.com/cm156 to enter the competition. Entries must be received between **August 25 2010** and **September 26 2010**, and only UK residents aged 18+ may enter.

The question

ACE is a...

A. Semimodular VA synth
Text: **UHE A** your.email@address.com

B. Supernodular CV sampler
Text: **UHE B** your.email@address.com

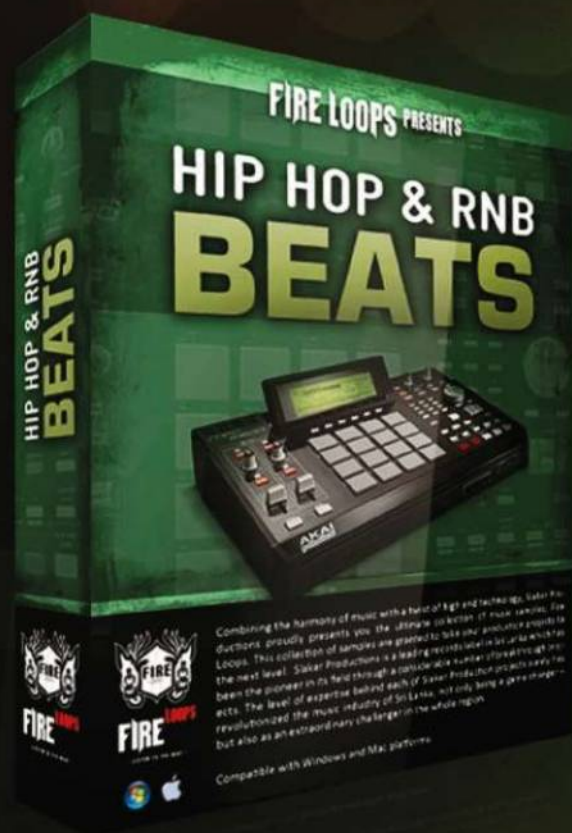
C. Semiskimmed LF filter
Text: **UHE C** your.email@address.com

TERMS AND CONDITIONS By entering this competition you are agreeing to receive details of future offers and promotions from Future Publishing Limited and related third parties. If you do not want to receive this information, please text the word STOP at the end of your message. Texts will be charged at £1.00 plus your standard network tariff rate. The winners will be drawn at random from all entries that answer correctly between 25/08/10 and 26/09/10. Winners will be notified within 28 days of the closing date of the competition, and will then be sent their prize free of charge, to a UK delivery address that they must supply. Only UK residents aged 18 and over may enter. No employees of Future Publishing Ltd or any company associated with this competition, or any member of their close family may enter. Prizes are as stated and no alternatives, cash or otherwise, are available. Future 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. Future 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 Future Publishing Ltd, 30 Monmouth Street, Bath, BA1 2BW.

LOOKING FOR BEATS?

HIP HOP & RNB BEATS

INTRODUCTORY PRICE: \$33.95



If you are a keyboardist / guitarist / singer / MC who is tired of going through thousands of construction kits, just to find a good beat to groove along with; this is the sample pack for you. When you are inspired to make the next billboard hit with a perfect hook, don't let the beat get in your way.

Over 500 beats (4 bar) in 24 bit audio. A staggering 3.4 GB collection (1.3 GB WAV / 1.3 GB AIFF / 800MB REX) this is one of the largest Hip-hop & Rnb beats collections of all time.

This collection of beats is available in 24 bit quality WAV, REX, AIFF formats. Get yours now for the Fire loops special introductory price of \$33.95. Visit www.fireloops.com to get a FREE demo sample pack of "Hip Hop & Rnb BEATS" collection.

DANCE BEAT & BREAKS



Fire loops presents the ultimate dance beats & breaks collection featuring over 550 loops in 1.3 GB of 24 bit audio. Includes beats for all genre's including Electro, Glitch, House, DnB, Techno.

\$33.95

URBAN PERCUSSION LOOPS



Over 340 percussion loops in 600MB of 24 bit audio. These percussion loops are played & edited to match perfectly with urban styles of Hip Hop, Rnb, Tribal, House & DnB.

\$19.95

ELECTRO HOP



Includes 11 construction kits with 140 loops in 600MB of 24 bit audio. The pack features analog synths with analog beats created using the most sought after analog gear.

\$9.95

DIAMOND RNB PACK 01



11 construction kits containing over 166 loops of beats, keys, bass & guitars. Made using the best quality equipment in the game especially for fans of smooth Rnb.

\$9.95



www.fireloops.com

VISIT US FOR THE LATEST & THE GREATEST SAMPLE PACKS & FREE DEMO SAMPLE PACKS


**DVD
INSIDE**

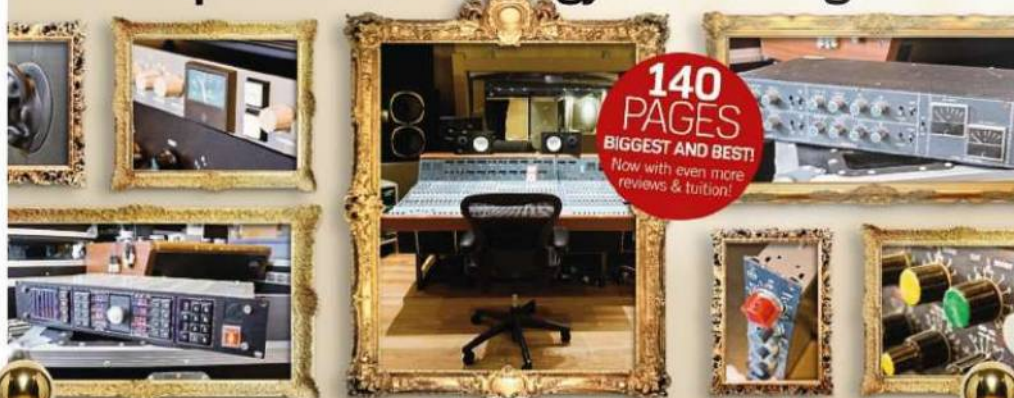

**D.Ramirez
& Steve Duda**
 Get perfect drums. Watch them
make killer beats on video

1682
NEW SAMPLES
 Future Garage instruments
Ambient loops **AND MORE**

IN THE STUDIO
Patric La Funk
EXCLUSIVE VIDEO Steal his
tricks while he makes a track

FutureMusic®

Technique and technology for making music



**140
PAGES**
BIGGEST AND BEST!
 Now with even more
reviews & tuition!

THE EXPERT'S GUIDE TO

Studio Classics

Hands-on with the masterpieces behind today's music
 Exclusive insight, expert tips **PLUS** Hear them on DVD!

HOT NEW DJ TECH REVIEWED

Pioneer DJM-2000 & Novation Dicer

Meet the cutting-edge kit
that'll transform your sets

TIPS FROM THE PROS

Expert Ableton
Master Live's mixer section

Cubase Class
Produce a full live
Get Dist
How to use



**SEPTEMBER ISSUE
ON SALE
NOW!**

**AVAILABLE IN STORES
AND ONLINE**

MYFAVOURITEMAGAZINES.CO.UK

FutureMusic®

Technique and technology for making music

Future Music is the mag for the latest gear and how today's cutting-edge music makers use it.
 We've been making the future since 1992. Make sure that you're part of it.

cm/reviews

The latest computer music gear tested and rated!



98_ PROPELLERHEAD REASON 5

Version 5 of the groundbreaking software studio is here, but have the Props done enough to keep up with the Joneses?



104_ SLATE DIGITAL FG-X

A compressor to massage your mixes and a newfangled loudness maximiser to make them (at least) as loud as Hell



106_ CAKEWALK V-STUDIO 20

An audio interface, control surface, guitar amp sim and DAW, all in one pint-sized package

This month

- 98_ Propellerhead Reason 5
- 102_ Steinberg HALion Sonic
- 104_ Slate Digital FG-X
- 106_ Cakewalk V-Studio 20
- 108_ Softube Tube-Tech PE 1C
- 109_ Expert Sleepers Spectral Conquest
- 110_ Roger Linn Design Adrenalinn Sync v2
- 111_ Artificial Audio Quartz
- 112_ EastWest Hollywood Strings
- 106_ Mini Reviews
- 110_ **cm** Recommends

Our promise

We bring you honest, unbiased appraisals of the latest computer music products. Our experts apply the same stringent testing methods to all gear, no matter how much hype or expectation surrounds it.

What the ratings mean

- 1-4_ A seriously flawed product that should be avoided
- 5_ This product's problems outweigh its merits
- 6_ A decent product that's only held back by a few flaws
- 7_ Solid. Well worth considering
- 8_ Very good. A well-conceived and executed product.
- 9_ Excellent. First-rate and among the best you can buy
- 10_ Exceptional. It just doesn't get any better than this!



Awarded to products that challenge existing ideas and do something entirely new



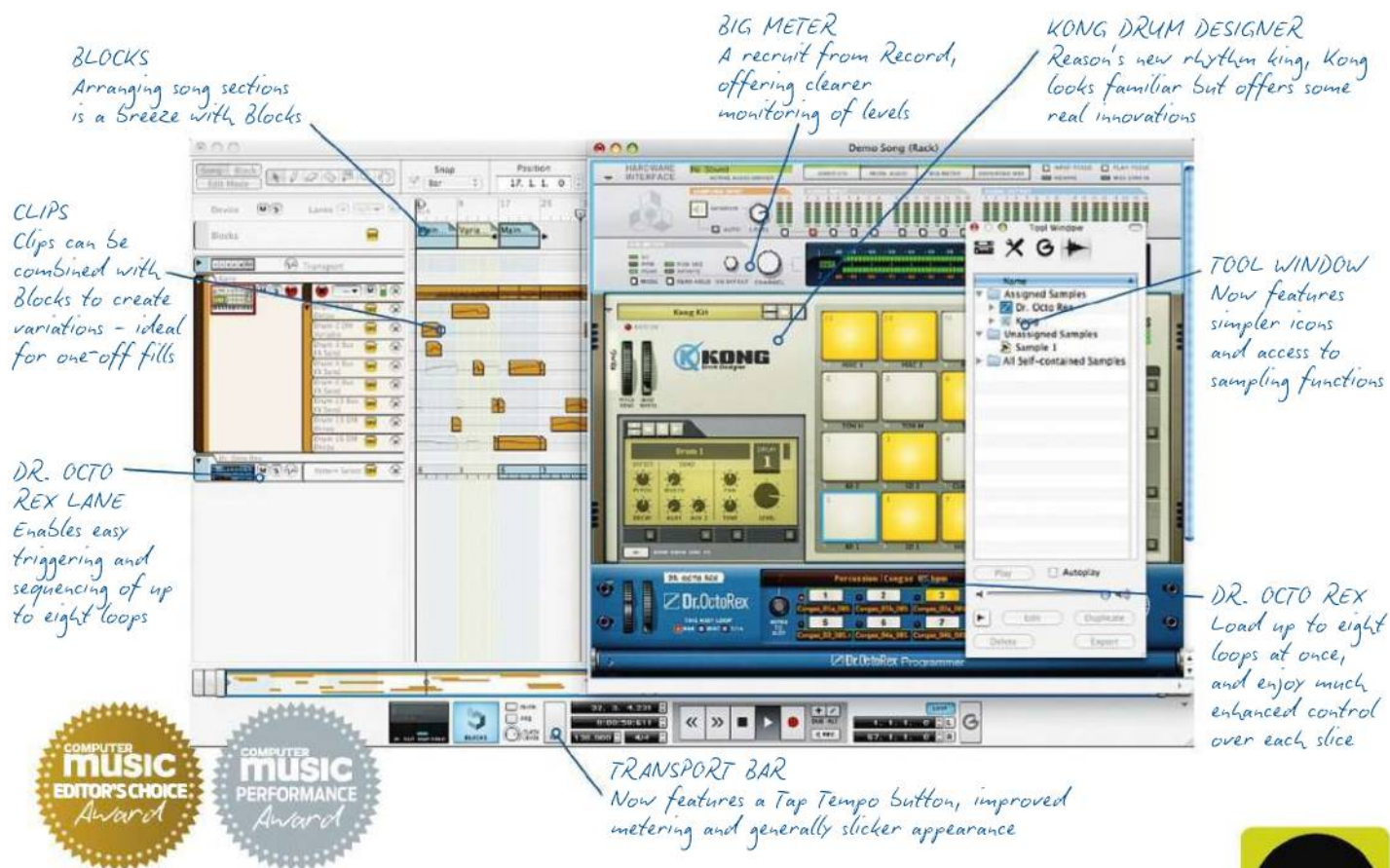
A product has to really impress us with its functionality and features to win this one



If the product exceeds expectations for its price, it will receive this gong



In the opinion of our editor, the best product reviewed in the magazine this month



Propellerhead Software

Reason 5 £300

PC MAC



This classic virtual studio has been refurbished and taken delivery of some killer new kit. Say hello to Kong, Dr. Octo Rex, Blocks and more...

System requirements

PC Intel P4/AMD Athlon XP 2GHz,
1GB RAM, Windows XP/Vista/7, 3GB
hard drive space

Mac Intel CPU, 1GB RAM, OS X 10.4,
3GB hard drive space

> Reason has been a firm favourite with **cm** readers (and writers) since its original release a decade ago. Not just a virtual studio in concept, it offers a literal representation of a traditional MIDI studio, revolving around a simulated rack to which a huge range of devices can be added. Effects, synths, samplers, drum machines, mixers - all can be dropped into the rack and connected as you see fit by flipping around to the rear of the units and plugging virtual cables into their I/O ports. Sequencing is pretty much the only part of Reason that's not tied to the rack. Unlike almost all modern music applications, there's no third-party plug-in support - and there likely never will be, although you can connect Reason to other apps via the ReWire protocol.

Now Reason 5 is here, and following what seemed like an eternity tinkering with the restricted beta build, we're finally in possession of the finished, boxed version. You can check out *The cm Guide To Reason 5* on p24 to find out how it all works, but is it really any good? And are there any hidden drawbacks? That's what a review aims to uncover, so let's get to it...

If there's one new feature that has our pulses pumping the most, it's the Kong Drum Designer. Each of its 16 pads can control any of 16 drum channels, each of which holds its own sound source module. The one you'll probably use most is NN-Nano, a stripped back version of the NN-XT sampler. The other modules are Nurse Rex (a mini Dr. Rex) and seven synthesisers, covered in *Different drum* over the page.

Tip of the hat

Each pad can be assigned to any drum channel and also bound to one of four 'hit types'. Sound modules respond to these; for example, Synth Hi-hat offers closed, open and two intermediate positions. NN-Nano's hit types, meanwhile, are four discrete multilayered setups. For Nurse Rex, hit types can fire off a loop, slice or slices. There are also pad-level Link and Alt group, level, pan, tone, decay and pitch controls, and two external sends and internal Bus FX send.

Oh, and then there are the effects! Each pad has two slots, for one of nine effects or an additional tone or noise generator. Our favourite is the Overdrive/Resonator, but the Rattler

comes a close second. We'd like to have the effects in the Reason rack too, but for now, you can route signals through Kong. There's also a send effect slot (eg, for reverb/delay) and a master slot for compression, etc.

The small Q buttons positioned adjacent to most of Kong's parameters select them for Quick Edit mode, whereby all 16 pads display relevant controls. For example, hit the Q button next to the Pan/Level knobs and each pad turns into a mini X/Y pad for instant editing of pan and level. It's a fabulous system.

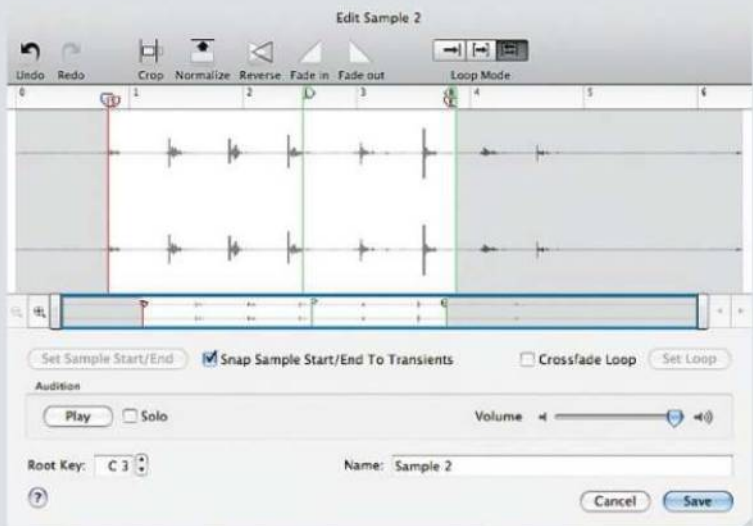
There are a few omissions, though: when loading multiple layers, there's no automatic velocity mapping, and Kong lacks the seemingly obvious per-pad delay/offset function. But overall, it strikes the right balance between power and immediacy, and on the back panel, you'll find every connection you might need.

The other new device is Dr. Octo Rex. This backward-compatible replacement for Dr. Rex allows up to eight loops to be loaded at once. However, the variations you can now achieve with a single loop can make you forget you have eight to play with!

Rock around the Blocks

Perhaps the best feature debuting in Reason 5 is Blocks. This is a way of defining blocks of arranged material, ie, clips and automation. They appear in the sequencer as a single track, and you can define and use up to 32 blocks. One might be an intro, another a chorus and so on. Turn to p33 to see how it works in practice.

Blocks might sound simple, and, well, it is - that's the point. It's powerful, though, and could revolutionise the way you approach arranging. It makes reusing great edits easier than ever and lends a compositional spontaneity that - of all the major DAWs - only Live can match, while managing to be better for sequencing. Anybody who tries Blocks will miss it terribly whenever they use any other sequencer - it's that good. One thing we'd like to see, though, is the ability to highlight a section of arrangement



Reason's new sample editor is a streamlined joy to use - no frills, just thrills!

Sampling made simple

Despite Reason's 'racks full of virtual gear' approach, previous versions couldn't sample audio directly like old school hardware samplers. That's all changed with Reason 5. Simply click a button on NN-Nano, Redrum, NN-XT, NN-19 (we still love that Paul Hardcastle reference) or hit the icon in the Tool window to record your external source.

With the recording made, open the sample editor, which is at once both basic and beautiful. Start, end and loops points are set with the mouse, as are fades and normalisation. You can trim samples based around chosen start and end points, and snap these points to transients.

Once you've recorded and edited your sample, you can save it for use in any suitable playback device in Reason - complete, rather usefully, with its loop setting (one-shot, forwards or forwards-backwards). One-click copying is another great feature, allowing quick variations to be saved.

Like magic, Reason has gone from having no sampling functionality whatsoever to having perhaps the quickest tools of any DAW on the market. We challenge you to go from recording and editing a sample to playing it in a device in less time with anything else out there.



If two loops are twice the fun, then imagine the kind of revelry you can enjoy with Dr. Octo Rex! It offers up to eight loops and a wide range of per-slice controls

Quick Edit mode in full effect! Here we get simultaneous control over level and pan for each and every pad in Kong

“Ultimately, Reason’s restricted nature is also its strength”

and have Reason automatically create a block from it. You can do it manually, but there should be a more immediate function.

Reason’s Factory Soundbank has always been a useful resource, if not particularly extensive or inspirational. For v5, Propellerhead have called on a who’s who of sound designers, including heavyweights like Adam Beyer (techno superstar), the Bomb Squad (legendary Public Enemy producers) and Printz Board (musical director of the Black Eyed Peas). There are drum banks, loops and more, totalling 1.5GB, with some genuinely great material to be found.

Reason 5’s newfound ability to lock controllers to specific devices shouldn’t be overlooked – see p30 for a rundown. Elsewhere, there are more enhancements than we can list. The most obvious is a coming-of-age makeover. Reason and Record now share an almost identical aesthetic, with many control sections made slightly larger and more clearly delineated. The transport bar is improved, with larger level meters and a Tap Tempo button, for example. Record’s virtual keyboard (use mouse or QWERTY keys) and Big Meter are also here.

All of which leads to our one major complaint. Despite all the welcome homogenisation with Record, the latter’s multiple rack facility is absent, so the single column of rack devices takes up only part of a widescreen display. This oversight is as infuriating as it is inexplicable.

And there are a couple of other small gripes. For example, we’ve mentioned in previous issues how we’d love to automate the Length control in the Groove section of the Toolbar. Playing with this in real-time yields an absolute goldmine of edits and breakdown effects, but it still can’t be automated. However, you can now at least resample such live tweaks on the fly.

On the topic of sample tinkering, the vast majority of DAWs now offer some degree of built-in loop slicing, so Reason users could feel maligned at having to fork out for ReCycle on top. Some might argue that it’s time to add basic audio track functionality, too, but when you look at how little extra it costs to get all of Record’s amazing functionality, and factor in the built-in sampling that Reason now offers, we think Propellerhead have got the balance about right. One genuine grumble to round things off: we still think a comprehensive assignable key-command system is long overdue.

Reason reassessed

Minor caveats aside, how does Reason stand up in 2010? Music software has progressed immensely since it first emerged, but Reason uses many of the same devices it’s always had. Can it still compete? In short, yes. It’s fair to say Reason has its own character, and while you can’t use plug-ins, the built-in devices are great. The mighty Thor synth can produce everything from searing leads to bowl-breaking basses. All of your drum needs are more than met with Kong, ReDrum and NN-Xt, and there’s a comprehensive range of effects processors.



The Synth Bass Drum module is designed for classic drum machine-style thumpings

Different drum

In addition to its sample-based drum modules, Kong offers seven synthetic ones. Physical Tom Tom, Snare and Bass Drum mimic real instrument sounds using physical modelling, while Synth Bass Drum, Hi-hat, Tom Tom and Snare ape classic synthesised drums. It’s a surprising inclusion given the huge number of sample banks on offer and the realism that multisampling affords. Surely you’ve already got all the drums you want with samples?

Well, not quite. The ability to tailor each drum sound to the rest of your track is every bit as fun and useful as being able to edit synth patches. Of course, this requires a lot of tonal control – and Kong has plenty.

Physical Bass Drum, for example, has no less than nine sound-shaping parameters, taking in things like beater

density, tone and even shell level. You can get lost for hours designing drum kits and adjusting them in real-time.

So how do they all sound – can they compete with samples? Well, the three physical modelling drums are rather impressive, offering a truly different and useful approach to real-sounding drums. With judicious tweaking of settings, they can be very convincing, particularly in conjunction with the two effects slots.

As for the synth drums, these recall the unashamedly unrealistic tones of old school drum machines (as do the physical modelled drums, on extreme settings) and quickly prove their worth when let loose on a project.

It’s only a shame that you can’t save individual drum module presets, although you can save entire banks.

Ultimately, Reason’s restricted nature is also its strength. With only a few synths and a finite range of effects at your disposal, you really do get to know them inside out, in a way that very few producers bother to do now that there are so many plug-ins around. And by eschewing third-party plug-ins, Reason is made so rock-solid that come the nuclear apocalypse, only cockroaches, scorpions and Reason will be left standing. It can run on a very modest machine, too, being one of the most CPU-light music applications we’ve ever used.

Most of us can benefit from using Reason as part of our setup, and as a number of name producers have shown, you can make complete tracks entirely in Reason. If you’re into audio recording, it won’t be for you, but perhaps its sibling, Record (see p115), will fit the bill. For almost anybody else, whether pro or hobbyist, it’s a crime not to at least try Reason. Without a shadow of a doubt, this is the best version yet – but more than that, it really does make Reason a complete proposition at last.

Web www.propellerheads.se
Contact Sound Technology, 01462 480000
Info Upgrade from any version: £89
 Record/Reason Duo pack: £353

Alternatively

Ableton Live 8

£139 >> 9/10 >> £299

More open-ended, with its own malleable sequencing system

Image-Line FL Studio 9

£145 >> 8/10 >> \$279

PC-only but offers a huge array of features out of the box

Verdict

For Rock-solid and CPU-friendly
 Stunning new sequencing features
 Kong drum device is awesome
 On-board sampling
 Streamlined interface
 Surface-locking for control hardware

Against Single-column rack
 Can’t configure custom shortcut keys

It’s always been a superb app, but with v5, Reason finally feels ‘complete’, offering a highly satisfying musical environment

10/10



TELEPHONE **01837 55200**

09.00 - 17.30Hrs MON - FRI

EMAIL **SALES@TIMESPACE.COM**

TIME+SPACE

WWW.TIMESPACE.COM

NEW

SYMPHOBIA 2

'Symphonic Effects and Legato Ensembles'

An epic 33Gb collection of brand new sounds!

New and exciting orchestral articulations, massive amounts of fresh and inspiring symphonic effects, exclusive legato ensembles with real legato transitions, Dystopia III and a brand new interface. Symphobia 2 is the new no-brainer library for any film, game or TV composer.

£979.00 Shipping September 2010

Powered by Kontakt 4

vir2

Violence

EXTREME VIOLIN MANEUVERS

A Kontakt instrument featuring unusual textures, manglings, distortions, and perspectives on the solo violin.

£66.95
DOWNLOAD ONLY

VIRTUAL INSTRUMENTS / SOFTWARE



Pop Paper
Sub Boom Bass

Cone-rattling ultra deep synth bass virtual instrument!

£79.00



Spectrasonics
Trilian

34Gb of Electric, Acoustic and Synth bass in one powerful instrument.

£189.00



Cinesamples
Hollywoodwinds

A comprehensive sampling of the orchestral woodwind ensemble.

£199.95



Garran
Jazz & Big Band 3

Featuring the new ARIA player and over 50 individual instruments.

£99.00



Toontrack
Beatstation

The complete workstation for recording, creating and editing instruments.

£79.00



UltimateSoundBank
Electric Toy Museum

97 vintage electric musical toys in one instrument!

£219.95



Toontrack
SDX Music City USA

Recorded with Harry Stinson and Chuck Ainlay. Requires Superior Drummer 2.0.

£119.00



Vir2
Electricity

The ultimate virtual electric guitar instrument.

£259.00



Pop Paper
Predator

Your go-to synth for contemporary music production.

£125.00



Sample Logic
Morphestra

1100+ epic instruments and multis pre-installed on a 160Gb Glyph hard drive.

£449.00



- Ivory II Grand Pianos – £235.00
- Ivory II Italian Grand – £119.00
- Ivory II Upright Pianos – £199.00



The Secrets of House Music Production
144-page full-colour essential guide to producing cutting-edge house music.
£34.95

SAMPLE CDs / DVDs



Toontrack
EZX - Vintage Rock
(requires EZdrummer)

The phat and funky Ludwig Keystone drum sound.

£49.00

EZdrummer Xpander



Big Fish Audio
Detroit Soul

The classic 1960s and 1970s Motor City sound.

£64.95

Multiformat



Sample Magic
Progressive House

Deep and driving, melodic and uplifting Euphoric House

£59.95

Multiformat



Loopmasters
Drumsound & Bassline

Smith: Studio Technique Eclectic samples from the pioneers of DnB.

£39.95

Multiformat

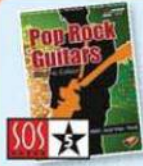


Zero-G
Urban Legend

Over 8,000 Hip Hop and R&B samples.

£79.95

Multiformat



Nine Volt Audio
Pop Rock Guilters

Six-string sounds capturing the vibe of today's chart topping hits.

£64.95

Multiformat



Sample Magic
Soundtrack & Chill

1.58Gb of cinematic moods and organic ambience.

£59.95

Multiformat



Digital Redux
A Class Series: Cinematic Dialogue

Vintage cinema dialogue, historic speeches and NASA transmissions.

£20.00

Multiformat



Big Fish Audio
Cinematic Percussion

2.6Gb of percussion recordings and construction kits.

£66.95

Multiformat



Zero-G
Deep Impact

Atmospheres, FX, soundscapes, textures, sci-fi drones & more.

£89.95

Multiformat

Download Store

www.timespace.com/download



Sonic Academy How To Make Drum & Bass

18 videos on producing D&B using Logic Pro.

£29.99

Video



SPin Media Tribal Percussion

Drums, exotic shakers and world percussion.

£44.95

1.9Gb Multiformat



Sonokinetic OS2

Cues and FX to spice up your productions.

£16.95

516Mb WAV, Kontakt



Loopmasters Scott Rockenfield: Rock Drum

Authentic 130 - 183bpm rock drum samples.

£34.95

650Mb Multiformat

ALL PRICES CORRECT AT TIME OF PRESS. ERRORS AND OMISSIONS EXCEPTED. PRICES ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE. PRICES INCLUDE 17.5% VAT.



Steinberg PC MAC HALion Sonic £210



It's been quite some time since Steinberg launched a new instrument. Can Hypersonic's spiritual successor make the grade?

System requirements

Mac Intel Core Duo 2GHz CPU, 2GB RAM, OS X 10.5 or 10.6, i, 12GB HD space, VST/AU host, eLicenser dongle

PC 2GHz dual-core CPU, 2GB RAM, Windows Vista/7 (32-/64-bit), 12GB HD space, VST/AU host, eLicenser dongle

> In its time, Steinberg's Hypersonic 2 was a good workhorse synth/ROMpler plug-in. However, things move on. Four years later, we have HALion Sonic, which combines Steinberg's sampling/synthesis engine with sound design from Yamaha's Motif team to deliver over 1200 workstation-style synth, hybrid and acoustic sounds. So is it just a revamped Hypersonic? Not really: visual similarities aside, this is a much deeper instrument.

HALion Sonic is built around a framework featuring 16 program slots (see *Patch work* for details). You can use this system to control, balance and play up to 16 separate programs on different MIDI channels or, alternatively, stack them up to create complex sounds. The main area in which HALion Sonic overshadows its predecessor is its underlying sampling/synthesis engine. This uses technology from the forthcoming HALion 4 to deliver four modes - Synth/Sample, Drum, Loop and Instrument - and combined with the four layers per program, there's plenty of scope for sonic manipulation.

Additional features include four insert effects per layer and four per program, four global aux

effects, LFOs, 24 filter types, envelopes (pitch, amplitude, filter and freely assignable), a 32-slot modulation matrix, a step modulator, eight preassigned quick controls, eight trigger pads and an X/Y controller that's cryptically dubbed The Sphere. Finally, there's the FlexPhraser. This handles everything from basic arpeggiation to performance assistance for guitar, bass and drum parts, using a library of over 1400 phrases.

Under the hood

So, HALion Sonic clearly packs some serious horsepower. In use this is most obvious with the virtual analogue system, which offers three oscillators plus sub, noise and ring modulation. In addition to the usual sines, squares, saws and whatnot, HALion Sonic's oscillator types include cross-modulated, synced and the ring modulator-esque 'exclusive or'. Also worth mentioning are the four LFOs, two monophonic and two polyphonic. The latter allow independent modulation per note, and also have additional shape-editing features.

The filters are one of HALion Sonic's most powerful elements. There are a whopping 23

“The filters are one of HALion Sonic’s most powerful elements: there are a whopping 23 different types”

filter types, all available in Classic and Tube Drive flavours. You can use them in serial and parallel modes, and morph between up to four filter shapes. The results are superb and you could easily get waylaid by them for some time.

Understandably, not all features are available in all modes, with the step modulator and the powerful filter configurations only found in the Synth/Sample mode. In contrast, the Instrument mode is for keyswitching multi-articulation patches, and offers a much simpler single-tab interface. Similarly, the Drum and Loop modes share an interface, which is also less full on. However, it does include a keymap graphic and parameter adjustment for sounds assigned to each key, including effect send levels.

Sonic state

In use, we found the differences between modes the most confusing aspect of HALion Sonic, mostly because you have no way of knowing before you load a program which modes have been used. It’s not unusual to find a program combining synth- and sample-based layers, which isn’t a problem in itself, of course. But if you’re yearning for a keyswitching sampled bass sound, you can’t search on that basis.

Overall, the sounds themselves are pretty good, featuring plenty of pads, basses and keyboards. A sizeable chunk of the drums category is taken up by loops. Most of these are very good, and the individual control over slices and pattern randomisation allows for some cool variations (although for full pattern editing, you’ll have to drag them into your DAW). The drum kits are more limited, however, and the one that’s supposed to bring you the thunderous sound of classic Led Zeppelin is particularly underwhelming.

On the ‘real’ instrument front, there’s a good array of electric guitars, and we were pretty impressed by the combination of acoustic guitar and FlexPhrases both for picking and strumming. For some programs, you’ll also find the trigger



Those fabulous filters in full effect! Here, we’re using the X/Y morphing method with four distinct filter types



Each of the four layers has its own insert effects

Patch work

HALion Sonic uses a tried and tested sound module concept whereby multiple programs (aka patches and presets) can be combined into ‘multis’. However, each program also consists of up to four sound layers, and these can be loaded individually from the browser. The significance here is that each layer can be any one of the four modes: Synth/Sample, Loop, Drum and Instrument.

The upshot is that you can combine totally different sound and synthesis types not just at multi-level but also at program-level. When you consider that you also have fully independent FlexPhraser options for

each of those layers and the program as a whole (so five in total), as well as individual insert effects for each layer and the program and quick controls for each layer and the program, it’s obvious that HALion Sonic is a very powerful instrument.

In use, the interface makes this all very easy to navigate, although we did wonder what we should be doing with all these options. Our only real gripes are the fact that individual layers can’t be grouped by mode type in the browser. This and the fact that you can’t audition layers before you load them means a bit too much guesswork is involved when hunting new layers.

pads assigned to play chords using the ‘snapshot chord’ feature. In contrast, the orchestral strings failed to convince us.

As mentioned, effects are available both as inserts and auxiliaries, and of the 17, the REVerence convolution reverb is the highlight. The remainder do the job perfectly well, although the amp sim is lacklustre.

New for old

As ever with workstations, the broad sound palette means that HALion Sonic has both good points and bad points. If you’re after a dance- or acoustic-specific instrument, there are better places to look. However, its underlying sound engine is very good, and although the workstation doesn’t cover all synthesis bases and there’s no raw sample importing, what’s included is enormously flexible. Beyond this, HALion Sonic’s most unique aspect has to be the FlexPhraser, which does an excellent job of blurring the boundaries between arpeggiator and auto-accompaniment. If you’re sure a workstation is what you’re after, this ticks a lot of the right boxes. **cm**

Web www.steinberg.net
Contact Steinberg, + 49 4042236115

Alternatively

Native Instruments Kontakt 4
cm146 >> 10/10 >> €379

Clever scripting and a huge library mean this isn’t ‘just’ a sampler

Korg Legacy Digital Edition
cm95 >> 9/10 >> £140

For genuine retro multi-modules, try the M1 and WaveStation

Verdict

For Powerful new synthesis engine
Great filtering
Good interface
Flexible sound set
Clever FlexPhraser function

Against No auditioning in browser
Not all synthesis styles included
No raw sample import

A solid effort from Steinberg with some real highlights, including the FlexPhraser and superb synth and filter features

8/10

Slate Digital FG-X £200 PC MAC



Do you like it loud? We said, DO YOU LIKE IT LOUD?
Then listen up, deaf-lugs, because this one is for you...

> Maximising loudness is very much a part of contemporary mastering, and it's typically done using limiters, clipping, saturation or a combination thereof - see p13 for a primer. Dissatisfied with these approaches, Steven Slate and Fabrice Gabriel of Slate Digital put their heads together to devise an alternative: FG-X.

This is a single plug-in that houses FG Comp, a master bus compressor (see *Compress to impress* below), and FG Level, which offers a new type of maximisation called Intelligent Transient Preservation (ITP). It's a sort of smart saturation process - see the FG-X manual on the **cm** DVD for further info. Rounding it off are peak, RMS and VU meters.

Once you've set FG Level's Gain knob to achieve the desired level, it's important to set the ITP slider to suit the material. It's a bit like a limiter's release time: too 'slow' and transients can lack snap; too 'fast' and distortion can occur.

The sound can optionally be enhanced with the Lo Punch/Detail (bass/treble transients) parameters and the novel Dynamic Perception process, which makes mix dynamics more 'lively'. These can be handy for shining up good mixes and great for reviving lacklustre ones.

The acid test

We tested FG-X on material in a range of modern genres, from indie, rock and metal to DnB and hard dance. At sensibly loud levels (eg, up to -9dB RMS), FG-X had the edge over other loudness processors we tried - even beating our previous favourite, Ozone 4's limiter.

With limiters, mix elements are always jostling for attention; for example, chugging guitars can sink back slightly behind thudding kick drums. Not so with FG-X: elements stay focused and locked in their places, and the bass remains solid. Those guitar chugs, for instance, stay right up in your face. FG-X is very transparent indeed.

With a decent mix, we had no problems getting our masters up to commercial levels.



We even tried FG-X on some unmastered mixes of commercial tracks, and the results (which you *won't* hear on the DVD) quickly exceeded the original released versions, which had used painstakingly dialled-in plug-in chains to get the levels up. FG-X was less squashed, more punchy, and more like the original mix. In fact, we could even get it sounding a little louder!

If you crave extreme levels (say, up to a deafening -5dB RMS), FG-X will comply with your instructions, but you'll get some treble distortion and audible transient saturation. Even so, the results are preferable to the nauseating pumping of a limiter or the hard-to-control distortion of clipping/saturation.

Overall, FG-X entirely fulfils its remit and sets a new standard in loudness maximisation, delivering some neat dynamic-shaping options on the side. FG-X does require that your mixes are of a certain standard in order to work its magic, so if you're still learning the ropes of mixing, you might not reap the benefits of it. If that's not you, you simply have to try FG-X. **cm**

Web www.slatedigital.com

Contact sales@studioexchange.co.uk

System requirements

PC SSE2-capable CPU, 1GB RAM, Windows XP/Vista/7 (32- or 64-bit), VST/RTAS host, iLok

Mac G5 or Intel CPU, 1GB RAM, OS X 10.4, VST/AU/RTAS host, iLok

Alternatively

iZotope Ozone 4
cm138 >> 10/10 >> \$250

Complete mastering solution with EQ, compression, limiting and more

Airwindows NC-17
N/A >> N/A >> \$50

The first plug-in to hit the market imitating Slate's ITP process

Verdict

For Superb loudness maximisation
Transparent at sensibly loud levels...
...and coherent at extreme ones!
Useful enhancement controls
Excellent, easy-to-use compressor
Good, clear interface

Against No makeup gain on FG Comp
FG Level is very CPU-intensive

Anyone who does mastering needs to check out FG-X: it preserves punch and dynamic definition like nothing else

10/10

Compress to impress

FG Comp's controls are dead simple: Attack and Release (ranging from 'slow' to 'fast'), Ratio (up to 20:1) and Threshold. Unlike a lot of compressors, the gain reduction meter is set to show a very small range of just 3dB by default, which is spot-on for most mastering situations. That's a sensible touch.

Sonically, FG Comp is audio butter - it's one of the smoothest, most transparent compressors we've heard. It's hard to make it pump, yet somehow it still grabs the

transients in all the right places. We found it equally adept at providing subtle mix 'glue', gentle level riding, and giving material a 'compressed' feel without being obnoxious.

Interestingly, it's one of the few master bus compressors we've found to be useful with complex, full-on material like extreme metal, as it can control these mixes without simply overreacting. Oh, and it's worth a try on instruments, too - we like what it can do on a drums bus, for instance.

WANT TO DO MORE
THAN **ONE** COMMAND AT A TIME?

GET THESE...

APC40

APC20



AKAI APC40 & APC20

THE ABLETON PERFORMANCE CONTROLLERS



DESIGNED AND DEVELOPED BY



FIND OUT MORE WWW.AKAIPRO.COM



Cakewalk V-Studio 20 £260

PC MAC



An entry-level recording solution for guitarists, aiming to marry the immediacy of old-school multitracking with the flexibility of software

System requirements

PC P4 1.3GHz/Athlon XP 1500 CPU, 512MB RAM, Windows XP/Vista/7 (32-bit), USB port

Netbook Intel Atom/Athlon Neo CPU, 1GB RAM, Windows XP/Vista/7 (32-bit), USB port, 100MB disk space for core app (6GB recommended), 1024x600 display

Mac OS X 10.5, Logic Pro/Express 8 or GarageBand '09

> The V-Studio series from Cakewalk/Roland has thus far aimed to provide a complete production environment, but the new VS-20 has a far simpler remit: it's for guitarists who want to get into software recording but crave the simplicity of yesteryear's standalone hardware recorders. The package consists of the VS-20 hardware and PC-only Guitar Tracks 4 software, and it's billed as being 'netbook ready', hence we used a Samsung NC10 netbook for this review.

At 30cm wide, the VS-20 hardware is about 5cm wider than your average netbook. It feels good if not exactly rugged, but it'll surely last if you're sensible with it. The I/O ports are on the left and right sides, to facilitate plonking the device right in front of your laptop. On the left, you've got a USB port; stereo out on RCA jacks; and 1/4" jacks for dual footswitch, expression pedal (for wah/volume) and headphones. On the other side, you'll find a high-impedance 1/4" input for guitar/bass; stereo line in on 1/4" jacks; and an XLR mic input with phantom power. It's got a pair of built-in stereo mics, too.

Guitar Tracks lets you record up to 32 tracks of audio and has two main screens. The Track

view is your typical DAW arranger, with features like snap to grid, clip fades, track freeze, etc.

Console yourself

The other screen, Console view, corresponds to the VS-20's controls. The channel levels can be controlled with the VS-20's faders, using the 'track group' buttons to access them in banks of eight. Tracks can be armed via the Track Select buttons, and there's a transport strip too. You can record volume automation using the VS-20's faders (and manually draw in curves for other parameters, including those of plug-ins).

The input panel lets you select from line, guitar/bass, mic input and the built-in mic. The input is stereo-only, so you can't record from all inputs at once. Recording levels are set with the Peak Sens. knob, which has an overload LED.

Levels for MIDI backing, DAW output, direct monitoring (with COSM effects) and output level can also be set. The MIDI backing has its own track - you can't edit note data at all, but you can disable channels, eg. to isolate the drums.

Speaking of backing tracks, there's about 1GB of included sound content, in various tempos

"The built-in mics are perfect for capturing fleeting ideas"

and genres. You get band (full mix) and drum audio loops, and 400MB of full-length songs. It's a real mixed bag, and the songs are of no real use - many are just embarrassing. Guitar Tracks will timestretch audio to fit your song, but it's prone to buzzing/flamming artifacts. The MIDI loops are more useful, but you only get ten.

Guitar Tracks' mixer is simple. Each track has level, panning, solo/mute, high/low shelving EQ, insert effects, and sends for the Reverb and Echo modules. Of these last two, you can choose from about 15 presets each - there are no tweakable parameters, but the delays do sync to the beat. On the master output, you have high/low shelving EQ and a limiter, but no inserts. Bizarrely, the TTS-1 virtual instrument that produces the MIDI sounds does *not* go through the mixer, so you can't apply, say, EQ to MIDI backings - it doesn't even go through the master EQ/limiter. You can set the TTS-1 as an audio track source, to come through the mixer, but then you can't use the MIDI Backing level knob.

Of the supplied effects, you get the good-old Sonitus:fx Equalizer, AliasFactor bitcrusher, Classic Phaser, Compressor/Gate, HF Exciter, Modfilter, Multivoice Chorus/Flanger, Para-Q, Studioverb2 and Tempo Delay. It's a solid selection, and VST plug-ins are supported, too.

Reamp for the masses

The VS-20 hardware features a built-in Boss COSM guitar/vocal processor (see boxout), for live monitoring and recording. You can also record the dry signal (whilst monitoring with effects) and later 'reamp' it through the COSM processor and record the results to a new track, so you can change the tone after recording. In fact, you can reamp any signal, so you could, say, use the harmoniser to create new vocal lines on separate tracks. It's easy to do, too.

The V-Studio 20 hardware should allow you to forget about the keys and mouse, and it does, to an extent. You can even assign the footswitch to commands like play/stop, record, tuner, as well as COSM effects toggling options. However, if you record a bad take, there's no way to undo it from the hardware, so you have to hit Ctrl-Z anyway. You can't just record over it because Guitar Tracks 'stacks' the two takes and plays them together. This behaviour can be changed in the options, but it should be ready to go.

If you outgrow Guitar Tracks, you can buy the Pro version, or even Sonar (which loads Guitar



You can pile on the Boss COSM effects with no CPU hit and no added latency

COSMic bomb

Hit the COSM button on the VS-20 (or in Guitar Tracks) and the VS-20 Editor app is launched. It appears like a Boss floor pedal, and indeed, the effects use Boss algorithms. They run on a DSP chip inside the hardware, so unlike using plug-in effects in Guitar Tracks' mixer, they won't tax your computer's CPU at all, and they won't be subject to DAW latency either - ideal for netbook use! Just think of it as a Boss multieffects pedal stuffed inside the hardware.

Guitar amp models cover all the usual suspects, including a bass amp. They're not in the same league as the current crop of plug-in amp sims, but they're usable enough. The vocal

processor is of a similar level of quality and it can be used in place of the amp sim. It offers pitch correction (ie, autotune) with three different speeds (from slow and gentle to 'T-Pain') and intelligent, in-key harmonisation - something of a rarity in plug-in land.

The four stomp pedals cover compression/FX, overdrive/distortion, modulation and delay. We particularly enjoyed the lush modulation effects and the Slow Gear automatic volume swell (which provided the 'pad' sound in our demo tune). Additionally, there's a sweet one-knob room/hall reverb (that's well worth reamping through), a noise gate, tuner, and presets aplenty.

Tracks projects), and you'll still be able to use the hardware as an interface and controller. It works as a Mackie Control device for other DAWs, and while Guitar Tracks doesn't run on Mac, you can use the hardware and COSM effects under OS X.

A fond farewell

While we've raised a few grumbles here, we're actually quite fond of the V-Studio 20 and were sorry to see it leave. Sure, it's not perfect, but it's still very straightforward, and we had fun using it. The mixer is a doddle to use and the COSM effects offer further immediacy. We didn't have any CPU problems recording track upon track with our netbook. The built-in mics are perfect for capturing fleeting ideas. Understandably, they don't sound amazing, but they're clean and quite sensitive - we used them for the acoustic guitar and finger snaps in our demo tune.

All in all, the V-Studio 20 isn't quite what it could be, but it's still a good buy for guitarists looking to get into computer music, and it does bring back the spontaneity of portable multitrackers. It's also a smart option for netbook users after a portable 'power up'. **cm**

Contact Roland UK, 01792 702701
Web www.cakewalk.com



The VS-20's control layout is mirrored in the software's Console view, with plenty of extra controls to twiddle

Alternatively

NI Guitar Rig Session
cm128 >> 8/10 >> £79

End-of-line deal on this (DSP-less) interface with amp/DAW software

IK Multimedia Stealth Pedal
cm142 >> 8/10 >> £416

Pedal-style interface with amp sim and recording software, but no DSP

Verdict

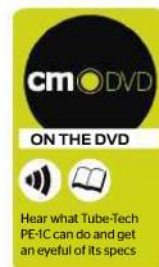
For Straightforward operation
Built-in mics are very handy
Decent DSP effects with easy 'reamping'
Minimal CPU hit, even on netbooks!

Against Dodgy timestretching
MIDI backing doesn't go through mixer
Supplied audio/MIDI content is poor
No hardware undo feature

Despite its shortcomings, the V-Studio 20 is a good entry-level package, with an emphasis on recording immediacy

7/10

Softube PC MAC Tube-Tech PE 1C £160



For anyone who doesn't yet own a Pultec-style EQ, perhaps it's time to hop on the tube train with Softube's latest

> Here we have yet another Pultec-style EQ emulation; to be more accurate, it's an emulation of a modernised copy of the original Pultec EQP-1A. The venerable EQP-1A has been emulated in software many times over the years – we count at least ten plug-in versions currently available, from a myriad of developers. Now Softube have turned their hardware modelling skills to the task, and along with some help from Tube-Tech, created the Tube-Tech PE 1C EQ plug-in. This collaboration marks the second time the two companies have teamed up, their first outing being the Tube-Tech CL 1B compressor plug-in (9/10, **cm150**).

On the Pul'

Anyone familiar with Pultec-style EQs will be instantly at home here. Most such emulations look more or less the same, but the PE 1C differs slightly in that it replicates the Tube-Tech hardware rather than an original Pultec box. The unit's controls look very three-dimensional and realistic – not essential but nice nonetheless.

The PE 1C design is a passive tube equaliser, so its controls are pretty easy to get to grips with. It works in three distinct sections. The low-frequency section has overlapping boost and attenuation shelves, as well as a Frequency Selector knob adjustable between 20, 30, 60 and 100Hz. The other two parts pertain to upper frequencies. The boost section is a peaking EQ with knobs for Bandwidth, Boost and Frequency, the latter being adjustable in fixed steps between 1 and 16kHz. Finally, there's the treble shelf with controls for Attenuation and Frequency (5, 10 or 20kHz). There's also an output gain control. This wasn't in the original design but is convenient as the PE 1C can alter the signal level. For full details, check out the manual on the **cmDVD**.

The crucial thing about the PE 1C (and other Pultec-esque EQs) is the way in which the controls interact, which is quite different to standard parametric EQs. In the low-end section,



the Attenuation dial works on a slightly higher frequency to the Boost dial, which results in a very natural and musical 'enhancement' when using the Cut and Boost controls together. The high-frequency sections can work in tandem with each other, too, as you can use the boost to bring out a certain frequency spot, then bring the entire treble down a tad if things are now too bright. The PE 1C works great on bass, vocals, kick drums and even on a mix buss.

Comparing it to other EQP-1A emulations is slightly confusing; the Tube-Tech PE 1C is said to give the sound of a "brand new" Pultec EQP-1A, and it does seem a tad less gnarly than, say, IK Multimedia's Pultec emulation. The difference is subtle, though, and you can still drive the input for a warmer sound. Sonically, think silky-smooth highs and warm thick lows, like, er, audio chocolate. The PE 1C isn't a precision tool but rather a 'feel' EQ that can be used intuitively. If you're in the market for a Pultec-style EQ, this one comes highly recommended. **cm**

Web www.softube.se
Contact Adam UK, +44 1992 525 670
Info TDM version, £240

System requirements

PC Intel P3, 512MB RAM, Windows XP/Vista/7, RTAS/VST host, iLok

Mac G4/G5/Intel CPU, 512MB RAM, OS X 10.4, RTAS/VST host, iLok

Alternatively

Nomad Factory Pulse-Tec EQs
cm150 >> 8/10 >> \$149

Another great-sounding Pultec emulation, with added MEQ-5 and clipper section

IK Multimedia Vintage Tube Program Equalizer
N/A >> N/A >> \$100

An excellent but CPU-heavy EQP-1A emulation that's slightly more gritty than Softube's

Release the clones

Danish company Tube-Tech first started producing hardware way back in 1985. Their first unit was an equaliser named the PE 1A, which was essentially an up-to-date copy of the legendary EQP-1A made by US company Pultec. In later years, Tube-Tech went on to make revisions of the PE 1A, and the most recent version – the PE 1C – differs from the PE 1A in that it used an internal circuit board to mount the components instead of being hard-wired. It also featured

extra versatility in the form of additional selectable frequencies on the high boost, specifically, 1, 1.5 and 2kHz.

The PE 1C is still in production today, and is often bought by studios who want an 'as new' Pultec sound produced by a reliable modern unit. This is because the original Pultec units are now extremely rare and can suffer from component degradation and aging, which can affect the sound.

Verdict

For Silky smooth tones

Easy to use

Works in many mix situations

A useful addition to your mixing toolbox

Against It's yet another Pultec EQ!

Softube aren't breaking new ground here, but this is a solid addition to their processor portfolio

8/10

Expert Sleepers PC MAC **Spectral Conquest** \$29



This spectrally explicit plug-in gets us hot and bothered with its violaceous appearance and custom scripting functionality

> Effects that work by directly manipulating the spectral content of an audio signal aren't new, but making the process easy to complete as well as musical and creative is quite a task. That's exactly what Expert Sleepers are aiming to accomplish with Spectral Conquest.

Before you really get going with it, you need to get a handle on the interface. This isn't helped by the fact that the entire GUI is in the same shade of purple that Prince was fond of in the mid-80s. There's also very little contrast in the on-screen text, especially in the small light purple lettering surrounding each control section. There's even a shiny, reflective visual effect that moves across the bump-mapped background underneath your cursor. When this falls across the white presets in the top border of the window, it's almost impossible to make out the text, though at least you can disable this in the Preferences panel.

Le freq, c'est chic

Fortunately, the GUI elements are very responsive, as is the real-time plot of the audio spectrum, which is the uppermost graph. This bounces around to the input signal with little perceivable latency, and makes it easy to zone in on a specific sound - just listen for the audio element you're interested in and note which frequencies jump in response to it. There are several controls for adjusting the display's response, which helps with interpreting the incoming audio.

Each slice is termed a 'bin level' in the world of Spectral Conquest, and the output amplitude of each band is displayed as a small line on the spectrum plot. You can split the signal into as many as 2048 bins and as few as 16 (intermediate values are available in powers of 2), and the CPU consumption is impressively low.

To effect the sound, you can use the bar graph beneath the spectral display to adjust the relative amplitude of each frequency slice, much



as you would with a graphic equaliser. You can further manipulate the spectrum by clicking on several buttons on the top border that will apply a series of presets, either setting odd or even slices to 0, blanking all values or inverting them. In addition, you can apply a script, as explained in *Super script* below.

We found the results very pleasing to the ear. Filter effects such as high-pass, low-pass and notch are a breeze, and you can get unusual results by muting selected harmonics. Extreme effects are also easy to come by, and a number of the supplied scripts are ideal for this, such as gate (mutes frequencies above or below a threshold) and reverse (high frequencies become low ones and vice versa).

Sans scripts, Spectral Conquest is a sound way to achieve spectral manipulation, although it's not quite up there with the competition - but then neither is the price. Factor in the scripts and there's an enormous amount of potential here, whether you choose to roll your own or simply use those created by others. **cm**

Web www.expert-sleepers.co.uk
Contact os@expertsleepers.co.uk

System requirements

PC SSE2-capable CPU, Windows XP/Vista/7, VST host

Mac Intel CPU, OS X 10.5.8, AU/VST host

Alternatively

iZotope Spectron
N/A >> N/A >> \$130

Morph, pan, delay, warp, smear and more. No scripting, though

Artificial Audio Obelisk
cm136 >> 9/10 >> €99

Spectral delay, filter and gate effects, wrapped up in a cool GUI

Verdict

For Scripts offer vast flexibility
Easy spectral manipulation
OSC control of parameters
CPU-friendly

Against Interface could be improved
Minimal script feedback from GUI
No 'true stereo' scripting

Spectral Conquest is a potential powerhouse of sonic manipulation, thanks to its scripting functionality

7/10

Super script

Spectral Conquest's best feature isn't overly visible from the GUI, but it's hinted at by the four parameter knobs in the bottom right panel of the screen. This is where you can load a script: a series of commands that modifies the spectral data. The four knobs can be used to adjust values within the script, giving the user hands-on control. However, scripts can't feed data back to the display, not even to add a label to the knobs so that you know what they actually do.

Scripts are written in Lua, which is an easy enough language to learn. If you've used tools like Max, Pure Data or even Reaktor, turning your ideas into scripted actions won't be too tricky. Expert Sleepers have already released a few more example scripts, including a low-pass filter with LFO and a spectral freeze effect. One caveat is that while the processing is in stereo, scripts can't access the channel data separately, so you can't manipulate the stereo field.

Roger Linn Design MAC

AdrenaLinn Sync v2 \$99



We're pumped to get our hands on this revised version of music technology legend Roger Linn's rhythmic multieffect

> It was around 1980 when Roger Linn became a 'name' in music technology with his LM-1 sample-based drum machine, the sounds of which featured on countless hits. Fast forward to 2002 and Roger founded his current venture, Roger Linn Design, this time focusing on guitar floor effects units with the AdrenaLinn series, which combine sequenced digital multieffects with a drum machine and amp modeller. Plug-in AdrenaLinn Sync v2 is based on the company's most recent pedal, AdrenaLinn III. It's currently Mac-only, but a Windows VST is imminent.

The internal drum machine, amp modelling, stereo reverb and guitar tuner of the hardware version are all absent. Presumably the idea is that these are all better catered for by other plug-ins, and we'd have to concur. The plug-in one-ups the pedal in a number of ways, however, featuring dual modulation paths and stereo tempo-synced delay up to 32 seconds long.

The top half of the GUI comprises the Filter, Distort, Limiter, Volume/Pan and Delay sections, which run in series, in that order (with an option to place the distortion before the filter module). Worthy of special mention are the very smooth analogue-modelled filters courtesy of Way Out Ware, who handled the coding and DSP aspects of the plug-in. The filters come in low-, band- and high-pass varieties, as well as flanger and phaser modes. The frequency parameter is set in semitones, so you can tune the filters to musical values. With the Snap To Scale option activated, the notes will always be in the selected scale, too. Noise can also be added to the filter input, which can create some neat percussive sounds.

That syncing feeling

The tempo-synced LFO and 32-step Sequencer can modulate the filter frequency, volume and panning. The highlight has to be the Sequencer, which has beat divisions in 1/8 or 1/16 in straight, triplet, half-swung and swung variations. On a per-step basis, you can set not just the level but



also the mode of a two-stage (attack/decay) envelope generator, which can be used to cause transitions between certain steps (or turned off for normal stepped operation).

AdrenaLinn Sync can generate everything from burbling tremolo, through auto-wah or envelope filtering, to complex resonant filter sequences. Used for real-time guitar processing, the excellent modulation capabilities make you rethink how to play your instrument. Less is more with this plug-in, as it provides most of the rhythmic variation and can generate note changes through resonant filter sequencing. The simplest ideas can give rise to interesting phrases or chord sequences.

We strongly recommend that axe-wielding computer musicians consider AdrenaLinn Sync v2, as it has a highly adaptable and inspirational sound. And if synths or sampled instruments are closer to your heart, it can just as easily transform a tepid tinkle on the ivories into a rhythmical slice of genius. **cm**

Web www.rogerlinndesign.com

Contact via website

Info Free upgrade from v1

System requirements

Mac 1GHz CPU, OS X 10.4.11,
AU/VST/RTAS host

Alternatively

Audio Damage BigSeq2
cm138 >> 10/10 >> \$49

Tempo-based multieffect, with plenty of options for sequencing

dBlue Glitch

N/A >> N/A >> £Free

Freeware sequencing/randomising multieffects for Windows

Verdict

For Great-sounding filters

Hugely inspirational rhythmic effects

Excellent modulation features

Can be used on a variety of sources

Comprehensive range of presets

Against Preset-saving 'nag' screen

Not just for guitarists, this plug-in inspires with its combination of splendid sound quality and groovy modulations

9/10

It's a setup

We found AdrenaLinn Sync's presets to be so good that you need never delve into creating your own patches. They're well labelled, too, with some of the note-like resonant filter patches including the musical key in the name. What's more, there are some cool replications of the AdrenaLinn settings used by famous artists, including John Mayer and Green Day.

100 new presets have been added since v1, all of which have been designed to take

advantage of the new analogue-style filters found in v2. There are also 28 slots for saving your own patches.

Our only minor gripe is that every time you choose a preset, adjust a parameter and then decide to try another patch, a nag screen comes up reminding you that you haven't saved the current settings. This holds you up when you want to quickly try things out and see what the parameters are doing to the sound.

Artificial Audio Quartz €99

PC MAC



Another modulation-powered multieffects unit, but is this one keeping it real or simply faking it?

> We got our first taste of Artificial Audio's output with the spectral multieffects unit Obelisk, which scooped 9/10 and our coveted Innovation award in **cm136**. Now, a year on, their far-flung ideas have crystallised once more: this time into Quartz, a multieffects unit with an intuitive modulation system.

The effects modules (linked in series from left to right) are pan, gain, two multimode filters, tempo-synced stereo delay and a waveshaper. It's worth noting that each of the filter's modes (12dB low-, band- and high-pass) features a Fat variant, enabling pre-filter saturation and 4x oversampling. The modules aren't that complex, but they really do combine well to generate all manner of creative effects, no matter what the source material happens to be.

Crossing the line

The beating heart of the plug-in is its sample-accurate modulation system. There are four independent LFOs, running from 0.01Hz up to 2kHz, and from two bars down to a 32nd-note when synced, with dotted and triplet options. More exciting are the four Modulation Lines, each of which can be bound to Quartz's main effects parameters (but not the LFO speeds, disappointingly). To get going with these, you draw in adjustable curves using up to 100 freely movable points. Each Line can cover up to 48 bars before looping, and points can be snapped to the grid. Frustratingly, there are no dotted or triplet divisions, although Artificial Audio say that this is on their list for a future update.

While the wealth of modulation possibilities makes Quartz ideal for far-out sound design, it has numerous more musical applications too. For example, we stuck an arpeggiated synth chord sequence through the plug-in and managed to produce everything from rhythmic trance gates, through electronic percussive sequences, to dubbed-out delay patterns. The plug-in can breathe new life into



even the most mediocre of phrases - you might generate underlying swooshes by employing one of the filter or delay presets, or apply creative drumbeat variations via the rhythmic gate patches. It's easy to take things too far, as evidenced by the motion sickness-inducing 'Stoned DJ' presets, but with judicious use, the results can be thoroughly musical.

One minor gripe is that unused controls are so dulled out that they're hard to see against the background. In fact, the colour scheme in general makes it difficult to distinguish much at a glance. Luckily, Quartz is so well laid out that these concerns fall by the wayside as soon as you've spent a little time working with it.

This plug-in would be at home in any electronic producer's sonic arsenal. The experimental aspects are all there for those looking to create new sounds from old, but it's just as adept at general delayed, gated and filtered effects. Quartz is capable of giving your tracks that extra layer of rhythmic interest and it just might push you in new creative directions. **cm**

Contact bernd@artificialaudio.com
Web www.artificialaudio.com

System requirements

PC 1GHz CPU, Windows XP/Vista, VST host

Mac 1GHz PPC/Intel CPU, OS X 10.4, AU/ VST host

Alternatively

Audio Damage BigSeq2

cm139 >> 10/10 >> \$49

Tempo-based gate effect, with filtering, delay, distortion and more

Roger Linn Design AdrenaLinn Sync v2

cm156 >> 9/10 >> \$99

Great for sequenced filter, volume and panning modulations

Verdict

For Well laid out and easy to use
Huge variety of potential applications
Sample-accurate modulation
Great-sounding presets
Can output MIDI CC data

Against Colour scheme not great
No dotted/triplet times for Mod Lines

A well-conceived plug-in that's equally useful for workhorse production duties and madcap sonic transformations

9/10

Outside the box

One of Quartz's neatest features is that it can produce MIDI data. Simply activate the MIDI send for any LFO or Modulation Line and select a channel and CC number to make the program start pumping out the relevant data. So, if your DAW of choice has a fiddly automation system and you want to create some complex rhythmic parameter movements, you can instead opt to use Quartz as a MIDI control device, taking advantage of its many excellent

preprogrammed Modulation Line patterns. It's also a very quick method of applying the same Modulation Line patterns to multiple parameters of a plug-in or, indeed, plug-ins. External MIDI hardware can be controlled too, of course - simply route the MIDI to your interface's MIDI output.

It should be noted that certain DAWs (eg, Logic) don't support MIDI-sending effects plug-ins, but there is a workaround that's nicely described in the manual.

EastWest/Quantum Leap PC MAC Hollywood Strings €1389



Blockbusting samplists EastWest deliver a string library infused with big-screen flavour. Can they score another hit?

> Recorded at EastWest's studios on Sunset Boulevard, Hollywood Strings is their latest instrument. It runs standalone or as a plug-in, with 312GB of sample content preinstalled on a hard drive – see *Hard drivin'* below. Spread across almost 4000 articulation-specific and keyswitching patches for violin (first and second), viola, cello and bass sections, all typical styles are covered. These are complemented by script-based performance modes including legato, portamento and con sordino.

Much like EastWest's Symphonic Orchestra, Hollywood Strings presents the instruments as multi-mic setups, enabling you to roll your own blend. The five options are main pickup (Decca Tree), mid pickup (auditorium front row), close pickup, surround (rear of recording space) and vintage ribbon surround (the surround options are mutually exclusive).

One interesting new feature is finger position. A number of violin, viola and cello long-bowed patches include control of string choice via finger position, so you can take advantage of the mellower bridge sound, for example. Further articulations include bow change, up bow, down bow, played effects (tremolo and trill) and a number of prerecorded and playable runs in patch form. However, one of the biggest features is actually quite subtle: sample crossfading. For vibrato and loudness (including the accompanying timbre), you can morph between playing intensities using MIDI CCs.

RAM it down

Given the potentially stressful CPU and RAM demands, it's a relief that some patches offer a 'lite' version too. As far as patch selection is concerned, the key to success is in learning their abbreviations (BC for 'bow change', for example). With such large sample sets to load, you'll want to pick the right one first time.

Onto the sound, and, unsurprisingly, it's excellent. Importantly, it's very consistent, but



there are also real subtleties worth mentioning. For legato patches, velocity affects transition speed rather than volume, so playing harder means a quicker transition. Next, some legato patches combine articulations and use a tempo-detection script to switch between them. With skill, further subtleties can be achieved using finger position (FP) patches and, in some instances, MIDI CCs (portamento speed).

Finally, it's worth saying that Hollywood Strings is purely section-based, so there are no solo instruments. However, EastWest have included full folders of 'divisi'-style patches captured concurrently using close mics to the left and right of each section. In practice, these can be useful for adding part clarity as well as producing traditional divisi (split) parts.

All told, Hollywood Strings is an incredibly impressive but demanding instrument, both in terms of system resources and your own mental faculties. However, if you produce soundtrack music professionally and/or seriously, you'll be used to that. This is highly recommended. **cm**

Web www.eastwestsamples.com
Contact via website

System requirements

PC Intel Core 2 Duo/AMD Dual Core 2.1GHz, 4GB RAM, Windows XP/Vista/7, iLok, 310GB drive space for installation, VST/RTAS host

Mac Intel 2.1GHz CPU, 4GB RAM, OS X 10.5, iLok, 310GB drive space for installation, VST/AU/RTAS host

Alternatively

audiobro LA Scoring Strings

N/A >> N/A >> \$1399

This 40GB package makes clever use of divisi sections

Vienna Symphonic Library Appassionata Strings Bundle

N/A >> N/A >> €1030

This set is for lush, sweeping Hollywood-style scores

Hard drivin'

Hollywood Strings ships on a bare internal hard drive, conveniently bypassing many hours of DVD copying. However, EastWest are quite keen to point out that this is really a transportation medium, and you should be copying this disk onto a fast drive (7200rpm minimum). They recommend in preference a solid-state drive (SSD). It's also worth noting that the drive itself is only covered by their limited 30-day replacement warranty, although they will

always resupply the data itself should you lose it. Either way, you'd probably be wise to back up or transfer the data in some way. Finally, you'll need to specify your platform (Mac or PC) so that they can supply the correct type of drive.

Having said all of the above, our Mac-specified review version arrived on a perfectly usable 500GB Western Digital Caviar Black – a premium (though maybe not server-class) performance drive.

Verdict

For Excellent and consistent sound
Many played articulations
Convincing use of sample crossfading
Useful performance scripts
'Lite' versions for some patches

Against Resource-intensive

EastWest put in another star turn with this superb professional string library

9/10

Every issue in Guitarist...

Find out more about the gear that made the music



Guitarist is packed to the brim every month with gear reviews, artist interviews, guitar lessons, tech Q&A, free CD and more

Guitarist

The Guitar Player's Bible

On sale in all good newsagents

www.myfavouritemagazines.co.uk • www.musicradar.com



Apply Now for 2010

1/2 the price of most other Foundation Degrees

CM

Music Production and Business Foundation Degree

Quality Training in Creative Music Production and Business

020 7377 0621 / everyone@cmsounds.com
www.cmsounds.com

TEXT 'CM' and your email address to : 63333 Standard network charges apply

- Entry is based on experience & motivation
- Previous qualifications not essential
- Trained specialist tutors • Small class sizes
- Unlimited studio time • Industry links • Unique course
- Fully supported by student loans system, so no initial outlay

CM / Brady Arts Centre / 192-196 Hanbury Street / London / E1 5HU
everyone@cmsounds.com / www.cmsounds.com / Join us on Facebook. Search 'CM Sounds'



the custom 19" rackmount case has full acoustic treatment and front to back airflow perfect for the studio and the road

our audio computers are powerful but quiet cutting edge yet stable

Ultimate
directresolution.computers **Studio+**
DARC **Studio**
Producer

systems start at just £499
www.directresolution.com
0845 094 8750



WINDOWS 7 AVAILABLE NOW!

cm mini reviews

A rapid-fire round-up of sample libraries, ROMplers and more

VirSyn

iVoxel £6.99

Format iOS, iPhone, iPad, iPod Touch
Contact info@virsyn.de
Web www.virsyn.de

VirSyn hit the App Store once again with iVoxel, an advanced vocoder that borrows from their Matrix plug-in and produces a clear and (mostly) intelligible sound. There's quite a bit of control available; carrier waveforms can be altered, along with pitch, breathiness, cutoff and time "warp". You can use the vocoder live with the on-screen keys or sequence any of the 200+ pre-recorded voice snippets ("voxels"). You can record your own voxels using the built-in microphone.

The sequencer is a piano-roll affair, and you can adjust the pitch and length of the voxels. It's a little fiddly, but the results can be quite entertaining and even inspiring. Your efforts can be documented with the built-in recorder and uploaded to your desktop computer via Wi-Fi. You can copy audio to the clipboard to sling it over to other apps like ReForge or Jasuto.

iVoxel is a blast to use, though it can be frustrating at times, with its many pages and slightly quirky sequencer. Nevertheless, there is a lot of fun to be had, the sound is splendid and the price is certainly right. Note that iVoxel will work with the original iPhone an iPhone 3G, but at slightly reduced audio quality.

8/10



Native Instruments Session Strings €99

Format Kontakt 4 library
Contact via website
Web www.native-instruments.com

This pack features an 11-piece ensemble: four violins, three violas, two cellos and two basses. Aimed at pop, disco and R&B producers, for simplicity's sake, each patch has the whole ensemble mapped across the keyboard. However, it's not light on articulations, with scoops, falls and glissando in addition to pizzicato, spiccato, crescendo, legato, sustain, tremolo and staccato sounds. Further features include convolution reverb, 3-band EQ, and the 'animator' phrase generator, which turns chords into riffs.

Instruments are divided into single articulations (14) and more complex performance patches (10), with all 24 repeated in darker-sounding 'Motown' format. Sonically, Session Strings is spot on, with the tight, close sound enabling you to deliver fast, disco-style lines. However, its 1.65GB footprint does mean velocity layers are limited (three at most), and if you're after the lush room sound of classically-focused orchestral libraries, look elsewhere. Pop and dance producers, however, will welcome this library.

9/10



2CAudio Aether 1.5 \$250

Format PC/Mac, AU/VST
Contact info@2caudio.com
Web www.2caudio.com

Here we have a free update to one of our favourite reverbs, Aether. First up are new quality modes for oversampling (giving a subtly clearer top end), Ultra Smooth modulation (more round and 'real'), and better offline interpolation (increasing coherency and definition).

The redesigned GUI is way better and the preset browser is basically now the 'easy mode' that we felt was missing from v1.0, with six (lockable) knobs for tweaking on the fly. The ER and LR sections now have four stereo modes apiece and independent predelay, and there's a Cascade knob to feed the ER section into the LR. The range of many parameters has been massively increased - for instance, ultra-fast modulation can create a synth-like shimmer!

This is a great update that quashes the few criticisms we had of v1. There's much more to it, but all you really need to know is that Aether now sounds better, is more accessible for newcomers and is yet more flexible for sound designers.

10/10



Blip Interactive NanoStudio £8.99

Format iPhone/iPod Touch
Contact contact@blipinteractive.co.uk
Web www.blipinteractive.co.uk

The dream of creating full productions on our mobile devices is gradually becoming reality, as exemplified by the much-anticipated NanoStudio. With six tracks of sequencing in the familiar piano-roll style, a sampling (and resampling!) drum machine, and four instances of a superb synthesiser, it really is a (basic) virtual studio in the palm of your hand.

To start things off, there's the TRG-16. You get 16 pads into which you can load the factory sounds or your own WAV files, which can be imported using the free desktop NanoSync app. Stereo and mono samples are supported, there's a sample editor, and you can record from the iPhone's (mono) mic. Oh, and you can resample NanoStudio's output. Very slick. You can record TRG-16 parts live or use step-entry, and there's a knob for controlling velocity. TRG-16 has three output busses to cater to your mixing needs.

Eden is NanoStudio's synth. A subtractive



instrument that can work as a VA or wavetable synth, it's a real knockout. You get 128 great patches, but you can roll your own as well. Filters, envelopes, LFOs and dedicated effects are all here. Blip haven't cut any corners here, and it shows. Eden sounds marvellous – big basses, shimmering pads and screaming leads.

The eight-channel mixer has two aux effects: reverb and chorus/delay. Tunes can be zapped

over to your Mac or PC via Wi-Fi and NanoSync.

NanoStudio is truly terrific, and capable of producing serious work. It's easy to use, full of well thought-out features and sounds great. More than any other app, it lives up to the wild expectations we have of iDevices. Compression and EQ are notable by their absence, but that aside, this a definite must-have.

9/10

Propellerhead Software Record 1.5 £235

Format PC/Mac
Web www.propellerheads.se
Contact Sound Technology, 01462 480000

Reason 5 might be grabbing all the headlines, but its sibling, Record, is no slouch either. Whereas Reason is aimed primarily at electronic music styles, Record is more akin to a traditional DAW, with full-on audio recording, superb real-time timestretching and a mixer that's modelled on an SSL console, complete with bus compressor. The free 1.5 upgrade offers up a number of persuasive reasons to upgrade, crossgrade or purchase it outright.

First and foremost of the new goodies is Neptune. Finally bringing the joys of auto-tuning to Propellerhead users, it does a fantastic job of correcting incoming monophonic audio, giving control over expression, vibrato, correction range, formant control and speed. The result is a device that can gently smooth over vocals in myriad styles, or generate the characteristic robotic effect we've heard on almost every R&B track of recent times. It does all of this quickly and with the minimum of fuss. You can also manually play in notes with a MIDI keyboard, making for a sort of vocoder/auto-tuner hybrid.

If that's not enough, Neptune's voice synth enables you to play vocal harmonies alongside the original, even allowing chords. These can be wired to separate outputs and treated on a new channel, for full control. And, of course, you can mute the dry signal altogether, instead playing completely new polyphonic vocal lines. A single word will suffice to sum up Neptune: awesome.

Add to this the heightened sequencing functionality introduced by Blocks, the superb new arrangement system shared with Reason (for more info, see p33), and a number of smaller tweaks, such as drag-to-timestretch (very welcome indeed), Clip Normalisation/Reverse and an expanded ID8 patch library, and you're looking at one tasty update.

It goes without saying that all current Record users should grab this update without thinking. Reason users, on the other hand, now have a greater incentive to splash out for both



products. Anybody who has experienced neither app ought to try the fully functional time-limited demos as soon as they finish reading this review. The only thing to be aware of is that Record 1.5 is not compatible with Reason 4, so would need to buy an upgrade to Reason 5 to use them together.

9/10

Soundware round-up

Loopmasters DOWNLOAD

Atjazz Deep & Analogue £25

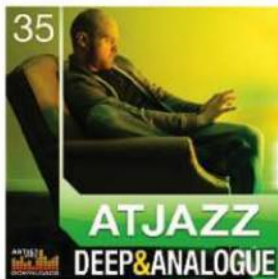
Contact info@loopmasters.com

Web www.loopmasters.com

Format WAV, Acidized WAV, REX 2, ReFill, Live Pack, Apple Loops, HALion, Kontakt, EXS, SFZ, Stylus RMX, NN-XT

While Atjazz's speciality of 'jazzy UK deep house' might be a tad niche, the 'deep and analogue' part of the title tells you what you need to know about this pack. Using only analogue kit and hardware samplers, each of the 258 loops and 143 one-shots have plenty of top-end sheen and low-end power, with Rhodes chords and bass loops particularly impressing us. There are plenty of tight claps and kicks, too. It's a modest collection, but it will fit the glove for everything from DnB to classic house.

8/10



Industrial Strength DOWNLOAD

Jamie Ball Banging Techno £18

Contact info@loopmasters.com

Format WAV, Acidized WAV, REX 2, ReFill, Apple Loops, Kontakt, Battery
Web www.loopmasters.com

The title says it all: Jamie Ball wants you to take these 340 samples and rule the dancefloor with his relentless, distorted, grinding 140-160bpm loops and hefty, speaker-crunching one-shots. Forget Detroit, Chicago and Berlin - this take on techno is more Wigan Pier. The pummelling, brutal drums are the highlight for us, but there are also leads, basses, vocals and even turntable FX. There's a lot going on in each loop and it would take some time to create something similar from scratch. Overall, the quantity and usability make this worth the modest price.

7/10



Sounds/To/Sample DOWNLOAD

Deep Afrika Tribal Tops £14

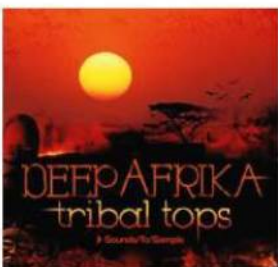
Contact via website

Format WAV

Web www.soundstosample.com

In their ongoing attempt to cover every imaginable stylistic base - and perhaps after watching too much of the World Cup - Sounds/To/Sample hit us with Deep Afrika Tribal Tops. This 200-loop collection is all about percussion, and it would certainly find a home in samba-influenced tunes and even straight-up house records, to give them a natural swing. There are two tempos - 125 and 128bpm - and all the percussion instruments you'd expect are here, including congas, shakers and timbales. It's a fair price considering the hefty programming or recording exercise you'd have to undertake to create such rhythms yourself, and the sound quality is solid.

8/10



Vengeance-Sound DOWNLOAD

Trance Sensation £65

Contact via website

Format WAV, MIDI

Web www.vengeance-sound.com

Back with a vengeance, the German sample sages this time focus on the euphoric world of trance. They've gone down the construction kit path, providing 20 "trance hymns" and all of their component stems, including MIDI parts and one-shot kicks and FX. Every riff comes in effected and dry versions (we wish more sample companies would do this), so you can really make the sounds your own, or cut them up into something totally fresh. Ranging from 132 to 140bpm, Trance Sensation is a certified trance palette, with about 1.6GB of content in total. It ain't cheap, but it sounds pro and it's actually good musically, too. For beginners in particular, there's a lot of production know-how to be gleaned from the component parts.

8/10



Samplestar DOWNLOAD

Deep Tech Sessions £23

Contact via website

Format WAV, REX

Web www.soundstosample.com

Claiming to take influence from Gui Boratto, Richie Hawtin, Magda and Booka Shade, Deep Tech Sessions is a trendy trip to a late-night Berlin club. Unlike many packs that claim to cover this ground, only to dance around cliché, this one has totally nailed the vibe and sound. Each loop is so well put together, you'll be getting your groove on just previewing them.

Production-wise, these are ready for the floor straight out of the box. While there might not be many one-shots in this pack, the loops are understated enough to work in your tracks without overtaking them, while the REX files enable you to deconstruct your favourites. The Melodics folder is filled with bouncing melodies, and the FX section should plug the holes in your club arrangements nicely.

The quality here is simply top-class. It's one of the best dance packs we've heard in a while, and the asking price for the 550MB of content is very reasonable.

10/10



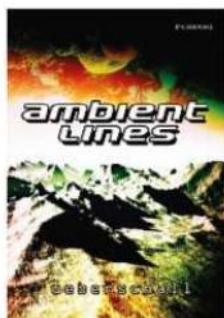
Ueberschall

Ambient Lines €99

Contact support@bestservice.de

Web www.bestservic.de

Format Elastik Instrument Soundbank



This title is designed for quick construction of ambient sound beds and textures. Building blocks include pads, beats, evolving atmospheres and sound effects, and each of the 35 kits also includes a fully mixed cue. Use of the Elastik instrument means you can easily mix and match any of the 457 key- and tempo-labelled stems, plus you have easy access to pitch, direction and playback points.

Sonically, this set is excellent – reminiscent of classic FSOL and The Orb. The sounds are extremely well processed, resulting in point-and-shoot simplicity for those after quick, convincing results.

9/10

Ueberschall

Supreme Styles €99

Contact support@bestservice.de

Web www.bestservic.de

Format Elastik Instrument Soundbank



Here we have 30 urban construction kits providing over 1600 loops (4GB in total), although as usual with Ueberschall, you don't get the raw WAVs – it's all locked into the Elastik Instrument format. Each kit includes five patches: intro, main, variation, outro and single sounds. Guitar is featured heavily in this set giving it both a latin and, at times, chilled flavour, and although it's excellently recorded, in places it lacks the edge of modern urban production. That said, good tempo and key labelling, and the various musical sections provide plenty of flexibility for compiling your own arrangements.

7/10

Big Fish Audio

Detroit Soul £65

Contact Time+Space 01837 55200

Web www.timespace.com

Format WAV, Acidized WAV, Apple Loops, REX, Stylus RMX



The Funk Soul Productions team deliver a wonderfully realistic slice of Blues Brothers-style 60s and 70s soul and R&B. Arranged into 28 construction kits, styles and tempos (59 to 200bpm) vary considerably.

The core instrumentation of drums, bass, guitar and horns is augmented by vibes, organ, piano and percussion, and you'll also find the drums available in stem form (kick, snare, overheads and room). If we have one criticism, it's that the intro, outro and main sections aren't complemented by bridges or alternate sections. That said, this is still a great one-stop solution for vintage R&B backing tracks.

8/10

Zero-G

Deep Impact £90

Contact Time & Space 01837 55200

Web www.timespace.com

Format Acidized WAV, Apple Loops AIFF, Kontakt, EXS24, NN-XT



Following in the footsteps of their earlier Dark Skies library, Zero-G here focus on action-packed special effects, soundscapes, drones and textures for larger than life TV, film and gaming moments. Construction kits (40 in total) are presented as a handful of layers, as well as a fully mixed cue. You also get raw looped material ranging from beats to drones and explosions to scene FX (600 files in all). We were particularly impressed by the many explosions, hits and whooshes, and just the general supersized nature of the sounds. Deep Impact delivers a powerful, professional 'big screen' experience.

9/10Producer Loops **DOWNLOAD****Deep House Progressions Vol 1** £30

Contact Producer Loops, 0845 0943077

Web www.producerloops.com

Format Acidized WAV, Apple Loops, MIDI, Reason ReFill, REX, Stylus RMX



Spread across five construction kits (which can be bought separately), this pack delivers around 560MB of loops. Typically around half of each kit is premixed loops with effects, enabling quick track construction. However, with no individual hits, it's less flexible than it should be. The inclusion of MIDI files is useful, but it's a shame they don't include the beats too. With tempos firmly in deep house territory (122-126bpm) and the sounds being pretty understated overall, there's a suitably laid back nature to the set. Even so, there's not much here that you couldn't recreate, making this more of a quick-fix tool for non-programmers.

7/10Puremagnetik **DOWNLOAD****Hackshop** \$12

Contact info@puremagnetik.com

Web www.puremagnetik.com

Format Live 8, Kontakt 3, Apple Loops



Hackshop is the work of sound sculptor and circuit-bender The Violent Scar, and it bundles over 100 tempo-labelled loops with ten bass, pad and percussion instruments. The 100MB of content has been produced using TVS's own processors and modified instruments, including his circuit patchable Yamaha DD-5.

Although trailed as glitchy (which it is), these sounds would be equally at home in more industrial contexts. While we like the percussion instruments, the most inspiring stuff here is the range of loops – they're as crisp and edgy as you're ever likely to hear. If white noise and distortion float your boat, Hackshop delivers big time, in affordable, convenient Puremagnetik style. **cm**

9/10

cm/recommends

The best new gear from the last three issues...



Slate Digital £255 **Trigger Platinum**

Rating 10/10
Reviewed **cm**153
Contact sales@studioexchange.co.uk
Web www.slatedigital.com

What is it? The debut plug-in from Slate Digital, Trigger is the ultimate drum replacer, in our opinion. Dialling in settings is a doddle, the triggering is phase accurate and the superb built-in kit sounds come from Steven Slate's renowned drum packs. The killer feature, though, is Leakage Suppression, which greatly reduces cross-talk, allowing for extraordinarily accurate triggering, even with faint ghost notes.
Verdict "Trigger is the new gold standard in drum replacement software. It's easy to use, triggers like a dream, and sounds terrific."



Iced Audio \$69 **AudioFinder 5**

Rating 10/10
Reviewed **cm**154
Contact software@icedaudio.com
Web www.icedaudio.com

What is it? An audio file organiser, AudioFinder is, as far as we're aware, the only program of its kind. You can browse files by directory, preview them (or play them via a MIDI keyboard), detect pitch/tempo, make edits and apply effects, use batch processing/renaming, and much, much more. New for v5 is a powerful metadata tagging system with similarly adept searching functions.
Verdict "It's not the sexiest bit of music software, but when it comes to getting a grip on your samples, nothing beats AudioFinder"



Steinberg **Nuendo 5** £1531

Rating 9/10
Reviewed **cm**155
Contact Via website
Web www.steinberg.net

What is it? Cubase's big brother is a DAW of epic price and proportions, being aimed primarily at post-production professionals. New features include an enhanced automation system, intuitive surround panner, better MediaBay, and a funky pitch effect. Some of Nuendo 5's improvements are already shared by Cubase 5.5, and - fingers crossed - hopefully we should see more of them making an appearance in Cubase 6.
Verdict "A solid and attractive update that's light on pointless 'whizz bang' additions"

What we've been using this month



Ronan Macdonald
Editor

Reason 5's Kong, sampling functionality and Blocks transform its sound and workflow without detracting from its essence. It's simply one of the greatest pieces of music software ever made.



Lee du-Caine
Deputy Editor

People always told me my mixes were "totally pumping", though I've come to realise they were having a sly dig at my mastering skills. But now I've got Slate Digital's FG-X, I can be loud and proud.



Tim Cant
Multimedia Editor

I had my first taste of Spectral Conquest for this month, and what an earth-shaking encounter it was! Just as soon as I've sussed out the scripting system, I'll be plunging in even deeper.



Caity Foster
Production Editor

This being my first month on **cm, I had to pull out all the stops to keep up with the rest of the team. By which I mean I've been twiddling with the drawbars on Martinic's Combo Model V organ.**



PRIME LOOPS

WE'RE IN THE MIX

Prime Loops provide award-winning sound libraries, fresh in-tune with the evolving music scene. We are an extremely passionate team of engineers, sound designers & DJs, hailing from London, UK

DANGER! HIGH VOLTAGE!

Put your fingers in the socket and throw the switch, Prime Loops are delivering the high-voltage vibes to energise your next dancefloor hit!

This fully remixable pack contains a complete selection no-nonsense electro house elements, with straight-up beats, punchy kicks, swinging hats and sidechained pads, all broken down into a flexible folder structure to let you raise the pressure even further with your sequencer.

Featuring 240 separated drum and synth loops locked at 128Bpm, boosted by over 100 one-shot drum and fx sounds, you're ready to pick n' mix layers to construct your own disco remix devastation!

£17.95



XXL DIRTY SOUTH DRUMS

Get your hands dirty 48 supreme drum kits and 400 hard-hitting platinum-level drums for professional Dirty South, R&B, Hip Hop & Urban beatmakers. Get ready to lay down some serious XXL beats – and start making hits in minutes...

£14.95



R&B BEAT PROGRAMMER

Ready for some serious beatsmith talent? Once again, Prime Loops are bringing you the hottest rhythms to download straight into your mix. Hip Hop, Dirty South, Urban, R&B... we've got you covered in hit-making material, itching for injection into your beats... don't waste time and get set to lay down the overdubs today!

£14.95



SYNTH BASS ANALOGY

Inside this pack you will find an inspired arsenal of over 200 expertly designed sound effects and DJ samples, featuring transition sweeps, bleeps, vocal chops, cymbal FX, orchestra hits, impact sounds, vinyl spins, atmospheric intro textures and much, much more!

£12.95



AMBIENT FRACTALS

The true essence of Ambience - 'Ambient Fractals' will twist you through the mathematics of sound, bringing you a mesmerizing selection of waveform manipulations and spaced out oscillations. Designed to give the perfect sonic sculpting for numerous styles: Dubstep to House, Hip Hop to Techno, Drum n' Bass to Downbeat... and beyond!

£16.95

**COMPUTER
music**

Readers get **15% Discount**
with discount code **CM15**

www.primeloops.com

COMPUTER
music

\$83 OFF THE STORE PRICE WHEN YOU SUBSCRIBE

SUBSCRIBERS GET ALL THIS!

- Save 40% and pay only \$9.59 per issue (usual price \$15.99)!
- FREE DVD-ROM with every issue, packed with all the software and samples you need to make music
- Improve your skills with our easy to follow tutorials
- Never miss another issue - delivered by Airmail, direct to your home or workplace.

START SUBSCRIBING
FROM ONLY **\$31.18** BY QUARTERLY
CREDIT CARD

Click www.imsnews.com/cmu-a027

Call Toll free 1800 428 3003 quoting code a027

Terms & Conditions: This offer is for new subscribers only. You will receive 13 issues per year. Your subscription will start with the next available issue. Minimum subscription term is 12 months. If at any time during the first 60 days you are dissatisfied in any way please notify us in writing and we will refund you for all un-mailed issues.



Back issues

Your chance to order any issues of *Computer Music* that you may have missed over the last six months...



Issue 155 September 2010

- FXpansion Guru CM and 2021 jazz samples on the DVD
- Troubleshoot your music computer
- iPad MIDI control
- Build electronic beats from scratch
- Producer Masterclass: Nick Thayer, Black Noise
- Steinberg Nuendo 5, Toontrack Beatstation, Audio Damage Discord3 and more reviewed



Issue 154 August 2010

- Synapse Audio Junglist and 2001 Carnival Rave samples on the DVD
- Make a track for free
- Touch of genius (make music on your iPad)
- Hard times (integrating outboard gear)
- Producer Masterclass: Blame
- XILS-lab PolyKB, Line 6 Pod Farm 2, UAD Precision Enhancer Hz and more reviewed



Issue 153 July 2010

- Big Tick Audio Rhino CM and 2167 ambient samples on the DVD
- Ambient masterclass
- Rhythm and stealth (videogame music)
- See the music (a visual look at sound design)
- Producer Masterclass: Jayce Lewis
- Xfer Records Nerve, FXpansion BFD Eco, UAD FATSO, Magix Vandal and more reviewed



Issue 152 June 2010

- Time+Space UVI Soundstation and 2045 dark dub samples on the DVD
- The beginners' guide to mixing
- Tricks with time
- ...And the kitchen sink (foley sound)
- Producer Masterclass: Bonobo
- Vengeance-Sound VPS: Metrum, SoundToys V4, DMG Audio Equality and more reviewed



Issue 151 May 2010

- Martin Eastwood Audio Duet and 2,007 urban rock/electronica samples on the DVD
- The beginners' guide to MIDI and sequencing
- Emulating effects
- Sounds of sci-fi II
- Producer Masterclass: dan le sac
- IK AmpliTube 3, Avid Eleven Rack, Image-Line Harmless, D16 Syntorus and more reviewed



Issue 150 April 2010

- 1000 Sony Creative Software samples and 1,985 techno samples on the DVD
- The beginners' guide to synths
- Unrestricted Axes
- The Low-End Theory
- Producer Masterclass: Super8 & Tab
- NI Traktor Kontrol X1, Audio Damage Tattoo, Steinberg C12 and more reviewed

To order, call

0844 848 2852

or email

future@subscription.co.uk

>Your questions answered

Q&A

Confused about what to buy next? Stuck trying to get perfect dubstep wobble? Or plagued with setup and software problems that you just can't solve? We can help you out – send all your questions to cmhelp@futurenet.co.uk

My first mixer

Question I want to build a home studio setup. I want to be able to record guitars and vocals and add MIDI drums and synths, most likely using Cubase as my DAW. I have a new PC with an onboard soundcard that I assume won't cut the mustard. Should I buy something like a Behringer X1222USB mixer? Or should I buy something like a Focusrite Saffire 6 or similar? Would both be ideal or necessary? Also, is connecting either of these units to my existing soundcard easy?

Steve Black

Answer For your purposes, either the Behringer X1222USB or the Focusrite Saffire 6 would be suitable, but you certainly wouldn't



Behringer's X1222USB and Focusrite's Saffire 6 both have their advantages and disadvantages



COMPUTER music QUESTION OF THE MONTH

The Sample Boutique
Loopmasters
www.loopmasters.com

The writer of our *Question of the Month* will receive their choice of two Artist Series sample libraries courtesy of Loopmasters. www.loopmasters.com

need both! The Behringer mixer is more suited to basic live recording and mixing of many sound sources – it's possible to hook up a load of instruments and mics to the desk at the same time, and it has built-in goodies such as EQs and compressors. While the Saffire 6 USB doesn't have as many bells and whistles, it does sound very good – we'd expect that it sounds better than the do-it-all Behringer device. As you say you're not going to be recording more than guitar and vocals, we would suggest going for the Saffire to get the best possible recording quality.

Neither device would actually connect to your computer's onboard soundcard. Rather, they connect to your computer via USB – when you record and play back with them you won't be using your existing soundcard at all. Installation should be

pretty simple – install the drivers, plug the interface in, select the correct audio driver in your software of choice and away you go!

Auto-Tune-esque

Question I want to create an Auto-Tune effect like the one on Magnetic Man's *I Need Air*. I'm using Cubase 5, which has pitch correction built-in. Can I use it for that effect?

Brandon King

Answer You can indeed use Cubase's VariAudio feature to create the extreme Auto-Tune effects heard on countless tracks – see *Extreme pitch correction effects in Cubase*, right to see how to do it. Another option is to use Cubase's PitchCorrect plug-in.





Errant program change messages from Reaper are an easy problem to deal with

Taming the Reaper

Question I use Reaper and I have a problem with VSTi's - nearly all of them have the annoying habit of defaulting to Preset 1 when I attempt to render or go back to the beginning of the track. This does not apply to all, though: ZebraCM and a few others work just fine, whereas Dominator and most of the other soft synths I use reset to the first preset. Can you help?



Colin Stevens

Answer It sounds like your synths are getting unwanted program change MIDI messages from Reaper. Perhaps you've accidentally recorded some MIDI program changes, or have used pre-existing MIDI that includes these messages. Either way, the solution is simple: open the troublesome MIDI part at the start of the track, and select **Bank/Program Select** from the **MIDI parameter** menu in the bottom left-hand corner of the Grid Edit window. You'll see if such data is present - simply right-click it to delete it.

Plug-in confusion

Question I've been making tracks for about a year, and it's been going well so far. I've mostly been sticking to free plug-ins, but

I'm thinking of getting my hands on some of the more professional plug-ins out there. The problem is, I have no idea where to start. Every issue your magazine bristles with reviews of the latest software effects and VST instruments, all of which sound absolutely excellent. There seem to be hundreds of different compressors and filters and EQs, so I have no idea where to even start, especially when I'll be shelling out a significant amount of money for them. Is there any way you could give me a lowdown on the best plug-ins I could get to build my fundamental library - synths and effects that will serve many uses, and that I can get the majority of sounds I could ever want out of?

Sean Cotterill

Answer That's a tough question to answer. Opinions vary as to the "best" plug-ins of each type, and as you learn more and your production skills grow, your expectations and requirements will no doubt change. It's also important to remember that music production standards are constantly changing. You may love the sound of albums from the 60s or 80s, but if you want your music to stand up to contemporary competition, you'll want to keep investigating the latest effects. As such, it's nigh on impossible to build a completely future-proof plug-in library that will fulfil all your needs.

It's also possible to spend enormous amounts of money: you'll probably find that the Waves Mercury bundle would keep you entertained for

> Step by step

Extreme pitch correction effects in Cubase



1 > Start by making an audio track in Cubase. Naturally we're going to need some audio to work with, and there's an appropriate file on the disc. Drag **Vocal.wav** from the **Q&A** folder on the DVD onto the audio track and double-click it to open the Audio Editor.



2 > To use Cubase's VariAudio functions, click the **VariAudio** tab at the left of the Editor window and the VariAudio menu will appear. Click the arrow icon next to where it says **Pitch & Warp**, and the timing and pitch information will be displayed over the audio.



3 > To create an extreme Auto-Tune style effect, drag over the audio you want to process and raise the **Straighten Pitch** slider in the **VariAudio** menu to flatten the pitch curves. If you want to ensure that each note is perfectly on the closest pitch, raise the **Quantize Pitch** slider too.

"As you learn more and your production skills grow, what you require from your plug-ins will no doubt change"

> Step by step

Pitch-shifting breaks in Logic



1 > EXS24 might not have the pitch-shifting capabilities of Kontakt, but it's certainly possible to get those time-stretched jungle beats in Logic. Start by dragging **JungleStretch.wav** onto your hard drive from the **Q&A** folder on the **cm** DVD, and then onto an audio track in Logic.

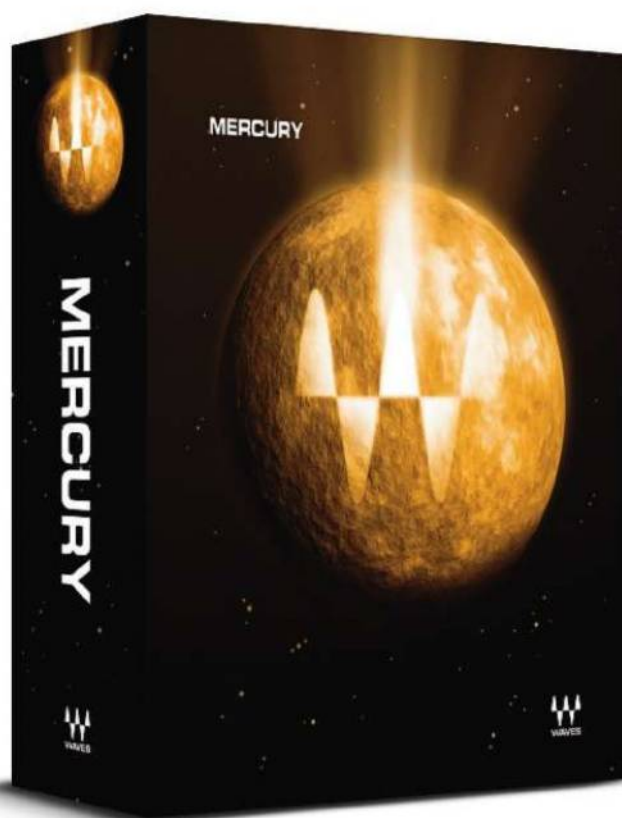


2 > Double-click the audio region to bring up the Audio Editor. Logic edits audio destructively, so before you start tweaking, select **Audio File»Create Backup**. To use Logic's audio pitch-shifting, select **Factory»Time and Pitch Machine**.



3 > Set the **Algorithm** to **Any Material** and the **Transposition** to **1200** to pitch the beat up an octave. Click **Process and Paste**. Logic will warn you that it's about to edit the audio destructively. Click the **Process** button to complete the operation. When played back, you'll hear the freshly time-stretched beat.

There's no question that Waves' Mercury Bundle is an incredible collection of plug-ins, but at over ten grand, you'd expect nothing less!



a while with its enormous library of 250 plug-ins, but are you prepared to spend \$10,550 finding out? The most sensible way to build a plug-in library, rather than compiling a large and expensive shopping list, is to identify your needs and try out some demos, so you can make an informed choice before you fork out.

We'd recommend starting out with the bread-and-butter effects such as equalisation, dynamics, reverb and delay, and modulation effects such as choruses and phasers. Check out the offerings in these categories from the likes of Voxengo (www.voxengo.com), SoundToys (www.soundtoys.com), PSP Audioware (www.pspaudioware.com), Blue Cat Audio (www.bluecataudio.com) and Waves (www.waves.com), but bear in mind that all of the Waves and SoundToys demos require iLok authorisation, as do some of the PSP ones.

On the instruments front, we'd suggest giving the demos of the various constituent elements of Native Instruments' Complete 7 pack a try. At €499, it's incredible value: this enormous software bundle comprises 24 instruments and effects, including an absolutely vast sample library. You'll find all the info and demo downloads you need at www.native-instruments.com.

Out of the jungle

Question I was very interested in the **cm Focus on jungle breaks** in issue 152, and was wondering if there was any way I could get

the same kind of timestretching effects using the EXS24 in Logic.

Lyndsey Harrington.

Answer The EXS24 sampler doesn't have full timestretching capabilities, so it's not possible to perform Kontakt-style real-time pitchshifting. It can be achieved with a bit more difficulty and less junglistic results using Logic's pitchshifting plug-ins, but to get the best effect, we recommend using Logic's audio editor, which has plenty of timestretching and pitchshifting options. See *Pitchshifting breaks in Logic*, left, for a quick guide to getting old-school jungle sounds in your new-school DAW.

Back to the drawing board

Question I've always wondered what could be done with a frequency-based MIDI editor. When I first started making experimental music on my PC over a decade ago, I thought how interesting it would be just using the mouse to draw lines of sound, free of the constraints of the piano roll. I would have thought that technical processing problems to do with polyphony and the digitised gradation of the frequency table could be overcome now that computers are more powerful. Chances are it wouldn't sound too musical, though. I've used Theremin-type plug-ins and haven't been overly pleased with the results. But it would be nice to be able to link that kind of data up with Reaktor

"If you're interested in experimenting with visual sound design, it's worth checking out Photosounder and MetaSynth"

or something in a user-friendly type program; just a graph with Hz over time, with all the other MIDI controllers on one editor. There isn't anything of that nature, is there?

Jonathan Peppé

Answer In terms of composing by frequency, the problem with MIDI is that it sends note data as integers from 0 to 127. So, MIDI-based DAWs and instruments aren't going to be able to achieve the kind of results you're after. However, you could create your own frequency-based sequencer in a package like Reaktor, but it would be a lot of work for something that, as you rightly concede, might not sound too musical!

If you're interested in experimenting with visual sound design then you should check out Photosounder and MetaSynth, demos of which are available at www.photosounder.com and www.uisoftware.com respectively. These aren't actually compositional tools as such, but both offer the 'Hz over time' editing method you describe.

It's worth noting there's a very easy way to get a straight-up Theremin-style sound in your DAW. If you've got a synth with a self-resonating filter (such as the freeware TAL-U-No-62, which can be downloaded from kunz.corrupt.ch), deactivate the oscillators and turn the resonance all the way up to create a simple tone that you can control the pitch of by automating the filter cutoff. This will only be monophonic in the case of TAL-U-No-62, but you can use multiple synths if you require more voices. Its simplistic tone is another limitation, but you can sculpt it with plug-in effects. If you're really intent on using non-standard tuning, remember that it's possible to pitchbend notes, though using this method, you're again forced to use a grid editor.

DAW deliberations

Question I've been making dubstep and DnB on my computer with Reason, but I think that I'd like to upgrade to a different bit of

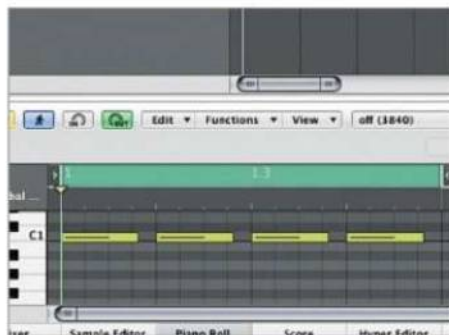
software, because I want to use VST plug-ins and audio tracks. I'm using a PC. What software would you recommend for making that sort of music? I don't mind spending a bit of money, but I don't want to waste it on software that's not up to scratch.

Morgan Holt

Answer If you're making dance music on a PC and have tired of Reason, the most popular alternatives would be Steinberg Cubase and Ableton Live. They both have great VST hosting and audio track capabilities, and these days there's considerable overlap in the two apps' capabilities - though there are some key differences too.

Cubase has the more sophisticated audio and MIDI editing, but Live has features like clip automation and more flexible effects routing capabilities. The one you prefer will be down to personal preference, so we'd hesitate to give a hard recommendation of one over the other. Thankfully, there are now demo versions of

Question How do I make gabba kick drum sounds in Logic?
Jonny Hurrell



1 > Start by creating a software instrument track in Logic. Load the Ultrabeat drum synth. We're going to use the default kick on C1. Draw in a four-to-the-floor kick pattern, as shown.



2 > Before we tweak the drum sound, let's add some effects to give it that dirty gabba sound. Start by adding Logic's Clip Distortion plug-in. Set **Drive** to 44.5dB, **Tone** to 20Hz, **Clip Filter** to 20,000Hz, **Mix** to 100% and **LP Filter** to 20,000Hz. This gives us a big, banging bass, but we need more beef.



3 > Next, add an Overdrive plug-in. Turn up the **Tone** to 20,000Hz and set the **Drive** to 13dB. Boom! Now there's plenty of bass in your face, but the kick still isn't quite right for that gabba sound. Let's return to Ultrabeat and get tweaking.



4 > First we'll set up Envelope 4, which is the amplitude envelope. Copy the shape we've drawn here, which peaks early but has a long tail. This gives us a good, square wave-y attack with a long, more rounded tail.



5 > Next select **Envelope 1**. This is the pitch envelope. Again copy the shape shown here. This gives us a quickly dropping attack at the start, followed by a slower descent. Getting this right is very important - check the **Gabba Kick** project on the **cm** DVD if you're not sure.



6 > We now have our basic gabba kick sound. You can use this as a basis for further experimentation. In particular, we recommend trying out different shapes for the amplitude envelope to create different feels, or applying filter and modulation effects to get more character.

both available, so you can try before you buy. The Live demo can be downloaded from www.ableton.com, and the Cubase demo can be found at www.steinberg.com. The Cubase demo requires a Steinberg USB-eLicenser hardware dongle to run, however, which can be bought from the site for £18 plus postage.

If you do decide to take the plunge and buy one or the other, you might want to go for one of the cheaper Lite versions before upgrading to the full product. Live Intro can be downloaded from the Ableton site for €99/\$99, and Cubase 5 Essential can be had for £127 with free shipping direct from Steinberg.

Faking a Swagga

Question How do I make a dubstep bass that like the one featured in Excision & Datsik's *Swagga* - specifically the one that

comes in on the drop - using Albino 3? It would be awesome to have in my tracks.

Karac Boldick

Answer We asked dirty bass expert and **cm** contributor Hattrix if it was possible to get Excision & Datsik's bass sounds in Albino:

"Good luck! You can't get the *Swagga* sounds out of a lone synth. Those boys spend hours upon hours mangling audio fragments together with crazy bus routing and multiband splitting."

If you really want bass noises like theirs, then you'll need to spend a great deal of time experimenting and tweaking. That's not to say you can't get some great dubstep bass straight out of Albino, though, as our *Producer Masterclass* with dubstep legend Rusko in **cm**134 certainly proved. You can get even better results with some parallel processing - see *Making dubstep bass in Albino and Live*, right, for a guide to creating a big, layered bass sound.



You need more than just a single synth to get the crazy sounds of Excision & Datsik's *Swagga*

Question How do I use Reason's vocoder?
Tom Woodward



1 > To put Reason's BV512 Vocoder to good use, you're going to need two things: a modulator and a carrier. The modulator will typically be a vocal, and it's what the envelope followers of the vocoder will use to control the levels of its band-pass filters. Start by adding an NN-XT sampler to the Reason rack.

2 > Click the triangle button at the bottom left-hand corner to bring up the program editor. Right-click the instrument and select **Initialise Patch**. This will delete the existing keyzones. Right-click the instrument again and select **Browse samples**. Load the **Vocal.wav** sample from the **cm** DVD.

3 > Draw or play in a MIDI note to play this vocal back on C3. Now that we've got our modulator, we need a carrier. This is what the band-pass filters of the Vocoder will impart the characteristics of the vocal onto. **Create** a Subtractor synth.



4 > We need a rich sound from this synth, so set the first oscillator to a sawtooth waveform, and turn the level of Filter 1's **Freq** slider up so that all frequencies pass through unhindered. Copy the MIDI part from the NN-XT track to trigger this synth.

5 > Now we just need to add the vocoder and route the instruments to it correctly to get the effect we're after. Add a BV512 Digital Vocoder, and press **Tab** to flip round to the back of the rack. Reason will have automatically routed the NN-XT to the Mixer and the Subtractor to the **Carrier** input.

6 > Unplug the right output from the NN-XT and plug the left into the Vocoder's **Modulation** input. On playback you should hear the distinctive sound of the vocoded vocal. Turn up the number of bands to get a more intelligible effect, or lower them for a lo-fi feel.

> Step by step Making a dubstep bass with Albino and Live



1 > We're going to make a dubstep bass noise that can be played via MIDI without resampling. We're going to use Ableton Live for this, because it makes it very easy to create parallel effect routing chains. Put Albino on a MIDI track, and load the **z_init** preset to initialise the patch.



2 > Set the first oscillator to a pulse wave shape, and tune it down a couple of octaves. At the bottom right-hand corner of the interface, set the number of voices to **Mono** and the **Glide** mode to **Bend** with a **12**-semitone range and a very short attack time (use the **Time** knob). This gives the patch a punchy attack.



3 > Let's get some wobbly filter action on the go. In the **Filter 1** panel, set the **Mode** to **12**, **Cutoff** to **11595**, **Track** to **0.50** and everything else to **0**. We want to use one of Albino's LFOs to modulate the filter cutoff, so in the **Mod Matrix**, set the second line to read **LFO 2 - 0.5533 - Fil 1 Cutoff**.



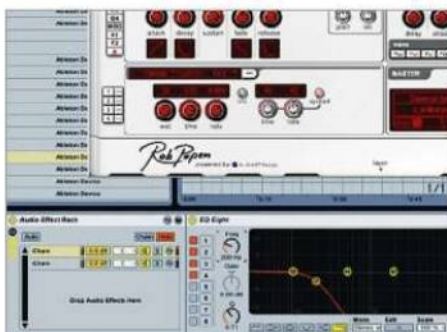
4 > Click the **L2** button to the right of the **Mod Matrix** panel to display LFO 2's parameters. Set the **Wave** shape to sine and the **Sync** level to **1/8T**. There you have it - an extremely generic dubstep wobble that provides a basis for experimentation. Save the patch using the **S** button in Albino's Patch Browser.



5 > An easy way to get some interesting harmonics into the mix is to turn up Oscillator 1's **Spread** knob. Set it to 11 o'clock, play a note and listen to how the sound has changed - it's got a sweepy, futuristic feel now. You can stop it sweeping, should you wish, by activating the **Free Run** button.



6 > Deactivate the **Free Run** button and turn down the **Spread** knob. Another way to quickly make a patch like this bigger is to use chorus. Albino has a great built-in chorus: activate the first **FX** slot and choose **Chorus**. This spreads the sound quite wide - not ideal for the bass end. However, it's possible to remedy this easily in Live. Deactivate the Chorus effect.



7 > Add Live's EQ Eight plug-in to the MIDI track, then right-click it and select **Group** to make a rack. Click the **Show/Hide Chain List** button, then click the effect chain and select **Duplicate** to make a copy of it. Select the first group and use the EQ to low-pass filter it at **200Hz**.



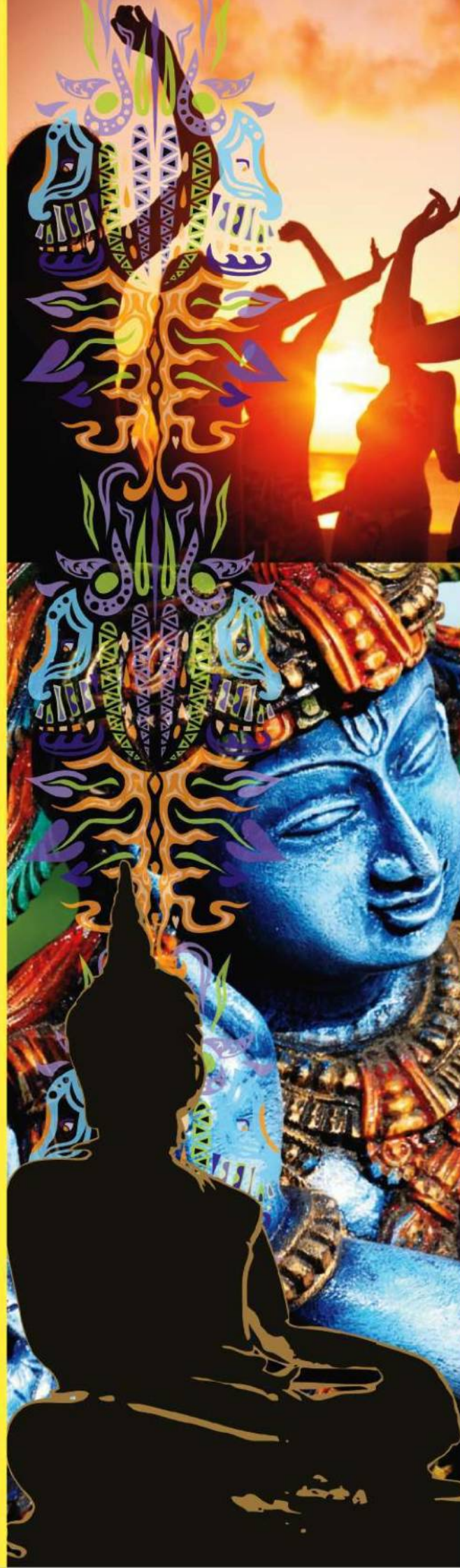
8 > Select the second chain and high-pass it at **300Hz**. To this chain, add Live's Chorus plug-in. This only processes the high frequencies let through, leaving the low-end unaffected. We can now easily turn up the lows in relation to the highs using the mixer in the rack. Turn the low-end group up to **3.5dB**.



9 > Now we can add all kinds of dirty effects to the high end of the sound without messing up the lows. Add **Redux** and **Overdrive** plug-ins with the settings above. Turn the chain down to **-10dB**. Automate the Overdrive effect's **Filter Frequency** and **Width** parameters with quick sweeps to make a nasty bass. **cm**

NEW-SCHOOL GOA TRANCE

Combining Indian mysticism with Western rave culture, Goa trance can be tricky to make. Here's how it's done...



> Goa trance is a sub-genre of trance that originated from the free party scene of the eponymous Indian state in the early 90s. In cultural terms, Goa trance is a heady mixture of Eastern spirituality and good old-fashioned Western hedonism. Its sound isn't that far removed from mainstream trance: fast, synthetic four-to-the-floor beats, euphoric arpeggiated synth patterns and simple driving basslines are the key ingredients. Like hard trance, acid lines can be found in abundance - but what you certainly won't hear are the poppy vocal lines of commercial trance. Instead, Goa trance uses spoken word samples and melodies that take their cues from traditional Indian and Middle Eastern music.

Goa trance achieved the peak of its popularity in the 90s, but since the mid-00s it's undergone something of a revival, and many new artists and labels have appeared. Although the scene is popular around the globe, it's still very much an underground phenomenon, with artists often distributing their work digitally or via compilation CDs, rather than on physical singles. This new school of Goa trance maintains the mystical and exotic flavours of the original style, but is now more complex and multilayered, thanks to the power of today's computers and music software.

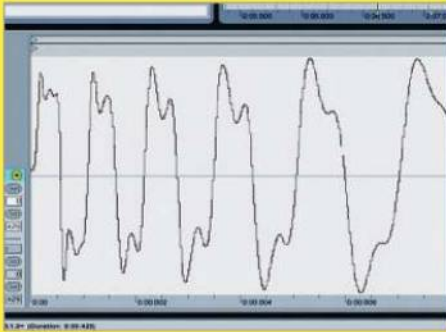
This complexity can be off-putting to new producers, as the genre can sound dense and impenetrable thanks to its myriad sounds, but getting a grasp of its

"New-school Goa trance maintains the mystical flavours of the original style"

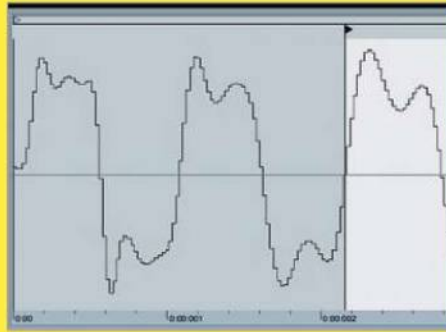
fundamentals makes it much easier to understand how such intricate tracks are put together.

Over the next four pages, then, we'll show you how to program your own high-energy Goa trance beats, and synthesise bass and lead sounds, before running through some general arrangement and production tips. Once you've got to grips with the basic techniques you'll be able to let your imagination run wild and create more complex sounds and arrangements. All the samples and patches used in the walkthroughs are on the DVD, so grab your tie-dye and let's get ready to rave!

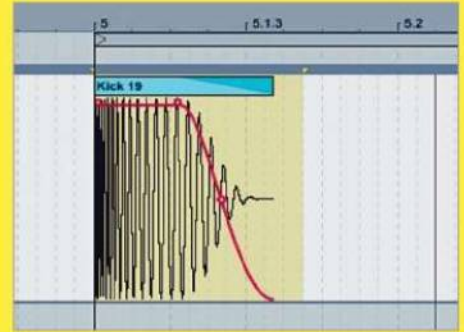
> Step by step Building a Goa beat



1 > Goa trance kicks are generally synthetic, with quite punchy, high-pitched attack phases. In the **Tutorial Files/CM Focus** folder on the disc you'll find a typical trance kick sample: **Trance Kick.wav**. Load this into your DAW and set the tempo to **145bpm**, then zoom in on the start of the sample.



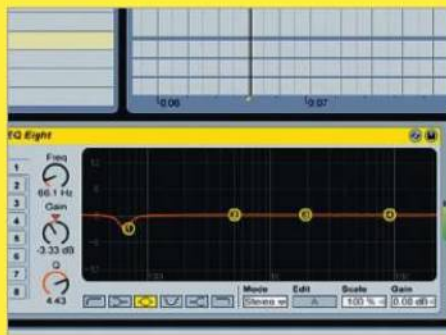
2 > You can see the high-end energy at the start of the sound - it's more jagged than the smoother body. Currently the sample is a little too punchy and bright for our needs, but we don't need to use EQ to fix this - we can simply move the start point to the beginning of a later cycle.



3 > The kick is a little long for our fast-paced beat, so we turn our DAW's **Snap to Grid** function off and shorten the sample on the audio track. We also apply a fade, so that the sound tails off naturally rather than just stopping dead.



4 > Turn the **Snap to Grid** function back on and copy the kick so that it plays on every beat of the bar. Even though we've shortened the kick and thus taken away some of the low-end energy at the end of the sample, it's still a bit bassy. Use a spectral analyser to see where the low frequencies peak.



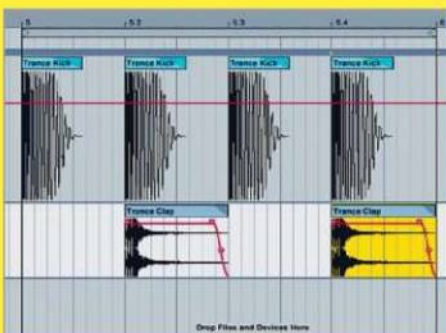
5 > This kick peaks at 66Hz. You can control the volume of this frequency and those adjacent to it using an EQ with the **Frequency** set to **66Hz**. In this example we've just taken off just a few dB (**-3.33**), which makes the subby throb a little quieter in relation to the kick's punchy attack.

POWER TIP

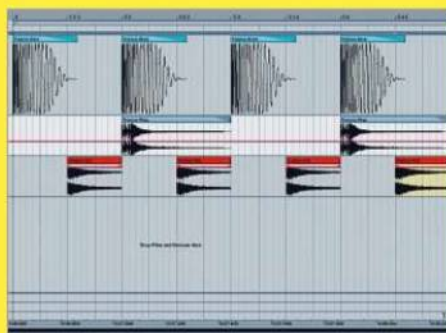
> Make your kicks sound the part

Getting the kick drum sound right is very important in any trance production. You can have great synth sounds and melodies, but without a good kick your track won't match up to the competition. As we've seen, it's possible to take high frequencies out of the kick by shifting the start point of the sample later. You can also take lows out by moving the end point earlier.

Taking frequencies out of a sound is easier than putting them in, so if you just don't have the frequencies you need in your kick, find a different sample, or try synthesising your own using a sine wave oscillator that very quickly drops several octaves in pitch.



6 > Add another audio track and drag **Trance Clap.wav** onto it. Place it under the second kick. This sound has quite a long reverb tail, which will sound messy if it runs over the subsequent kick. To prevent this, shorten and fade the tail so that it cuts off before the next kick. Make a copy of the clap under the fourth kick.



7 > We don't need the clap to feature a lot of low end, so use EQ to roll off everything under **500kHz**, leaving as much room for the kick as possible. Create another audio track, and drag **Trance Hat.wav** onto it. Place it on the offbeats between each kick, as shown.



8 > Put shorter, faded versions of the hi-hat on the first and second 16th-notes of each beat. These should be turned down by about 10dB so that they're not as loud as the main hats. When you're done, add an EQ and roll off everything under **500Hz**. Turn the hi-hat track down to balance well with the kick and clap.

Four top new-school Goa trance stormers

Amithaba Buddha *Obsidian Stones*

Featuring a massive synthesised kick drum, 808-style snare drums and an off-beat hi-hat, *Obsidian Stones* has a less rushy drum pattern than much Goa trance, but its use of fast-paced synth arpeggiations keeps the track rolling. The second half features some big chord changes, creating an epic crescendo.

www.bit.ly/avCDI5



Party Droids *Biogenesis Blaster*

A lush, psychedelic intro makes way for a typical ethnic-sounding trance riff and, eventually, distorted acid sequences. Drum rolls, huge FX and filtered synth arpeggiations keep the track rolling, and there's even a breakbeat-style breakdown halfway through, complete with an unusual sliding synth riff. These Party Droids must be crazy!

www.bit.ly/98HPZ7



Goalien feat Agneton *God Of Light (Golden Path Remix)*

This crazy tune starts out fast, at more than 150bpm, slows down to somewhere in the 130bpm region, then speeds right back up to its original tempo. Off-the-wall squelchy synth sounds lace the tune, which also features an unusual phased vocal synth riff that sounds very much like it was created in Native Instruments' Massive.

www.bit.ly/cN3TEe



Pandemonium! *A Mad Scientists Night*

This free digital release is a quality production with tons of twisted acid noises, abstract synth riffs and some unusual snare rhythms that give it an almost reggae feel. Add some bonkers mad-scientist samples and a rolling bassline and you've got a recipe for dancefloor carnage.

www.bit.ly/ctMIPj



> Step by step

Programming an exotic trance arpeggiator



1 > To get an exotic Eastern feel, we're going to use the Phrygian dominant scale. Program the arpeggio shown above on a MIDI track. Although it's in C, the kick drum is tuned to F, so you'll need to transpose the MIDI part up five semitones, either manually or using a MIDI effect.



2 > We're going to use Native Instruments' Massive to make this sound, but most virtual analogue synths will be able to create something similar. In Massive, select **File > New Sound** to initialise the patch. Start by activating **Osc 2**. Raise it an octave by entering **12** in the **Pitch** box.



3 > We can give the sound some punch by applying a short filter envelope. Set **Filter1** to **Lowpass 2** mode and drag the modulation handle from **1Env** to the first box under the **Cutoff** knob. Set **Filter1's** **Cutoff** and **Modulation** (the blue line around the knob) to the settings we've used here, and then copy the **Attack**, **Decay** and **Decay Level** settings shown here for **1Env**.



4 > While we've at it, let's make the filter cutoff follow the pitch of the notes played. Drag the **Ktr** modulation handle from the **Macro Control** panel to the second slot under the **Cutoff** knob. Next, apply a small amount of modulation. Select **4Env**, which is set to control the volume of the sound over time, and turn the **Decay Level** time all the way up.



5 > For a trancier sound, we need to add more voices. Select the **Osc** tab and activate the **Restart via Gate** button. This tells Massive that we want the waveform for each oscillator to restart with every note played, giving a punchier sound. Next, select the **Voicing** tab. Turn the number of **Unison** voices up to **4**, then activate the **Pitch/Cutoff** spread and turn up the slider as shown.



6 > For the final touch, activate Massive's **Delay Syn** effect and set the **Left** and **Right** taps to **3/16** and **4/16** with the **Dry/Wet**, **Damp** and **Feedback** knobs all set to 12 o'clock. You'll want to roll some of the low end off this sound, too, so get cracking with Massive's built-in EQ.

> Step by step Making a trance bassline



1 > New-school Goa trance bass sounds don't have to be complicated, but they do need to have a discernible pitch and complement the weight of the kick drum. To make this sound we're going to use Rob Papen's Albino 3. Start by selecting the **Diverse Sounds»_initial** preset patch. Activate **Osc 1** and **2** and set them both to **Analog** mode.



2 > Set **Osc 1** and **2** to pulse shapes using the **Waveform** knobs. We're going to layer them up on different octaves to get the perfect amount of low-end weight. Set Osc 1's **Octave** tuning to **-1**, and Osc 2's to **-2**. Copy the **Volume** levels shown here. Oscillator 1 is louder because we need more energy in that higher octave.



3 > We're also going to use a short filter envelope on this sound to make it quite percussive. In the **Filter 1** panel, set **Cutoff** to **494**, **Resonance** to **36**, **Track** to **.50** and **Envelope** to **0.16**. Bring up the Filter 1 envelope and copy the settings shown here to give it a short decay and low sustain level.



4 > This gives us a simple bass sound that will sit with the kick in the mix, but if you want it to pop through a bit more, set the first effect slot to **LoFi** and activate it. This will roughen up the top end of the bass sounds lightly, making them more audible.



5 > A classic trance trick to make the kick and bass as weighty as possible is to play the bass sound on the off-beat. Copy out the beat and arp for eight bars, and sequence this simple bass pattern alongside them. Note that this part is also transposed up five semitones.



6 > This creates a strong, trancey groove, but we need a bit of variation in the bass. For the last two bars, have the bass play **A#** then **F**, instead of **C**. This gives us an eight-bar groove that we can lay leads over the top of to create a melodic musical journey in true trance style.

> Step by step Creating a trance lead



1 > Now we're ready to start adding those all-important squelchy lead lines. Ideally, you'd use a synth with loads of voices and unison detune to make trance sounds, but any two-oscillator synth will do. Add the free TAL-Elektro (<http://kunz.corrupt.ch>) to a new track. Start by turning the **Osc 3** knob in the **Mixer** panel all the way down, and the **Osc 2** knob all the way up.



2 > Turn off the **Sync** on **Osc 1**, then turn the **Semi** knobs on both **Osc 1** and **Osc 2** all the way up to tune them up an octave. Turn the **Fine** knob down slightly on **Osc 1** and up slightly on **Osc 2**. This slight detuning effect gives a classic trance lead sound that can be nicely enhanced with - yep, you guessed it - a short filter envelope.



3 > To get that blippy sound, in the **Filter** panel, turn the **Cutoff** knob all the way down, set the **Key** knob to 12 o'clock and turn the **Contour** fully up. Next, turn the **Sustain** all the way down and set the **Decay** knob to 10 o'clock. This gives us a very short filter envelope, the length of which can be set with the **Decay** knob.

Acid flashback

In this walkthrough we're using our own CM-303 instrument to create a simple acid sound. It's a handy little synth for getting basic Roland TB-303-style sounds, but there are plenty of more sophisticated alternatives out there should you require additional sound sculpting options. Another excellent 303 clone is Propellerhead's ReBirth RB-338, a standalone program that can be ReWired into most DAWs. It was discontinued by Propellerhead a few years ago and can be downloaded for free from www.rebirthmusem.com. There's also an iOS version in Apple's App Store for £3.99. ReBirth RB-338 includes two 303 emulations complete with authentic old-school step sequencing, filter, delay and distortion effects, plus emulations of Roland's classic TR-808 and TR-909 drum machines.

On the plug-in front, AudioRealism's ABL2.5 is a great digital recreation of the TB-303, and can be downloaded for €95 from www.audiorealism.se. If you're after something more than just a straight clone, Audio Realism offer the more involved ABL Pro for the same price. This features modulation routing via virtual cables, two oscillators and built-in effects. Demo versions of both synths can be downloaded from the site, and AudioRealism also have their own iOS app, technoBox. This offers 303, 808 and 909 emulations and costs £2.99.

Another great option is d16's Phoscyon, which offers the same parameters as the original 303 plus extra controls, distortion and an arpeggiator. It's a superb emulation and something of a bargain at only €59. You can download the demo from www.d16.pl.

Finally, if the idea of a synth with a great acid sound and plenty of other tricks up its sleeve appeals, we recommend Lennar Digital's Sylenth1, which has many excellent acid presets plus loads of other trance-friendly tones. It costs €139 and the demo can be downloaded from www.lennardigital.com.



A bit of acid is an essential element of any Goa trance track. If you want the sounds of the classic Roland TB-303, try AudioRealism's ABL emulations

> Step by step Adding some acid



1 > The quickest, easiest and cheapest way to add a little acid to your tracks is to use the CM-303 synth, which you can find in the **cm** Studio on the **cm** DVD. Copy the MIDI pattern we've used here onto its track, making sure to include the overlapping notes and remembering to transpose up five semitones.



2 > The overlapping notes glide from one to the next when played back by the CM-303. So that you can hear this better, turn the Cutoff (**Cut**) knob up all the way. You can control the speed of the glide using the **Glide** knob, but the default setting works fine for this riff.



3 > CM-303 isn't a very complex instrument, and while we can sculpt the sound to a certain extent using its handful of parameters, we can get a lot more out of it by adding a few effects. Begin with an Overdrive. There's nothing fancy about this – just whack up the **Drive**.



4 > One distortion effect will do, but let's add another just to be absolutely sure of a completely over-the-top acid line. This time, we add Ableton Live's Saturator, again turning up the **Drive** level until it sounds really dirty.



5 > Now for the secret ingredient – a load of resonance. Turn the CM-303's **Res** knob up to **61%** and sweep the **Cut** knob around as you play the riff back. Listen to that bad boy wail! Turning the envelope (**Env**) up and **Decay** down will give you a fast filter sweep at the start of the sound that helps to emphasise each note.



6 > For the final trippy touch, add a ping-pong delay effect after the saturation. You want to filter the top and bottom off the delayed signal, so if your delay effect doesn't offer such functionality, put it on an auxiliary send instead, followed by an EQ with the top and bottom frequencies rolled off. This stops the delays clogging up your mix. **cm**



Something missing?

We can help
fill the gap

©iStockphoto.com/AskinTulayOver



musicradar.com™
The No.1 website for musicians

GEAR NEWS • EXPERT REVIEWS • PRO TUITION • DOWNLOADS • TIPS
VIDEO LESSONS • PODCASTS • COMPETITIONS • FREE TAB • USER REVIEWS

From the makers of **COMPUTER music**

GAK PRO AUDIO

01273
665400

CALL OUR SALES HOTLINE NOW!!

0% FINANCE AVAILABLE OVER THE PHONE
NEXT DAY DELIVERY*

moog

The finest analogue audio processors from the father of modern synthesis.



MOOGER FOOGERS IN STOCK

MF 101 Filter	£185
MF 102 Ring Mod	£219
MF 103 Phaser	£239
MF 104 Delay	£463
MF 105 Murf	From £313
MF 107 Freqbox	£259



Mopho



Tetra



Dave Smith Instruments

Real synths for real synth lovers from a true legend of instrument design. Accept no substitute. Favoured by artists and producers the world over for their authentic analogue sound.

Finance available on all Dave Smith products!

NI

NATIVE INSTRUMENTS



Traktor Kontrol X1

Legendary Traktor software finally gets the controller it deserves!!

£159



Komplete 6

The one stop solution for all your plug-in needs at a new low price! synths, drums, guitar FX it's all here.

£349



Maschine V1.5

Hardware reliability, software flexibility! Over 15,000 samples. The ultimate production solution!!

£459



Traktor Pro

DJ software with ground breaking FX and flexibility. Improved workflow takes your set to the next level!

£159

NUMARK

NEW

V7

High end motorised turntable controller with computer connectivity

£499



CD DJ IN A BOX



Only £269

Arturia
SOFTWARE & HARDWARE

Analogue Experience The Player

The undisputed masters of classic analogue reproduction!



25 note semi weighted USB keyboard, includes 1000 sounds from Arturia's soft synths

£129

All offers subject to availability

Buy The One Get 1 FREE!

Unbelievable limited offer!! Buy any of Arturia's synths and get another for FREE!!



V Collection

The ultimate collection of vintage synth emulations. Now only £329 - limited offer!!

£329



Roland

NEW PRODUCT BONANZA!!!!
Visit our Roland Planet instore for a demo.

Gaia

New generation analogue modelling synth!!

£489



RO-5

Professional portable digital recording in the palm of your hand.

£179



SD-50

All new compact multi-timbral sound module & audio interface from Roland.

£359



VE-20

Next generation vocal FX at your feet from the masters of the stomp box.

£169



BLUE

Icicle

XLR to USB converter for any microphone

£45



BlueBird

Classic Blue sound for the project studio

£219

Kiwi + FREE Robbie Pre Amp!!!

Unrepeatable offer - last few available!!!

£1739



CELEMONY



Melodyne

CELEMONY MELODYNE RANGE

Direct note access from polyphonic recorded material. Yes, really... **FREE DELIVERY**

Assistant **£159**
Editor **£279**
Studio **£549**

SE ELECTRONICS

FREE sE Project Studio Filter!!

Purchase an sE2200T, Z3300a, 4400a, T2, Z5600a II, Gemini II, Gemini III, G5, G3500, Voodoo VR1, or Voodoo VR2 and get a **FREE sE Project Studio Filter!** Can be claimed in store at time of purchase! Offer valid whilst stock lasts



2200T
World's most popular condenser now with tube warmth!

£359

Worth £110



UNIVERSAL AUDIO

LIMITED OFFER LAST FEW!!

Universal Audio 710 Twin-Finity & UAD-2 Solo

Incredible value mic pre plus DSP card bundle! Very last few don't miss out on this deal!!

£581

FOR OUR FULL RANGE OF UA CALL OR CLICK!

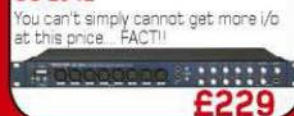


TASCAM

US 1641

You can't simply cannot get more i/o at this price... **FACT!!**

£229



ALESIS

Master Control

High end control surface and i/o now an unbelievable

£499



LEXICON

Native Reverb

THE studio reverb of the century. Now in plug-in form!

£969



MOTU

HYBRID MK3

USB & Firewire audio i/o in a compact package.

£425



BFD

NEW

ECO

Most of the features of BFD, light on price, light on DSP!!

£86



THE BEST PRICE, THE BEST SERVICE!
LOADS OF GEAR ON DISPLAY READY TO TRY!

78 - 81 NORTH ROAD, BRIGHTON, EAST SUSSEX, BN1 1YD.

FROM LONDON VICTORIA TO BRIGHTON IN LESS THAN AN HOUR. WE'RE JUST 5 MINS WALK FROM BRIGHTON STATION. OPEN MON - SAT 9.30 - 5.30 • SUN 11 - 4

GAK PRO AUDIO

01273
665413

0% FINANCE AVAILABLE OVER THE PHONE
NEXT DAY DELIVERY*

CALL OUR SHOP NOW!!



Audiofire 2
Ultra stable, ultra compact 2 in 2 out
£149



Audiofire Pre8
16 in 16 out Firewire audio interface
£579

Gina 3G
3rd gen 2 in 6 out PCI solution with mic pre's
£235

ECHO



Audiofire 4
2 mic pre's, 4 in 4 out
£239



Audiofire 12
12 balanced i/o up to 24bit 96kHz
£465



Full range of ECHO in stock
Please call for details.

UMX Series

All new ultra flexible keyboard controllers with intuitive DAW integration, learn function & audio i/o.

From £79



BCR 2000

24 high resolution encoders & 20 buttons. A huge amount of control for a tiny price!

£108



BCD 3000

Incredible value USB DJ controller. Comes bundled with NI Traktor LE!

£148



cakewalk by Roland

VS 700

Ultimate production studio, full DAW integration and automation

£3395



VS-20

Controller and audio interface with built in FX!! Oh and it's a stand alone recorder too!

Only £219



Sonar Producer 8.5

Latest incarnation of this feature rich ultra stable DAW for your PC!

£395



Take it away

TAKE IT AWAY

INTEREST FREE FINANCE
AVAILABLE ON ANY
INSTRUMENT BETWEEN
£200 and £2000
CALL 01273 665400

KORG

Monotron

Battery operated real analogue synth power in the palm of your hand!

£49

Kaossilator PRO 6 KP3

Fullsize keys, virtual analogue. Plus vocoder for only.

£295 each

WALDORF

Blofeld

Desktop version of renowned Blofeld

£329



Largo

Super villain of the synth world goes soft!

£149



AKAI

APC-20 APC-40

Call us for a MEGA DEAL on these ground breaking Ableton controllers!



MINIAK

Fullsize keys, virtual analogue. Plus vocoder for only.

£229



LPD 8 & LK 25

Ultra compact controllers for when you're on the move.

Only £44 each. From only £84



MPD RANGE

Genuine Akai MPC pads for your computer!



ADAM

A3X

NEW

Incredible big sound from a small cabinet at a small price!

£349



FULL ADAM RANGE AVAILABLE

Adam A5X **£486**
Adam A7X **£732**
Adam A8X **£1003**
Adam S1X **£1466**
Adam S2X **£2124**

GENELEC

8020B

Our favourite compact monitor!

£499



FULL GENELEC RANGE AVAILABLE

6010 **£319**
8020B **£499**
8030 **£830**
8040 **£1299**
7050 **£669**

Call our team for finance options.

STEINBERG

Cubase 5

Latest version of the world's favourite DAW!

£419



AVID

Pro-Tools

The post production professional's choice.

From £177

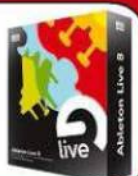


ABLETON

Live 8

THE performance DAW solution.

£299



APPLE

Logic 9

Benchmark DAW for your Mac!

£332



GAK MEGA CLEARANCE.
Ex demo, used and NOS bargains
Check GAK.co.uk for latest list
Call **01273 665413** to place an order over the phone..

Waves APA 44M	£499
Mackie Spike	£99
Behringer TDF 1616	£50
Korg Prophecy (used)	£399
TLA M3 Tube tracker (used)	£999
Roland JX3p (used) + case	£259
Moog Vx-352	£219
Logic Express 7	£99
Logic Express 8	£99
Akai EB2M	£89
Akai IB40	£89
Akai EB4JS	£139
SE 2	£139
SE 3	£99
SE USB 100DA	£99
SE 100DA	£79
SE GM10	£259
SE ICIS	£389
SE RL	£529
MXL DRK	£65
TLA Fatman iTube + iPod dock	£179
UA DCS Remote	£510
SPL Gold Mike	£749
Numark CDN 25+G	£179
Korg Triton LE	£349
Mackie HR 824 (pair)	£549
Novation Remote 25 SL	£209
Boss BR1200 CD	£629

ORDER ON LINE NOW!!

MASSIVE STOCKS!!

WWW-GAK-CO-UK

**Next working day delivery. We are a licensed credit broker. All prices include VAT. All monthly repayments are based on a 10% deposit & are paid over 9 months at 0% APR. Credit subject to status. Written quotations available on request. Prices correct at time of going to press. E&OE. *PLEASE NOTE GAK.CO.UK LTD IS A SISTER COMPANY & AS SUCH PRICES, STOCK & DELIVERY MAY DIFFER. 0% FINANCE IS NOT AVAILABLE ONLINE.

CLASSIFIEDS

To advertise call Leon Stephens on 01225 442244
Ext 2571 or e-mail leon.stephens@futurenet.com

ALCHEMEA livesound

INTENSIVETRAINING
AT THE



ALCHEMEA'S NEW 16-WEEK INTENSIVE HANDS ON
LIVE SOUND COURSE HAS BEEN DEVELOPED BY
LEADING INDUSTRY PROFESSIONALS AND IS
NOT FOR THE FAINTHEARTED!

- OUR TUTORS HAVE WORKED WITH TOOL, VAN MORRISON,
RAZORLIGHT, TORI AMOS, FRANZ FERDINAND, WHITE STRIPES,
STEREOPHONICS AND MANY MANY MORE!

- HISTORIC LONDON VENUE "THE FRIDGE"
- UNRIVALLED INDUSTRY STANDARD PA & LIVE SOUND DESKS
- WORK EXPERIENCE & FIELD TRIPS ARRANGED
- HEALTH AND SAFETY AND DIGIDESIGN CERTIFICATE INCLUDED

**GET IN TOUCH AND TAKE
YOUR FIRST STEP TOWARDS
A CAREER IN LIVE SOUND**



d&b
audiotechnik



YAMAHA
CO
commercial audio



digidesign
VENUE

www.alchemea.com • info@alchemea.com • +44 (0)20 7359 3986

manchester midi school

10 years innovation in music technology training

music production & dj courses

produce, engineer, remix and perform your music

learn at your own pace with creative freedom
and as much individual tuition as you need

- unlimited studio time (7 days a week)
- small classes (day or evening)
- ex-students have worked with:
Mark Ronson, James Brown, Dizzie Rascal,
Lily Allen, Amy Winehouse, Missy Elliot,
Busta Rhymes, Pacha, Goodgreaf, Jeff Mills, DJ Zinc...

midischool.com

0161 833 4722

free
weekend
taster courses
monthly

Authorised Training Centre



OFFICIAL
steinberg
training centre
abilton



DUPLICATION

1000 CDs with Booklet and Inlay c.£600
Quality CDR / DVD copies from 51p
Mastering and Artwork £70ph
DVD, CD-audio, CD-ROM

RPM

Repeat Performance
Multimedia

6 Grand Union Centre
West Row
London W10 5AS

Tel. 020 8960 7222



Over 23 years experience
Graphic design, colour print
Large and small run specialists
Excellent quality and presentation

Recommended by MCPS
www.repeat-performance.co.uk

MUSIC COURSES

The Recording Workshop

Since 1989 SPECIALISES in 2 month
HANDS - ON part-time COURSES
in very small groups on the latest recording
& production techniques for beginners and
advanced. Subjects include MICROPHONES,
EQ, EFFECTS, PROCESSORS,
MULTI-TRACKING, MIXING, MIDI, SYNTHESIS,
CUBASE, SAMPLING, PRODUCTION, ETC...
Concessory rates available

32 TRACK STUDIO AVAILABLE FOR HIRE



For Prospectus call free: 0800 980 7455

email: info@therecordingworkshop.co.uk





LIVE-COURSES.COM
the online ableton live training resource



Welcome to next generation **Ableton** training. **Learn. Produce. Compose. Perform.**

Live-Courses.com is a new website which features two Ableton Live online video courses for Beginners/Intermediate and Advanced level students which are designed and delivered by Ableton Certified trainer Rob Jones.

Our online video training courses can be studied at times which suit you, wherever you are located, and are supported by course materials, notes and projects which you download as you progress, making this the first course of its kind in the music software industry!



ableton **CERTIFIED**
TRAINER
Rob Jones

- Modular Format
- Online Delivery
- Custom Access 24/7/365
- Certified Trainer
- Course Notes for every Module
- Certificate on Completion
- Online Forums for Discussion
- Free Novation Bass Station Synth
- Over 750MB Free Royalty Free samples
- Study whenever and wherever you like!
- Ableton 8 compatible

Don't take our word for it -
View a free 15 minute course module at the
live-courses.com website today!



LIVE-COURSES.COM
the online ableton live training resource

SPECIAL OFFER **FOR** **COMPUTER** **music** **READERS**

Use this code to get your special **20%**
discount for a limited time:
CM20

Go online today to
www.live-courses.com

and register for your
FREE INFO PACK
and watch a
FREE SAMPLE MODULE TODAY!



Our sponsors


Focusrite


novation


KRK
SYSTEMS


loopmasters

Next issue **cm**/157

ON SALE
WEDNESDAY
SEPTEMBER 22

THIS IS THE **RE-MIX!**

Master the essential techniques behind the art
of remixing with our step-by-step guide!

REVIEWS FLUX IRCAM TOOLS / NOVATION DICER / KUASSA AMPLIFIKATION ONE / VOXENGO
HARMONIEQ 2 / ARTSACOUSTIC BIGROCK / SOUND RADIX AUTO-ALIGN / URS CONSOLE STRIP PRO V2

cmDVD

EXCLUSIVE FREE SOFTWARE

SLIP-N-SLIDE CM

Intelligent Devices' amazing frequency domain m
audio-mangling plug-in for Mac and PC!

2000+ ROYALTY-FREE SAMPLES!

Remix Toolkit

Royalty-free 24-bit samples and CMplay
patches for the remix producer



PLUS! HANDS-ON WITH OHM FORCE OHM STUDIO / PRODUCER MASTERCLASS: S.K.I.T.Z. BEATZ / CREATIVE GATING /
EMULATING ANALOGUE WARMTH / JASUTO PRO / **cm** FOCUS: PAD SOUNDS / QEMISTS INTERVIEWED

All magazine and disc contents subject to change

Are You Geek Enough?



This is ACE. Any Cable Everywhere. No compromises.

ACE belongs to a new generation of synthesizers developed with the latest, fastest computers in mind. ACE is capable of those crazy tricks you could expect from expensive analogue modulars, but hardly from a plug-in. Anything can be patched into anything, everything runs faster than audio rate. LFOs go up to 20kHz. Envelopes are snappy as a whip. Cross-modulation sounds right. LFOs, MIDI and envelopes can be run through resonant VCFs. Go wild and smile while you feed modules back into themselves. ACE does some sick stuff - luckily you'll never run out of patch cords.

ACE may be the best emulation of an analogue synth that never was.

Grab the demo for all common plug-in formats and platforms here*:

www.u-he.com



Urs Heckmann - Audio Software

*while you're at it, check out the award winning Zebra, Uhbik, Filterscape and More Feedback Machine too. Same developer, same website, same fun factor.

Parts or systems...



3XS SA-X PowerDAW Extreme

"The speed is phenomenal: installing software, duplicating large files, start-up and other disk-intensive operations simply fly."

Verdict:

A very powerful audio PC fully embracing the next generation of technologies and providing a solid foundation for 64-bit, multi-core music-making.

MusicTech As stated in MusicTech Magazine
July 2010 issue

we've got it covered.

Supplier of performance hardware and pc audio workstations

Scan 3XS Power DAW

- Gigabyte GA-X58A-UD3R, Intel X58
- Intel® Core™ i7-980 processor Extreme Edition
12M Cache, 3.33 GHz, 6.4GT/s Intel® QPI
- 625W Enermax MODU82+ Modular
- Thermalright Venomous X CPU cooler for Intel
- 6Gb (3x2Gb) Corsair XMS3, DDR3
- 512Mb Gainward G210, 800MHz GDDR2
- 500Gb Seagate ST35003200NS Barracuda
- 1Tb Western Digital WD1001 Caviar Black
- LG GH22NS50 22x DVD±R

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

Hardcore multitaskers rejoice. Fly through everything you do on your PC - from playing intense 3D games to creating and editing digital video, music, and photos. With the high performance platform capabilities of Intel® X58 Express Chipset-based motherboards, along with faster, intelligent multi-core technology that applies processing power dynamically when its needed most, PCs based on the Intel® Core™ i7-980X processor Extreme Edition deliver incredible performance with a rich feature set.



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.