



COMPUTER music

S P E C I A L

The essential
guide for 2010

101 AMAZING APPS

The greatest music-making apps for
iPad, iPhone, Android and WinMo



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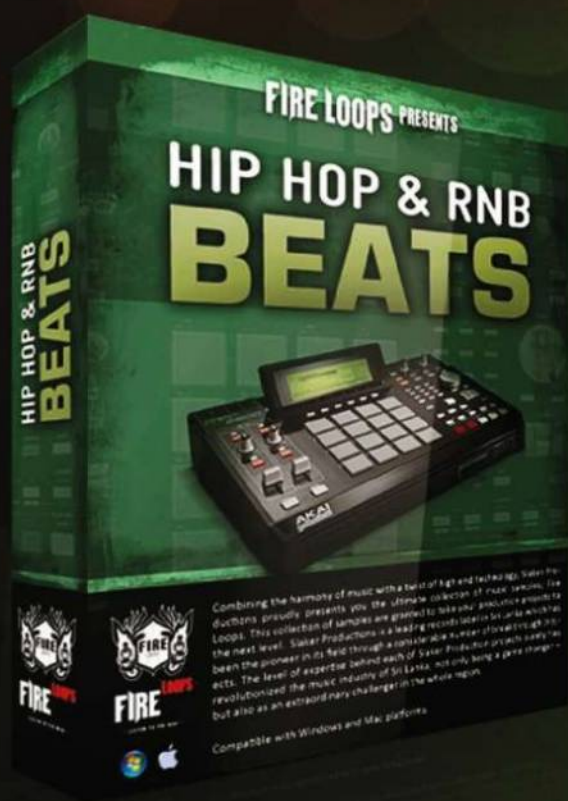
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- > Headphone supertest
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CM SPECIAL 43 2010

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

EDITORIAL

Editor: Chris Barker, chris.barker@futurenet.com
Associate Editor: Ronan Macdonald, ronan.macdonald@futurenet.com
Art Editor: Stuart Ratcliffe, stuart.ratcliffe@futurenet.com
Contributors: Greg Scarth, Jono Buchanan, Martin Delaney, Simon Ariblaster, Tim Cant, Daniel Griffiths, Declan McGlynn
Sub-editors: Kieran Macdonald, Cally Foster
Group Senior Editor: Julie Tolley
Senior Art Editor: Matthew Hunkin
Creative Director: Robin Abbott
Design Director: Matthew Williams
Editorial Director: Jim Douglas

ADVERTISING

Tel: 01225 442244 Fax: 01225 732285
Advertising Sales Director: Clare Dove
Advertising Sales Manager: Lara Jaggon
Account Sales Manager: Alison Watson
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CIRCULATION & MARKETING

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Promotions Executive: Madeleine Umpleby

PRINT & PRODUCTION

Production Co-ordinator: Frances Twentyman
Production Manager: Rose Griffiths
Head of Production: Richard Mason

LICENSING

International Licensing Director: Tim Hudson

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Publisher: Rob Last
Publishing Director: Mia Walter
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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)

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welcome

Portable music making is not new, but the recent generation of mobile devices mean that you no longer need to carry around a large, expensive laptop or a rucksack full of heavy gear. Powerful smartphones, netbooks and revolutionary devices like Apple's iPad have given software and app developers the opportunity to pack powerful features into tiny multi-functional devices. This has already started to change music production forever, with DJs and electronic musicians adopting these devices into their sets and live shows (check out Richie Hawtin on page 68).

Netbooks have also made mobile computing more affordable, and with the right tweaks yours can be made into the perfect mobile production tool (see page 51). Multitouch on Apple's magical iPad has thrust music production into a new era with wireless DAW control now a reality, and the iPhone has given rise to hundreds of innovative apps that challenge the way a musician interacts with their music. In this issue, we'll be looking at 101 of these amazing apps, with everything from synths and grooveboxes to drum machines and experimental-audio apps coming under our gaze. With more updates to the iPad OS planned for the end of the year, things can only get better for the mobile producer. We hope that this very special issue of **cm** more than whets your appetite.

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Chris Barker Editor



The cm Mission Our goal is to help you make better music with your Mac- or PC-based setup. With that objective in mind, we bring you step-by-step tutorials, unbiased product advice, music production techniques, expert tips and guides and a disc packed with sonic tools.

SPECIAL ISSUE 43 2010

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101 AMAZING APPS

We reveal 101 of the most inspirational, useful and downright brilliant apps for the mobile producer! **p6**



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We reveal simple power tweaks for your netbook and find the most efficient music making software to install on it

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101 AMAZING APPS

As music making goes mobile, we delve into the greatest music applications on the four most popular platforms



➤ It's hard to believe that just a few years ago, mobile music making was stuck in something of a rut. Aside from a handful of PDA applications and a couple of Game Boy packages, options were few and far between. It's no exaggeration to say that the smartphone revolution changed everything. Just three years on from the introduction of Apple's all-conquering iPhone, there are more mobile music options than ever before. The iPhone gets the most press, but users of Windows Mobile and Android devices have also benefited from the explosion of interest in smartphone music software. Packing a tent into your rucksack and heading off into the wilderness with an acoustic guitar might be the classic choice, but in the 21st century, everything you need fits right in your pocket. Whether you're on the bus to work, on a beach holiday or even playing a gig, there's no excuse not to be making music on the go.

The range of software available on mobile platforms might come as a surprise to anyone who still expects phone software to consist of gimmicky games and toys with no real long-term use. One of the most refreshing aspects of mobile software platforms is the way they've encouraged developers to think creatively and program software that suits the needs of musicians on the move. As a result, the range of apps on offer is mind-blowing. From drum machines to synthesisers, metronomes to amp simulators and full-on portable DAWs to wireless touchscreen control surfaces, you'll find practically everything you would normally use to make music available as a mobile app. What's even more impressive is the number of truly groundbreaking apps that have no parallel in hardware, or even in conventional software. Touchscreen granular synthesisers, virtual harps and accelerometer-controlled sequencers are quite unlike anything the music-making world has seen before.

In this special issue, we're proud to present what we believe is the largest collection of multiformat music app reviews ever published. We've rated and slated 101 of the newest and most interesting products for iPhone, Android and Windows Mobile. The iPad, which balances precariously on the borderline between tablet computer and smartphone, is thrown in for good measure. With thousands of apps to choose from, picking just 101 turned out to be surprisingly tough, but after months of testing, countless heated debates and the odd heated argument, we've finally agreed on a list that covers the whole spectrum of music apps. Whether you're a house producer, a thrash metal guitarist, a hip-hop scratch DJ or anything in between, we guarantee you'll find something of interest here.

Android

Although it's only just starting to take off in the UK, Google's open-source Android operating system looks likely to follow in the footsteps of the iPhone OS as a veritable hotbed for exciting app development. Google are currently activating nearly five million Android phones every month, so the platform's clearly already gathering a major following.

With handsets like the HTC Desire and Google's own Nexus One rivaling the iPhone 4 in terms of memory and CPU speed, the Android OS is backed by some seriously powerful hardware. What's more, the open-source nature

of Android means that developers have much more freedom than they do with Apple's highly restricted App Store. Early signs look very promising for musicians, and things are sure to get even better as Android continues to grow in popularity worldwide.

Windows Mobile

We'd be lying if we said that there were a huge number of Windows Mobile music apps to choose from, but the old faithful smartphone operating system still includes a few gems. The choice of WinMo music software lags behind those of the iOS and Android, but that doesn't mean it's not worth checking out some of the applications on offer.

WinMo's relative limitations are understandable. Firstly, the OS has been in development for so long that a number of features aren't particularly well designed for the current crop of touchscreen smartphones. Secondly, it runs on so many handsets that developers can't be sure exactly what hardware they're coding for. The move from Windows Mobile 6 to Windows Phone 7 this autumn should greatly improve matters, bringing with it touchscreen optimisation and minimum hardware requirements. Even so, current WinMo phone users shouldn't be disheartened; the cream of the Windows crop offers some great apps.

iPhone

Fed up of iPhone owners banging on about how great their phone is? So were we - until we tried one and realised they were right. Now, three years down the line, the iPhone has become ubiquitous among techy nerds and business users alike. Most importantly for us creative types, the overwhelmingly large choice of apps available through iTunes includes thousands aimed at musicians. Narrowing our choice down for this issue was a major challenge.

One of the big advantages of the iPhone is that the hardware is a known quantity for developers. Out of the hundreds of apps we tried during the course of our exhaustive testing, only a handful failed to run perfectly on the older models. The vast majority of iPhone apps also run smoothly on the iPod Touch. The new iPhone 4 and iOS 4 operating system only look set to make things even more interesting.

iPad

It's no secret that we're incredibly excited about the music-making potential of the iPad. With an outstanding screen, great sound and a powerful processor, the multitouch tablet has got what it takes to be a classic. In terms of software it gets a head start due to the fact that it can run pretty much any iPhone app, but we've already seen enough to make us believe that the iPad's going to be a serious music tool sooner rather than later. With early adopters like Richie Hawtin - who uses the 'Pad for his Plastikman live shows - singing its praises the future looks very exciting.

As with the iPhone, we expect the best software to emerge after developers have had a bit more time to make a proper assessment of the hardware's potential, but with hundreds of music apps available right now, there are already some truly game-changing uses for Apple's handheld marvel. Prepare to be amazed...

cm/recommended

Digging deep to find the most powerful apps for iPad and iPhone

Normalware **BeBot** £1.19

Format iPhone and iPad
Web www.normalware.com

One of the most pleasing aspects of the iPhone and iPad is the way that apparently simple toy apps can turn out to be much more powerful than first impressions suggest. BeBot, a so-called Robot Synth, is a perfect example. The cute interface means that initial impressions might be a bit underwhelming. Drag your finger across the screen and the animated robot 'sings' a theremin-style glissando. So far, so much like countless other toy apps.

BeBot's hidden depths come from loading up the Settings menu and adjusting some of the options. You'll soon realise that the cartoonish graphics hide a surprisingly powerful synthesis engine. Choose from sawtooth, pulse, sine and PWM waveforms, each of which offers a couple of adjustable parameters. Adjustable echo, overdrive and chorus effects can be added to any sound, while the Scale menu allows you to add autotune for more precise intonation, program

custom scales, add a note grid to the screen or adjust the synth's range.

Playing BeBot is incredibly intuitive, with the X axis controlling pitch and the Y axis controlling filter cutoff or pulse width, depending on your chosen waveform. Sound settings and scales can be saved as presets, allowing you to store and recall your favourites instantly. Recently updated to a universal app, BeBot translates well to the iPad's larger screen, with polyphonic patterns easily achieved using multiple fingers to play chords. Simple, cheap and very cheerful, BeBot is a great app that you might find yourself turning to more often than you'd expect.

9/10



The Strange Agency **Sound Scope Space** £1.79 (iPhone); £2.99 (iPad)

Format iPhone and iPad
Web www.thestrangeagency.com

You won't have seen anything like Sound Scope Space. This powerful monophonic synth sets itself apart from the pack with its ability to play back any waveform you draw in by hand. Sine, square and sawtooth waves are available at the touch of a button, but tracing any shape over the current waveform will push and pull it into place, instantly altering the sound of the synth. Complex hybrid waveforms that you'd struggle to create with most synths are easily achieved. An aliasing effect can also be added to any wave to give it a low-res 8-bit style sound.

Some of the tones that can be created are outstanding, especially when using the Kuzmoscillator LFO to modulate pitch and volume. The app's main weakness is that the playing interface is a little fiddly on the small iPhone screen, even with the chromatic keyboard scaled to match your desired playing range. The iPad's larger screen remedies this problem, laying everything out neatly on one page as well as increasing the size of the keyboard. The iPad version also adds a number of extra options,

the most notable of which is the second oscillator.

This allows for even more complex timbres to be created, while the adjustable detune option means you can add a bit of dissonance and thicken up your sounds at the touch of a button. The two-octave range of the detune effect also means it can be used to dial in a fixed interval. A sine wave detuned a full octave from the second oscillator is a great way of adding a sub-bass effect.

Sound Scope Space is a great idea and the concept makes for a powerful synth. There are still a few areas that could be improved - polyphony, a sequencer and ADSR settings are top of our list - but even without them we love it.

9/10



5 guitarist apps

From tuners and metronomes to chord books and songwriting tools, iPhone apps can replace a handful of essentials in any guitarist's gig bag. Here's our pick



Planet Waves Chordmaster £1.19; Free (LE version)

Web www.planetwaves.com/PWChordMaster.Page
Format iPhone

It's time to finally say goodbye to your dog-eared chord book. Select a root note, dial in your chosen intervals and Chordmaster will instantly display the fingering diagram. With the ability to choose from left- and right-handed diagrams for over 7000 chords, quickly switch between different positions on the neck and play the strings to hear how each chord sounds, Chordmaster is an excellent tool. Sadly there are no augmented chords included in the database, but otherwise this well-priced app can't be faulted.

8/10



bitcount Cleartune £2.39

Web www.bitcount.com/cleartune
Format iPhone

On the surface, this handy little app is a simple tuner like any other. Just set it to auto mode or manually select a note, then play a string and tune with ease. However, Cleartune's simple interface hides a veritable wealth of options. Dig beneath the surface to discover many handy features, including calibration (A4 is set to 440Hz concert tuning as standard), transposition, a huge selection of temperament options, three needle damping modes and a handy tone generator. Overall, then Cleartune is a very advanced tuner at a pretty nice price.

9/10



Groundcontrol Pro Chords £3.49

Web www.prochords.dk
Format iPhone

If you find yourself struggling for inspiration or jumping around the fretboard in a never-ending search for the perfect chord change, Pro Chords might just be the answer. Simply enter a chord or series of changes and the app will suggest more chords to match. Notes are displayed on a keyboard rather than a fretboard, but the portable nature of Pro Chords makes it just as handy for guitarists on the move as it does pianists (though we'd like to see an update featuring guitar chord diagrams). Writing and testing chord progressions has never been easier.

7/10



Music Motion iTick Free

Web sites.google.com/site/zhenwangyao/itick-metronome
Format iPhone

You can take your pick from hundreds of metronomes in the iTunes Store, but this neat free app is one of our tried-and-trusted favourites. To get started, simply pick one of the six available time signatures and then choose from the classic Italian tempo markings (andante, moderato, largo etc). Alternatively, you can get straight to the point by dialling in anything from 40 to 250bpm. With a range of downbeat and upbeat sounds and adjustable volume, iTick might be a rather basic metronome, but it does the job perfectly.

10/10



Frontier Design iShred £2.39; Free (LE version)

Web www.frontierdesign.com/ishred
Format iPhone

Great for those infuriating moments when you have a killer riff in your head but no guitar to hand, iShred is an all-in-one guitar simulator app that allows you to play an on-screen axe through virtual stomp boxes and an amp simulator. Built-in chords, scales and songs provide the inspiration, while effects including distortions, delay and a wah are all on hand for whenever you need them. Once you've finished punishing the fretboard, hit Record, play your song and then share it online or save and export as an audio file.

7/10



> 101 amazing apps

Hexler TouchOSC £2.99

Format iPhone, iPad and Android
Web hexler.net

It's no exaggeration to suggest that TouchOSC alone might be enough to persuade you to buy an iPad. If you'd told us a few years ago that we'd be able to control any software or hardware over MIDI using our mobile phones (or, indeed, our touchscreen tablet computers!) we'd have called you crazy. TouchOSC does just that, and the possibilities are truly inspirational. A multitouch controller with fully customisable multipage layouts, TouchOSC allow you to take hands-on control of any software or hardware wirelessly.

In use, it's fantastic. The multitouch rotary controllers, faders, crossfaders, X-Y pads and on/off buttons can be mapped to any parameter

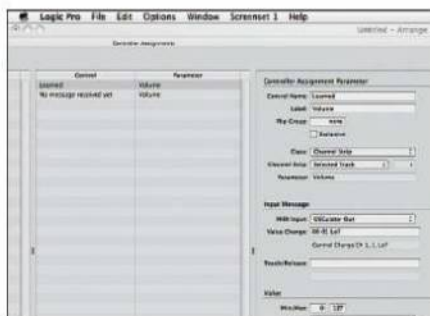
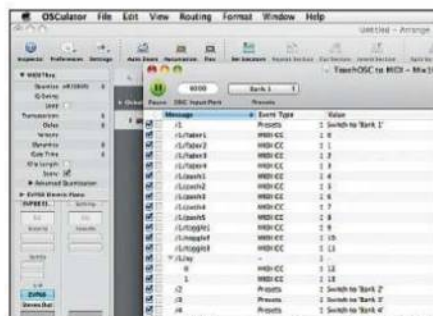
your software allows. All control signals are transmitted over Wi-Fi as OSC (OpenSound Control) messages, which can then be converted into MIDI or other suitable control protocols for your software. Clever routing in your DAW or a MIDI mapper can also send the signal back out to hardware, making TouchOSC ideal for use as a controller for VSTs, synth modules or drum machine software.

TouchOSC on the iPhone is impressive, but the iPad is where it really shines. The 9.7-inch screen means the interface can be set up to perfectly match your requirements, and its 11-point multitouch means you can realistically control as many parameters as you have fingers. At just £2.99, TouchOSC really doesn't have any rivals.

10/10



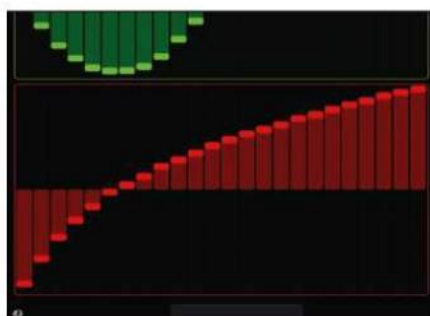
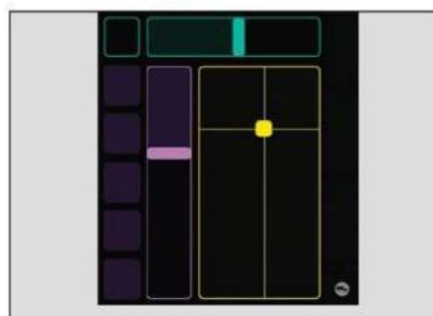
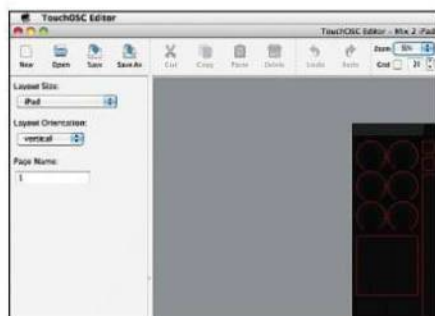
> Step by step Get started with TouchOSC on the iPad



1 > The TouchOSC app is relatively simple to use, but don't expect it to work instantly. The first time you load it up, you'll be met with a configuration screen demanding network information. Since all the data is transmitted over Wi-Fi, TouchOSC needs your computer's details in order to talk to it.

2 > You'll have to use a helper app on your computer to decode the OSC signals into whatever format your software can understand. The most popular options for PC and Mac include Max/MSP, Plogue Bidule and Pure Data, but we've gone with OSCulator on the Mac (£29 from www.osculator.net).

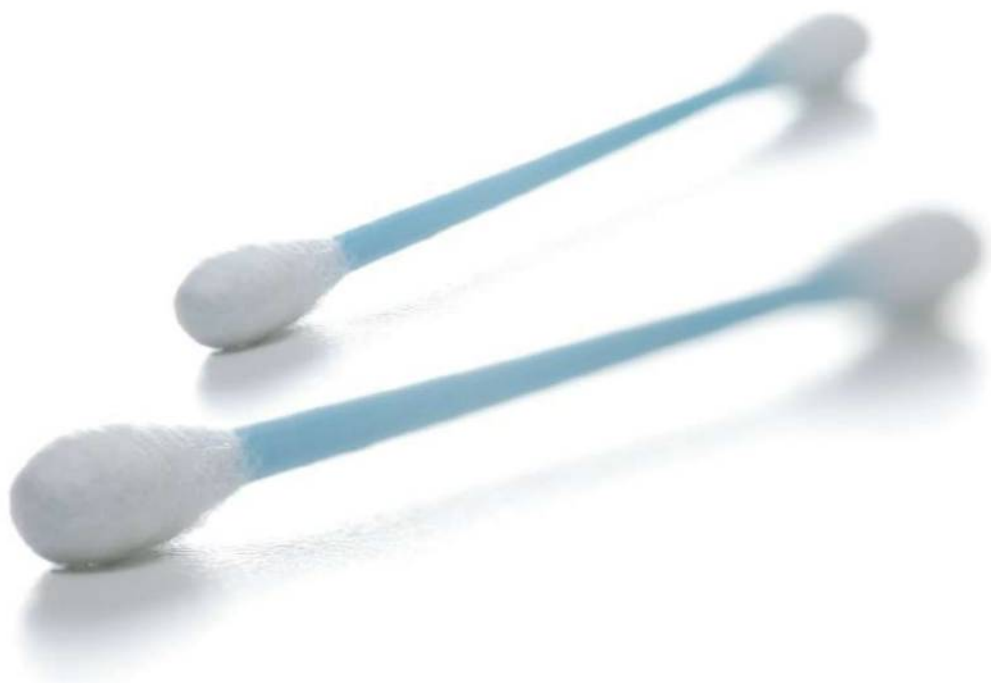
3 > When following OSCulator's quick start guide, setting up the software is a doddle. You'll also need to set up your DAW, and the procedures will vary depending on which software you use. Here we're starting to set up TouchOSC mapping in Logic using the **Controller Assignments** window.



4 > One of the great advantages of TouchOSC is that its interface is fully customisable. The Editor application allows you to create custom layouts or tweak a couple of settings on an existing layout. The **iPad mix** setup is an excellent starting point. Click the **Sync** button to send the layout to your device.

5 > If one screen isn't enough (as is likely to be the case on the iPhone), each layout allows you to have multiple pages, with buttons on the edge of the screen allowing you to flip instantly between them. Controllers can be grouped in whatever way works best for you.

6 > TouchOSC on the iPad is so powerful that it might just worry Stantum, makers of the £2000 JazzMutant Lemur control surface. Outstanding wireless control with flawless multitouch and custom setups make TouchOSC one of the must-have apps for iPhone and iPad.



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5 instrument apps

Is that an Ocarina in your pocket? Yes, and there's a Mellotron and a entire band in my napsack too! It's easier than ever to get musical on the move



MooCowMusic Band £2.39

Format iPhone
Web www.moo-cowmusic.com

If you want to try your hand at being a one-man band but don't fancy the traditional setup, your iPhone's got it covered. This popular app from MooCowMusic allows you to record all of the parts to a song and layer them over the top of each other. Keyboards, bass, guitar riffs and leads and drum hits and loops should keep you busy. You can even add a cheering audience. Unfortunately, it all feels a bit like a game or a toy rather than proper music. Ultimately then, Band simply isn't flexible enough to be essential for serious musicians. It's 15 minutes of fun, but not much more.

5/10



touchGrove Air Harp £1.19

Format iPhone and iPad
Web www.air-harp.com

Spotting the potential of the iPad before it was even launched, exuberant Californian codemeisters touchGrove hit the spot at the first attempt with this clever virtual harp app. The newer iPhone version is less of a hit, but that doesn't take away from just how good the original iPad edition is. You can either load up one of the songs to play along to or freestyle some harp jams of your own. Air Harp is one virtual instrument we can really see acting as a stepping stone to introduce youngsters to the real thing - a good thing as the harp is something of a niche instrument. Downloadable song packs ensure that once you've mastered the basic melodies, you'll be able to expand your repertoire.

7/10



Omenie Mellotronics M3000 HD £6.99

Format iPad
Web www.omenie.com

The concept behind Omenie's range of apps is very simple: they're high-quality software recreations of the Mellotron. The Ellatron apps for iPhone and iPad offer excellent sound quality and various clever updates to the original tape-based sample playback keyboard. The iPad-only M3000, produced with West Midlands Mellotron experts Streetly Electronics, takes things to the next level of authenticity. All 35 notes of each voice are sampled directly from Mellotron tapes, making the sound truly faithful to the original. It can honestly be called a software version of the Streetly M4000 Mellotron. Fantastic.

10/10



Yonac Thereminator £1.79

Format iPhone
Web www.yonac.com/software/thereminator

As Léon Theremin's eponymous instrument approaches its 100th birthday, it seems fitting that it should be brought into the 21st century with an iPhone tribute. You can drag your finger across the screen to play the instrument, but the real fun comes from switching on accelerometer control; waving the iPhone around to play a song seems to make perfect sense. Built-in reverb and tremolo effects make Thereminator our pick of the virtual Theremins.

9/10



Smule Ocarina £0.59

Format iPhone
Web ocarina.smule.com

Smule Ocarina's magical appeal comes from its clever use of the iPhone's microphone as a breath sensor. Blow into the mic to play the app, just like you would if you were blowing into a real ocarina (in case you're not familiar with it, an ocarina is an ancient instrument that's a bit like a flute). Vibrato can be applied by tilting the phone. The result is a simple app that has real physical appeal. Once you've mastered your ocarina technique, you can record your melodies and mail them to your friends, or play your songs to other users on the online community.

10/10



Sequencer apps

Old-school techniques meet new-school technology in these apps, which allow you to sequence up your inspiration as it happens



BeepStreet iSequence

£3.99 (iPhone);
£8.99 (iPad);
Free (Lite version)

Format iPhone and iPad
Web beepstreet.com

iSequence's tracker-style programming method might not be the most immediate approach, but it's a very flexible system. Parts can also be played in live using the keyboard, making it quick and easy to put together great loops using the default synths, your own samples or new sounds downloaded from the BankShop. The interface is perfectly optimised for each platform and the simple layout never feels cramped or fiddly on either iPad or iPhone. With great sounds and the ability to export your eight-track sequences as MIDI or WAV files, iSequence is easily one of our favourite sequencer apps.

9/10



mifki SoundGrid £1.99; Free (Lite version)

Format iPhone
Web www.mifki.com/soundgrid

Heavily inspired by Yamaha's groundbreaking Tenori-On, SoundGrid brings the 16x16 grid sequencer format to your phone. Although the default sounds are a little basic, you can download more from the app or create your own from samples. Eight layers of sound, effects, a mixer section and separate modes for live performance and song sequencing make SoundGrid even more flexible. We also love the fact that you can upload your tracks straight to SoundCloud. Perfect for acting out your Little Boots fantasies at the bus stop.

7/10



Propellerhead ReBirth £3.99

Format iPhone
Web www.rebirthapp.com

The original Mac/PC version of ReBirth is a legend in the world of music software. Never before had the venerable Roland TB-303, TR-808 and TR-909 boxes been so accessible. Now Propellerhead have taken things even further: you can have the same package on your iPhone for just £3.99. The synths still sound great, but unfortunately the interface is just too cramped to allow the ReBirth app to fulfil its huge potential. With so many other grooveboxes on the market, it's hard to see why you'd pick ReBirth over the likes of bleep!BOX and BassLine.

5/10



White Noise Audio bleep!BOX £5.99

Format iPhone and iPad
Web beepbox app.com

bleep!BOX is an old cm favourite. The great xOx-style step sequencer complements the synth engine perfectly to make this an outstanding all-round loop creation package. With great sequencing capabilities, bleep!BOX can be played live or programmed in advance to create more complex song arrangements. The iPad version is a must-have for owners of the bigger device, with the less cluttered interface really opening up the synthesis and modulation power of the software. bleep!BOX is one of the most well thought-out, complete music apps available.

10/10

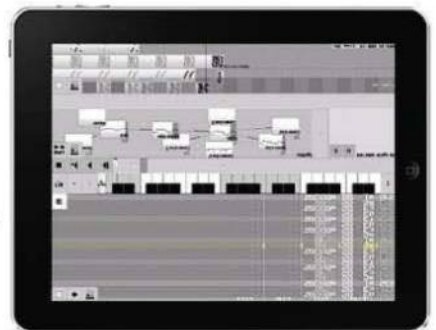


Alexander Zolotov SunVox £2.99

Format iPhone and iPad
Web www.warmplace.ru/soft/sunvox

Taking its cue from the classic 'tracker' packages found on the Amiga and Atari home computers of the 1980s, SunVox is an all-in-one sequencing package with loads of power hiding beneath the surface of its slightly arcane programming interface. The app's modular synth engine can be used to create some great sounds, and WAV and FastTracker XI files can also be loaded for use as sampler instruments. Any patches you create on your iPhone or iPad can be opened on several other platforms, including Windows Mobile, Mac OS X and Linux. It's not for everyone, but SunVox is well worth a look if you've got an open mind to the retro workflow.

7/10



Korg iElectribe £5.99

Format iPad
Web www.korg.com/ielectribe

Of all the iPad's launch titles, iElectribe was the one that got us the most excited. Based on the Electribe range of hardware grooveboxes, Korg's first foray into portable music apps is a powerful all-in-one dance music production environment that allows you to put together patterns, add effects and sequence your loops to create full song arrangements. Those of you who are familiar with the hardware version should need only the most cursory glance at the manual, and in fact the app is straightforward enough that even complete beginners should have no difficulty picking it up.

Based around the classic step sequencer concept, iElectribe's real power comes from the fact that, like its hardware counterparts, almost all of its sounds are synthesised in real-time. The synth engine is based around two oscillators, one of which is used to modulate the other. Picking a basic waveform and starting to modulate it, you'll soon discover that the sound design potential is huge. Basic envelope-shaping tools in the Amp section allow further control over the amplitude characteristics, and despite its apparent simplicity it's a highly versatile system, as a quick flick through the presets will demonstrate. Of those presets, 64 are ready-made tracks (in styles including house, hip-hop and dubstep), while 32 are more basic templates for you to build on.

In addition to programming note patterns, you can automate the vast majority of settings, allowing you to create complex grooves with interesting variations - and the fun really starts when you add movement to your tracks with the motion sequencer section. Whether you program all your patterns in advance or just hit play and start tweaking on the fly, iElectribe is a great performance tool. Its only major weakness is its inability to sync to an external clock signal via MIDI (though we hear rumours that a solution is on its way before too long). As such, it's a little limited in terms of interaction with other software, but there's still no doubt that iElectribe is one of the iPad's must-have music apps.

10/10

VALVE-FORCE

The Valve-Force tube saturation effect comes complete with glowing valves, but the sound gets quite harsh at high gain. It's best to exercise a little restraint here.

EFFECT

Only one effects send can be used at a time, but it's also possible to automate the selection knob to change between effects as your sequence plays.

OSCILLATOR

This is where the magic happens! iElectribe's synthesis engine is its greatest asset. The four waveforms and six types of modulation allow you to create everything from slamming kick drums to screaming leads.

FX SEND AND ACCENT
Clever use of this section can add interesting variation to your loops. In addition to accenting certain steps, effects can also be turned on and off for each part or globally for each step of your sequence.



STEP SEQUENCER

It's easy to get started with sequencing patterns. Advanced options including Swing and Bar length (anything from 1 to 16 steps) are hidden away in the Settings menu.

AMP

In addition to basic control of amplitude envelopes with the Decay setting, further sound shaping is possible with the Level, Pan and Low Boost controls. All four can also be automated.

MOTION SEQ

The motion sequencer is the key to introducing variation to your patterns. Hit the Record button as a sequence plays and every knob movement will be recorded and automated.

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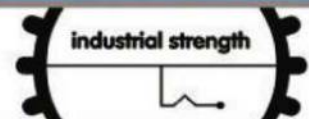
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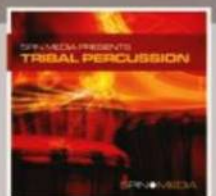
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cm/recommended

Two of our favourite synth apps clock in at under £3. Which is better?

Tempo Rubato

NLog £2.99;

Free (demo version)

Format iPhone

Web www.temporubato.com

In the unlikely event that you're still sceptical about the iPhone's synthesis power, NLog should change your mind. A fully featured dual oscillator subtractive synth with a great sound, NLog's options make it more versatile than plenty of hardware synths. In addition to the regular analogue waveforms, you'll find wavetable-like sounds and PWM, while more advanced features include frequency modulation, a ring modulator, multi-mode filters and two LFOs. With three envelope generators and a key-tracking option for the filters, the range of sounds that can be achieved is phenomenal. For a finishing touch, delay, chorus and distortion effects can be applied to the master output.

But the synthesis features are only one half of NLog's appeal. A number of excellent performance options make this unassuming little app even



more versatile. Choose from monophonic, poly or legato modes, then jam away on the keyboard or use the arpeggiator to create rhythmic patterns. Velocity-style control can be achieved by sliding your finger up and down each key to control the depth of modulation effects, while the most important parameters can be assigned to four rotary controls on the main performance screen.

Alternatively, a Kaoss Pad-style X/Y controller screen can be assigned to almost any parameter, giving you serious real-time expression control.

NLog shows just how good an iPhone synth can be. The small screen might not compete with a full-size keyboard, but the sound is easily on a par with pricey hardware and software rivals.

10/10

iceGear

Argon £1.19

Format iPhone

Web iphone.icegear.net/argon

One of NLog's closest rivals in the virtual analogue market is Argon, a three-oscillator subtractive monosynth that's absolutely packed full of excellent features. Oscillator waveforms include the usual sawtooth, square wave, sine and white noise, plus an excellent formant oscillator for creating vocal-style effects from vowel sounds. Frequency modulation, three LFOs and an excellent resonant multi-mode filter with adjustable low-pass slopes allow thousands of timbres to be achieved with ease. The 64 factory presets are all highly usable, with a further 512 user preset slots available for you to save your patches. You can add effects to the master output too, including delay and overdrive.

Argon's outstanding step sequencer is another string to its already weighty bow, allowing complex patterns to be set up and played like a highly customisable arpeggiator. It's a great and very convenient way of creating riffs with ease. The new clipboard feature in version 1.2 also allows Argon audio data to be copied and pasted into compatible apps such as Intua Beatmaker. The copy and paste function



is finally starting to emerge as an inter-app standard and Argon implements it perfectly, allowing you to create loops and patterns and then send them to Beatmaker for use in your sequences. Once you've started doing it, you won't believe that you ever managed without it.

With so many features to choose from, Argon is one of the best monophonic synths for iPhone; the formant oscillator and step sequencer both stand out as particular highlights.

So, what about our battle of the sequencers? Well, in a pistols-at-dawn direct shootout, the polyphony of NLog probably gives it that crucial edge - but at just £2.99 and £1.19 respectively, NLog and Argon are so cheap and so good that you might as well buy both. For just over a fiver, you can't lose. So go on, boys - shake hands and call it even. We promise this iPhone is big enough for both of you...

10/10

5 drum apps

Do everything from programming classic drum machine sounds to quickly organising a backing track with these five delightful drummers



Synthetic Bits FunkBox £1.19

Format iPhone and iPad
Web www.syntheticbits.com/funkbox.html

Proving that relatively basic apps can still be winners in this world of ever-increasing complexity, FunkBox is a simple drum machine with intuitive programming. Where the app really shines is its sound sources: it includes samples from seven classic drum machines, including the legendary Roland TR606, 808 and 909, MachineDrum SPS-1 and Maestro Rhythm King MRK-2. It would be even more cool if you could choose individual drums from each machine to create a mix 'n' match kit, and we would also like to see more than eight samples from each, but overall FunkBox is easy to use and sounds pretty great.

7/10



Simple Is Beautiful Drum Track8 £2.39

Format iPhone
Web www.simple-is-beautiful.org/

Yet another variation on the step sequencer drum machine, Drum Track8 gets things very right. The interface is split into pages, making it easy to create great patterns on even the small iPhone screen. The main 16-step Editor window is where loops are created, while the Mixer and Song Arrangement pages allow you to tweak things to perfection. With 15 drum kits to choose from, the sound options are excellent. As a result, Drum Track8 is a highly effective rhythm tool. We would love to see a full iPad version.

9/10



iZotope iDrum From £0.59

Format iPhone
Web www.izotope.com/idrumiphone

For just 59p, iPhone users can get a taste of iZotope's excellent iDrum package, which is a simple and highly customisable drum-sequencing app. iDrum is available in a number of versions to suit a wide variety of genres, from club to 8-bit. There's even a beatboxing edition! The special editions by big-name producers are particularly worth checking out: the Wu Tang Clan's RZA contributes a dirty New York hip hop version while Major Lazer offer up their unique blend of electro reggae. The option to export your drum patterns as ringtones is also a cool touch.

8/10



Roventskij IR-909 £2.99

Format iPhone
Web roventskij.net/?p=2

If you're looking for a basic step sequencer-based drum machine, IR-909 should fit the bill nicely. Some of its unique features aren't so successful - the accelerometer-driven control of tempo and sound options is fiddly at best - but the sounds are great, and the four pattern slots mean that you can set up multiple loops and switch seamlessly between them. With Roland TR-606, 707, 808 and 909 samples plus two additional kits, the great sound options are what really make IR-909 worth a look.

7/10



Sonoma Wire Works InstantDrummer £1.79

Format iPhone
Web www.sonomawireworks.com

More fun than playing along to a metronome but not quite as flexible as a full drum machine, InstantDrummer allows songs to be pieced together from a selection of patterns. Each section can be adjusted using controls for ambience, variation, intensity and gain. Heartbreaker includes drum patterns recorded by Death Cab For Cutie's Jason McGerr, while AirWrench and Combustion feature Nashville session drummer Tony Morra. You could use InstantDrummer for backing tracks, but we think it's best for keeping you in time during practice sessions.

7/10



cm/recommended

Too lazy to get out of bed? Control your DAW with your iPhone

Talkative Entrackment £1.79

Format iPad
Web www.talkative.se/products/entrackment

Entrackment is an absolute bargain for GarageBand users. Just like Apple's excellent free DAW, this Wi-Fi control-surface app is straightforward to use but powerful enough to compete with the big boys. Transport controls and simple channel strips let you tweak your basic mix wirelessly. The mixing options don't get more advanced than volume and pan, but the clean interface and full track labels make it easy to get the hang of.

To use it you'll need GarageBand 09 on an Intel Mac running OS X 10.5 or higher. Install the Entrackment Client plug-in on your Mac, fire up GarageBand and then start the app on your iPad. Everything works instantly. Our only major complaint is that there's no live metering on the iPad display, making it a bit awkward to check levels while you mix.

8/10



Saitara AC-7 £3.49 (iPhone); £5.99 (iPad)

Format iPhone and iPad
Web www.saitara.com/software.com

This excellent control surface app proves that the iPhone and iPad can be serious production tools. Compatible with many DAWs including Logic, Cubase, Pro Tools and Ableton Live, AC-7 offers everything from multitouch level control to real-time metering and accurate timecode display.

AC-7's most obvious rival is Far Out Labs' ProRemote, as both products offer similar feature-sets. ProRemote's more advanced MIDI features come at a high price, and AC-7's superior Pro Tools performance will be a deciding factor for many buyers. Our only slight reservation is over AC-7's user interface, which is feature-packed to the point of being slightly overwhelming. However, once you get the hang of it you'll find that AC-7 is a very powerful tool. For us, it just has the edge.

9/10



Far Out Labs ProRemote £52.99; £11.99 (Light version)

Format iPhone and iPad
Web www.folabs.com

ProRemote's remarkably high price makes it one of the most expensive music apps around. It's a bold pricing strategy, but the app is instantly impressive. In addition to the usual mix and transport features, ProRemote includes MIDI drum pads and an excellent X-Y controller. Mackie Control Protocol compatibility means it works with Logic, Live, Pro Tools and a number of other DAWs. On the whole it runs smoothly, but its performance with Pro Tools can be glitchy. Other DAWs don't have problems.

Although it's still cheaper than a hardware control surface, £52.99 is a substantial amount of money, and when compared to the similar AC-7 Pro's RRP of £5.99 it seems pretty extravagant. As a result we recommend the Light version, which offers fewer channels but weighs in at a far more reasonable £11.99. Even with a pared-down feature-set, it's still a great control app.

8/10



Steinberg Cubase iC Free

Format iPhone
Web www.steinberg.net/en/products/sounds_accessories/cubase_ic.html

Cubase 5 users should take advantage of this free controller app for iPhone and iPod Touch. The features are split into two pages: Transport and Arranger. The Transport options are the usual

basics: play, stop, record, turn the metronome click on/off and so on. The Arranger page allows you to manipulate Cubase's Arranger Track and experiment with your songs. Just select events on the iPhone and Cubase will create a new arrangement.

Installation is relatively simple but involves downloading the Cubase SKI Remote extension (free from Steinberg's site) and setting up iC as a Remote Device in Cubase. iC is a handy remote transport control but the absence of live metering or basic mixing capabilities limit its potential. Even so, it's churlish to complain about a free app that delivers what it promises; the transport and arrangement features all work smoothly.

8/10



Liine Grid

£14.99 (iPad); £3.49 (iPhone); Free (Lite version)

Format iPhone and iPad
Web www.liine.net/grid

Back in June, videos surfaced on YouTube of techno legend Richie Hawtin using an iPad-based Ableton controller for his Plastikman live sets. Needless to say, we were intrigued. Our investigations soon led us to Liine, a Berlin-based software company with Hawtin on board as an advisor. The company's first product, Grid, is a touch-based controller for Ableton Live that will follow a modular development path. We hassled the boys at Liine on a daily basis until they couldn't take any more and agreed to give us an exclusive pre-release version to try out.

The first instalment of Grid is a wireless clip launcher, but the overall concept is much bigger. Grid is a modular application that will expand to carry out a number of different functions, with the app becoming the central hub for a variety of controllers as new modules are added. Liine are keeping quiet about what's in store, but you can take an educated guess by looking at some of the hardware controllers available for Live. If we had to put money on it, we would say to expect mix features and track control modules before long.

After installing the software on the host Mac and firing up the app, it's apparent that the Grid interface is incredibly intuitive. Clips are laid out in a grid, with tracks running in columns from left to right and scenes in rows from top to bottom. The setup will be familiar to Live users as a simplified version of the Overview section in Session view. There are no track faders or channel strips to play with, just buttons for each clip. To make things easier to navigate, clip names and colours are instantly imported from your set, as are track and scene titles. Each of the clips and scenes can be launched via Grid just as if you were launching it in Live. When a clip is playing, loops are indicated by pie graphs at the head of

each column, mirroring those in Live's track status displays. To stop clips, launch an empty slot in the same track, or hold down the Stop button in the top right-hand corner of the screen and then tap the tracks that you want to stop.

The size of the grid is fixed, so your view is restricted to a set number of clips. On the iPad the grid is 11 tracks by 11 scenes in landscape and 8x16 in portrait. The iPhone version offers 6x6 in landscape and 4x8 in portrait. If your set extends beyond the edges of the screen, you can scroll around the grid using the Track and Scene title bars, or tap the button in the bottom right corner for a zoomed-out view that allows you to jump to anywhere in the grid.

Latency appears to be negligible even when connected over an existing wireless network. It's not particularly an issue when clip launch quantisation is enabled, but even with quantisation turned off, Live's response to clip and scene changes is instantaneous. For the most reliable connection, Liine recommend running Grid over an ad-hoc wireless network with static IP addresses. Hopefully performance will remain smooth when Grid expands to incorporate more modules.

Three versions of Grid will be available. The iPhone and iPod Touch version will be priced at £3.49, while the Pro version for iPad will cost £14.99. There's also a free Lite version for iPhone



that allows you to try before you buy. Lite is fully functional but the grid size is limited to four tracks by four scenes in landscape and 3x6 in portrait.

As a clip launcher, Grid's performance is flawless. The fact that it also operates so smoothly over a Wi-Fi connection opens up all kinds of live performance potential. Hardware controllers like Novation's Launchpad and Akai's APC40 may offer more control features, but they come at a much higher price and their interfaces are nowhere near as user-friendly. Even in this early incarnation, we're mightily impressed with Grid.

10/10

> Step by step Set up Grid



1 > After running the Grid installer, you'll find Grid as an option in Live's **Control Surfaces** menu. The installer also places the Grid Connector in your Applications folder. You'll need to have it running every time you use Grid.



2 > Grid will run over an existing Wi-Fi network, but Liine recommend setting up an ad-hoc network with static IP addresses. This should ensure a stable connection between the two devices and help to eliminate latency issues.



3 > Liine are keen to point out that Grid works just as well on the iPhone as it does on the iPad. The iPhone provides a great portable control solution, with a clip grid optimised for the smaller screen. (For more details check out p69.)

cm/recommended

Two excellent apps for recording and editing extraordinary audio

Sonoma Wire Works **FourTrack** £5.99

Format iPhone

Web www.sonomawireworks.com

FourTrack is a simple, old-fashioned recorder in the spirit of a virtual Portastudio. Mix and effect options are kept to a minimum, with faders and pan controls on each of the four channels plus the Slammer stereo bus compressor and Freakenzy four-band parametric EQ on the master output. Its compatibility with Sonoma's own AudioCopy and AudioPaste protocol allows sounds to be imported from other cool apps, including InstantDrummer.

All recordings are made at CD-quality 16-bit 44.1kHz resolution. The best results are obviously achieved using an external microphone, but as a portable sketchpad, the iPhone's internal mic gets the job done in a pinch. Although there are only four tracks, recordings can be bounced down to the first two as many times as you like, freeing up tracks three and four for overdubs each time. Once you're finished, the multitrack files can be uploaded to your computer over



Wi-Fi, allowing you to continue working on ideas in your desktop DAW. Unfortunately, gain and pan settings are lost unless you import your tracks to Sonoma's own RiffWorks software, but you can also export the stereo track as a finished mix if you prefer.

FourTrack's big brother is StudioTrack for iPad, which offers an additional four tracks and a master channel with reverb return. The channel strips gain their own reverb send knobs and FX buttons, allowing you to add compression, EQ and delay to each track. However, at £23.99 StudioTrack's extra features come at a significant price premium.

Is the extra cash worth it? We're not sure. Although StudioTrack's interface offers slightly more breathing space due to being on an iPad, FourTrack never feels too cramped thanks to clean, efficient design. FourTrack is our pick of the two apps thanks to its much lower price. Thanks to Sonoma, the iPhone in your pocket can double up as a handy digital multitracker.

9/10

Tibor Horvath **ReForge** £2.99

Format iPad

Web www.reforge.info

When a developer bills their app as a "Swiss army knife for audio files", we sit up and take notice. Audio editing on portable devices is notoriously fiddly, so anything that makes the process easier and more versatile has to be worth closer examination. Coming from the makers of AudioForge, ReForge is an iPad wave editor that takes full advantage of the big touchscreen to offer an even more intuitive hands-on user experience. The app's capabilities currently consist of a few basic editing functions, including trimming files, applying fades and panning sounds from left to right. Effects include stereo widening, low-pass and high-pass filters plus independent time stretch and pitch shift.

AudioCopy and AudioPaste functionality makes it easy to transfer sounds between apps. ReForge can also load MP3, IM4, WAV and AIF files directly from your email inbox, while Wi-Fi server and iTunes File Sharing support make things even more flexible. With the iPad held in landscape format, the waveform fills the entire screen - but flip to portrait mode and on-screen help appears to guide you through each of the

tools and the tracker knobs (which let you draw automation curves directly onto the waveform). It's a clever feature that makes it easy to get to grips with the functions and workflow. A history menu allows you to take a few steps back if you make a mistake.

ReForge probably isn't ready to replace your traditional Mac or Windows-based audio editor just yet. It's foolish to suggest that such a basic editor is going to make you ditch your copy of Sound Forge or Audition, and the touchscreen interface still isn't quite as precise as using a mouse. However, taking into account the fact that it's an app in its early stages of development, ReForge is a very usable editor that we're sure will come in handy for a lot of mobile musicians.

7/10



5 DJ apps

If you've ever fancied getting scratchy without diggin' crates or your bank balance, check out these nifty pad- and phone-poised platters



Async Baby Decks

£14.99

Format iPad
Web www.async-games.com

One of the more well thought-out virtual turntable apps on the market, Baby Decks is primarily aimed at scratch DJs. Eschewing many of the advanced mixing features of most beat-matching apps, Baby Decks offers a very simple virtual representation of the classic two-turntables-and-a-mixer scratch DJ setup. The problem is that scratching is inherently tactile, and the iPad simply can't offer the necessary feedback from the vinyl or the faders. Baby Decks probably isn't going to make you ditch your turntables just yet, but even so it's great fun to load your own audio files and scratch them to create effects.

7/10



Async Flare Scratch £2.99

Format iPhone
Web www.async-games.com/flare.html

The little brother to the iPad's Baby Decks app, Flare Scratch is definitely worth considering in its own right. It's aimed squarely at scratch DJs, with just one deck on screen. Load files from your iTunes library and cut, tear and transform to your heart's content. The responsive deck is excellent, but a slightly larger volume fader would be nice. Flare is a simple but highly effective tool that can be used to add realistic scratch sounds to tracks.

7/10



Capsulated Software Cue Play DJ £5.99

Format iPhone
Web www.capsulatedsoftware.com/cue_play_dj.html

Dutch trance legend Ferry Corsten knows a thing or two about DJing, so his involvement with the development of a DJ app instantly grabbed our attention. The result, Cue Play DJ, is a real winner, with the use of Wi-Fi for track uploading and mix streaming a particular highlight for us. The latency issues that Wi-Fi connections suffer from means that regular headphone monitoring isn't possible, but a number of different headphone mix options make it very easy to get the hang of this slightly different approach to cueing tracks.

8/10



Amidio Touch DJ 2 £11.99

Format iPhone
Web www.amidio.com/touch-dj-2

Touch DJ solves the iPhone cueing conundrum using real-time waveforms on screen. We're not convinced that mixing without listening is the right approach for everyone, but it's a novel way to do things. Auto BPM and beat detection make things a little easier, while three-band EQ, low pass filters and a handful of very basic effects increase your sonic options. Unfortunately the slightly high price puts Touch DJ at a disadvantage against its direct competition, but it's still worth keeping an eye out for the forthcoming iPad version.

7/10



Pajamahouse Studios Sonorasaurus £5.99 (iPhone); £8.99 (iPad)

Format iPhone and iPad
Web www.sonorasaurus.com

Sonorasaurus' impressive feature-set includes parametric EQs and dedicated effects for each channel (reverb, flange, high-pass filter and more). Most importantly, bread-and-butter features such as headphone cueing, pitch adjustment and jog control are all handled with a minimum of fuss. The iPad version, Sonorasaurus Rex, is worth shelling out the extra £3 for; in addition to the iPad-specific UI, Rex features automatic beat-highlighting on waveforms and a BPM tapper for working out track tempos. Not bad.

9/10



IK Multimedia AmpliTube

£11.99; £1.79 (LE version); Free (demo)

Format iPhone
Web www.ikmultimedia.com

Primarily intended for use with the iRig guitar interface (available for a reasonable £29.99), AmpliTube is a guitar FX and amp simulator app based on IK's excellent modelling software. Hook up your bass or guitar and you can perfect your tone, practise without an amp or come up with new ideas on the go.

The tiny iRig interface plugs into the 3.5mm socket on your iPhone, expanding it to a dual-purpose input and output socket. Plug in a guitar and headphones and AmpliTube

works instantly. The sounds are excellent, coming surprisingly close to the full version for Mac and PC. When played through good headphones, the range of sounds that can be achieved is highly impressive. Clean, crunch, lead, metal and bass amplifiers can be chosen, while switching the speaker cabinet or microphone selection results in subtle but effective changes in tone.

Only three virtual stompboxes can be used simultaneously, but the range of effects is large enough to make the app versatile enough for just about any guitarist. AmpliTube

offers everything from restrained clean tones to in-your-face fuzz without a problem. The app is available in three different versions: Free (three stompboxes and one amp/cab), LE (five stompboxes, one amp/cab) and full (all 11 stompboxes and all five amps and cabs). If you choose the free or LE version and find that the default range isn't enough, the Add Amp/FX option allows you to download upgrades.

The AmpliTube app outdoes any other amp sim on the market. When teamed with the iRig, it makes an excellent practice setup.

10/10



> Step by step

Get started with AmpliTube



- 1 > With a built-in tuner and metronome plus a handy audio demo feature for auditioning sounds, AmpliTube might well replace a few items in your gig bag. Latency can be adjusted (choose between low and ultra-low), feedback can be turned off to protect your ears and an auto sleep mode helps to maximise battery life.



- 2 > AmpliTube allows three virtual stompboxes to be loaded simultaneously, with a choice of delay, fuzz, distortion, overdrive, wah, envelope filter, chorus, flanger, phaser, octave and noise filter. The wah pedal position can be adjusted by tilting the phone, but this is easier said than done with a guitar in your hands.



- 3 > Each of the five amp models can be routed into a selection of cabs. Choose from a dynamic or condenser mic, then dial in your EQ and gain settings to perfect your tone. With so many options to choose from, there should be a sound to suit just about everyone.



- 4 > AmpliTube's song page is for importing MP3s or backing tracks to play along to. You'll need to use a computer on the same Wi-Fi network, but song transfers are handled easily through your web browser. It's also easy to set up a loop if you want to practise the same section until you nail it.



- 5 > Full setups can be saved to the 36 preset pads, which come in handy for switching between tones mid-jam. Latency is low when changing presets. In fact, latency is rarely an issue with AmpliTube, even when running multiple effects in the regular low-latency mode.

POWER TIP

>Order of merit

It's worth bearing in mind that the order of your virtual effects is just as crucial in AmpliTube as it is with real-life stompboxes. If you're using, for example, a flanger and a delay pedal, you'll find the sound to be quite different depending on the order of the two effects. One of the advantages of AmpliTube's preset slots is that you can set up identical presets with your stompboxes in a different order and switch them around mid-song. Try that with your pedals and patch cables!

5 Piano apps

You can tinkle the ivories no matter where you are using these five apps, which each have a different take on just what a mobile piano should offer



Nick Lee MagicPiano £0.59

Format iPhone
Web www.nickplee.com

Not to be confused with the Smule app of the exact same name, this basic sampling keyboard

allows you to record a sound through the iPhone's mic, play it as an instrument using the on-screen keyboard and, er, that's it. MagicPiano is somewhat limited in scope, but as piano apps go, it's cheap and fun. This is an excellent example of the kind of specialist app the iPhone does so well, but there are better sampling options available - and better virtual keyboard apps too, come to that. At only 59p, though, it's good for a laugh if you've got to time to waste.

6/10



MooCowMusic Pianist Pro

£5.99

Format iPad
Web www.moocowmusic.com

The iPad's large screen is just about the right size for an octave or two of slightly undersized piano keys, so it comes as no surprise to see that MooCowMusic have introduced Pianist Pro (based on Pianist, their iPhone piano app). The Pro version offers a variety of piano and organ sounds plus a guitar and a couple of synth sounds thrown in for good measure. The arpeggiator is more flexible, while the metronome is expanded to a simple drum machine. And of course, the augmented size of the keys makes them far easier to play than those of the Pianist iPhone app. Overall, this is a very nice upgrade.

7/10



Smule Magic Piano

£0.59

Format iPad
Web magicpiano.smule.com

We've seen plenty of piano emulation apps, but Smule's Magic Piano really takes things down a unique and interesting path. With freestyle and song modes plus the ability to duet with other users around the world, this app is particularly good fun for newcomers to the piano. However, things get really wacky - and really fun - when you start to mess about with the advanced layout options. Once you've played a song on a spiral keyboard, you'll never look at a piano in the same way again.

8/10

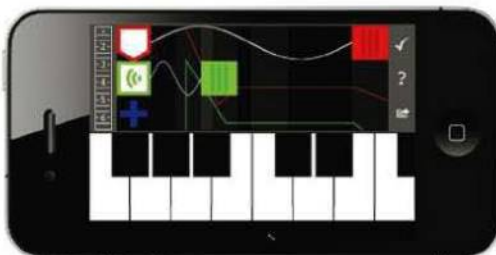


miniMusic Pianofly £1.79

Format iPhone
Web www.minimusic.com/pianofly.html

Pianofly's very simple interface hides a surprisingly powerful FM synth with plenty of editing options. You can either pick a preset to play with or create your own sounds from scratch. One of the app's cleverest features is the way that it overcomes the limitations of the iPhone's small screen. Dragging your finger along the screen slides the keyboard along, meaning that you can move up or down the piano as you play rather than being limited to a single octave or having to stab a tiny button. It's a neat solution, if occasionally a little fiddly.

8/10



Peterb Virtuoso Piano £0.59

Format iPhone and iPad
Web www.peterbmusic.com

With seven octaves of sampled grand piano ready and waiting at your fingertips, Virtuoso Piano is one of the most authentic piano apps on the market. A built-in metronome, basic reverb and recorder (with overdub capability) add some reasonable extra functions. There's nothing particularly groundbreaking about Virtuoso Piano, but it's a solid piano app at a great price. It's also worth checking out the Virtuoso Piano Celesta for iPhone (also £0.59), which offers similar features but with four octaves of delicate celesta samples instead of piano.

8/10



5 groovebox apps

Whether its for a pro live show or just some on-the-train fun, these five grooveboxes serve up great features for a bargain price



Sound Trends

Looptastic £5.99 (Producer for iPhone);
£8.99 (HD for iPad); Free (Gold version)

Format iPhone and iPad
Web soundtrends.com

Looptastic is a loop-based arrangement, mixing and effect app with an excellent interface and great sound. Arrange your loops into groups, apply effects with the X-Y pad and crossfade between sounds. With a great range of preset loop sets to choose from, Looptastic will appeal to the beginner who wants instant results. You can even remix tracks using your own sounds and then upload them straight to SoundCloud. Fantastic.

10/10



IK Multimedia

GrooveMaker From £2.39 (iPhone);
from £5.99 (iPad); Free demos

Format iPhone and iPad
Web groovemaker.com

Broadly similar to Looptastic, Groovemaker is already a major hit on the iPhone and is now available for iPad. Layer together samples and loops, mix them and sequence full songs. Everything takes place in real-time, so there's no interruption even if you change the tempo or add new loops. If you decide to buy the app, you can take your pick from a number of versions with ready-made house, drum 'n' bass, trance and hip hop sample packs.

9/10



Intermorphic

Mixtikl 2 £2.39

Format iPhone and iPad
Web www.intermorphic.com/tools/mixtikl

Mixtikl's unique loop-based approach to generative music makes it stand out from the groovebox crowd. We're not big fans of the interface, but there's no arguing with the results, which range from organic, ambient soundscapes to uptempo house. Early stability issues with the app have now been addressed, making Mixtikl a more attractive option than it was previously. You can also use the iPhone's copy and paste functionality to paste in loops from other apps. If you can get to grips with the fiddly, counterintuitive interface then you'll find that Mixtikl is a seriously powerful music app with great sound and a wealth of options to explore.

7/10



Agile Partners

Star6 £5.99

Format iPhone
Web www.star6app.com

Star6 delivers instant gratification through granular synthesis. Load up a set of loops and manipulate them with outstanding glitch-style effects including pitch shifters, gates and randomisers. Delay, filter and distortion effects complete the sound options, all of which work pretty well. Presets include sounds for electro, Baltimore club and drum 'n' bass, but the best results come from loading custom loops and rearranging your own tracks. Great sound, an intuitive user interface and powerful effects make Star6 one of the best loop-based groovebox apps around.

9/10



The Strange Agency

Slice £0.59

Format iPhone
Web www.thestrangeagency.com

As the name suggests, this highly original app chops your loops up into a series of slices. Things get even more interesting when you start to drag slices around the circle, rearranging the order of playback, skipping parts or changing the loop points. An echo effect can also be added, using clever two-finger control to adjust the parameters as the effect plays. There's no way of adjusting the tempo of your loop, but this is still a great app.

9/10



New Primacoustic® IsoTools

for the studio & stage



VOX GUARD™

larger & lighter than the competitors, the Voxguard allows you to reduce ambience around your microphone when recording vocals



KICKSTAND™

eliminate resonance



CRASHGUARD™

reduce the spill from cymbals & improve isolation



TELEPAD™

use your iphone live as a teleprompter or metronome



TRI-PAD™

isolates the mic stand from the studio floor, eliminates resonance & improves clarity

5 unique apps

One of the great things about iOS is the way that it gives developers the freedom to create truly weird and wonderful apps. Here's our pick of the bunch



The Strange Agency Curtis Heavy £1.19

Format iPhone
Web www.thestrangeagency.com

The iPhone's first granular synth app, Curtis Heavy allows you to synthesise sounds from an audio file or recording. Multitouch swipe gestures control grain size, read position and slew, which controls whether the read position jumps instantly from point to point or gradually slides between points. With no sequencing or MIDI features the app is currently a little limited, but Curtis Heavy is a great demonstration of the iPhone's synthesis capabilities. We would love to see some more advanced updates to this innovative compositional tool in the near future.

7/10

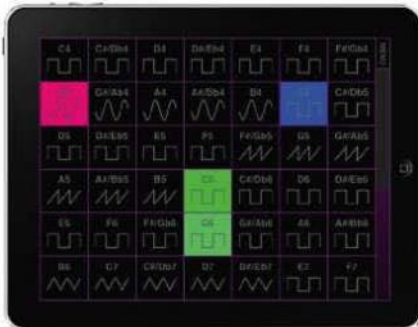


Mark-V Apps Sound Squares £1.79

Format iPhone and iPad
Web www.markvapps.com/soundsquares

At first glance, Sound Squares' grid-based interface looks like so many other apps - but in fact it hides a highly editable synthesis engine that allows you to set parameters such as waveform, amplitude envelopes and note-tuning individually for each square. This custom grid is easily configured as an excellent performance tool. Effects including a low-pass filter, distortion, delay and chorus can be added, while aftertouch-style finger gestures allow a number of modulations to be controlled as you play.

8/10



The Strange Agency Spoke £1.19

Format iPhone
Web www.thestrangeagency.com

This cheap app from one of our favourite developers is so simple and effective that we can't believe no one else has done it before. Spoke uses a circular format with a play head that rotates 360 degrees per bar. Each coloured disc represents a different drum sound. With no quantisation or grid markers there are absolutely no restrictions on the rhythms you can create - so as you can imagine, things can get pretty rowdy! Tap tempo and four loop-storage slots make Spoke a great performance tool. It's just a shame you can't load custom samples. Maybe that will appear in the next update...

9/10



Reality Jockey RjDj Free

Web iPhone
Format www.rjdj.me

This is not your conventional DJ app! Reality Jockey's game-changing RjDj is an augmented reality music app unlike anything else. Load a 'scene' and you'll soon discover how the music reacts to inputs such as finger gestures, phone movement and ambient sounds. No musical knowledge is required. Each scene has its own set of sounds, allowing you to create your own unique arrangements of everything from hip hop to dub. Downloadable packs allow you to add new scenes. Music becomes software and software becomes music in an inspirational multisensory experience.

9/10



TeaTracks Gliss £0.59

Format iPhone
Web www.teatracks.com/gliss

Categorising Gliss is so difficult that we're probably best off leaving it to developers TeaTracks, who describe the app as "a hybrid of sequencer, game, instrument and generative music system". Five colours represent samples, each of which can be triggered and sequenced by drawing lines on the screen. The tempo and direction of play is controlled by tilting your phone, which is excellent fun and surprisingly powerful for creating interesting loops.

9/10



cm/recommended

Top-rated apps are top-rated for a reason. Check out these humdingers

Intua

BeatMaker £5.99

Format iPhone

Web www.intua.net/products.html

One of the most intuitive beat-creation tools around, this extremely popular app is primarily a sample player, but its looping, sequencing and pattern creation features make it an all-round virtual studio. Think along the lines of the Akai MPC series of sampling grooveboxes and you'll get the general idea.

The app comes pre-loaded with a variety of loops and Artist Packs from producers including Man Parrish and Richard Devine, so you can get started immediately. New sample kits can be added by loading WAV or AIFF audio files, recording directly into the app, downloading entire kits or pasting audio from other apps. Once you've got your kit together, loops are recorded live to a click track or programmed using the internal sequencer. A combination of step sequencing and a pattern-based song mode allows you to create complex song arrangements from your samples.

BeatMaker is also a great performance tool, whether you're triggering samples on the fly or



just making adjustments as a pattern plays. Samples can be routed through two FX busses, with effects including tempo-synced delay, three-band EQ, and a multi-mode resonant filter.

This combination of intuitive workflow, sample playback and excellent sequencing capability means that BeatMaker one of the best

music apps around. We've already seen plenty of musicians adopting it for live performances and composition, and we'd expect that to continue as more people start to realise just how good it is. BeatMaker is quite simply a must-have for every iPhone musician.

10/10

Chris Wolfe

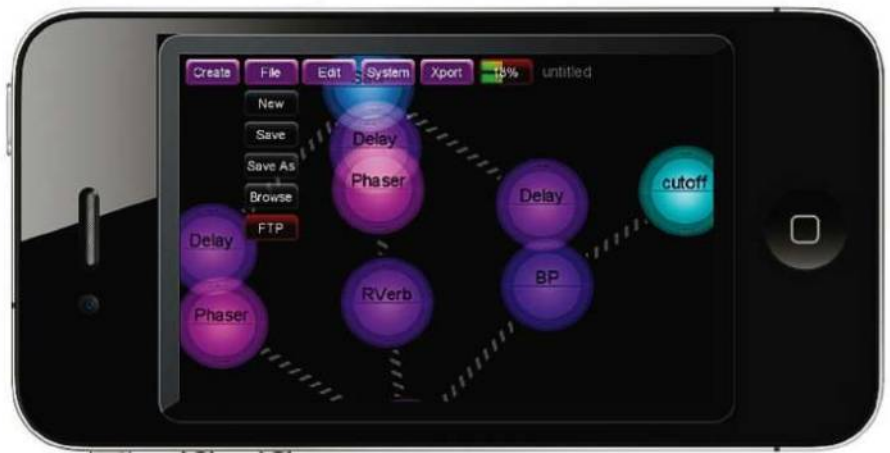
Jasuto Pro £3.99; £1.79 (Classic version)

Format iPhone and Android

Web www.jasuto.com

Warning: Jasuto is not for the faint-hearted. If you're looking for a synth app with instant results, you're going to be disappointed. However, the great news is that once you get the hang of the basic structure, you'll find that Jasuto is capable of creating incredible sounds. The mixture of subtractive, additive and granular synthesis plus sample playback, effects and sequencing make Jasuto one of our favourite iPhone apps.

Jasuto's huge range of modules (known as nodes) includes samplers, oscillators, filters, envelope generators, effects and sequencers, so you'll need to know the basics of synthesis to get the best results. It's easiest to start by modifying some of the demo patches, but you'll soon figure out how to construct your own scenes from scratch, linking nodes to each other and moving them around the scene to adjust the way they interact. The range of sounds that can be created is mind-blowing and the sequencer allows you to trigger patterns from within the app. We'd strongly recommend the Pro version, which takes things to the next level. All the features of the Classic version are included plus dozens of extras,



including granular looping of samples, a waveform drawing mode and audio clipboard features.

The tight-knit user community makes Jasuto a pleasure to use, with support available on the web forum and a patch-sharing feature available in the app. The future looks even more exciting, with an iPad version in the pipeline and further integration with the plug-in version. At such a

bargain price, anyone with an interest in synthesis would be crazy not to give Jasuto a try.

The Android version of Jasuto is very similar to the iPhone version. You'll need a powerful handset such as the HTC Desire or Google Nexus One to run it, but if your phone's up to scratch, this is one of the best Android apps around.

10/10

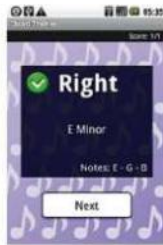
cm / android

Here are 20 musical tools we recommend for Google's mobile platform

Nautilus **Ear Coach** \$1.99

A simple app for practising chord and interval recognition always comes in handy, and Ear Coach fits the bill nicely. Train relative pitch by identifying intervals between pairs of notes or try to identify chords from simple triads. Statistics are also saved so that you can track your progress easily.

8/10



niko twenty **Tube Tempo BPM** Free

Tap along to the beat and let this excellent free app calculate the tempo for you. OK, so plenty of apps can do that part, but Tube Tempo's built-in delay time and LFO speed calculator set it apart from the rest. An audible click and visual indicator are the icing on the cake. Tube Tempo would be a handy pocket-filler for DJs.

10/10



niko twenty **Electrum** \$3.99

This simple drum machine app is based on the classic step sequencer format. With good built-in sounds and free downloadable packs based on classics such as the Roland 808 and 909, Electrum has some great sonic potential. We highly recommend checking out the excellent sample packs at www.synthdrums.com.

10/10



mob-dev **Hit It!** \$1.49

The 16 drum sounds included with this app won't blow your mind, but the clever sensor mode just might. Swing your phone like a drumstick and you can trigger up to five different drums depending on the angle and direction of your swing. Pretty cool stuff. More drum sounds in the next version please!

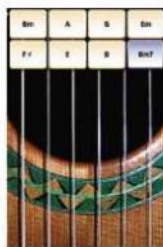
8/10



Coding Caveman **Solo** £1.50

We've seen plenty of guitar apps like Solo, but not many use the same chord-based system as this app. Rather than fretting individual notes, Solo allows you to pick from a group of chords. The virtual guitar can then be strummed or each string can be played individually. It's simple but effective.

7/10



Samalyse **TapeMachine Recorder** €2.99

A simple audio recording app with basic editing features is a must for capturing interesting sounds or making quick recordings. TapeMachine fits the bill perfectly. Cheap, cheerful and effective, TapeMachine is ideal for recording and editing samples out and about.

8/10



Adam Smith **Ethereal Dialpad** Free

This cool abstract synth allows you to pick from Flat, Draw, Swarm or Grid modes and draw patterns on the screen to play sounds. Synth options include pitch quantisation along with basic delay and flanger effects. Plug-ins allow you to expand the app with cool features such as gravitational sensor control.

9/10



Simon Dixon **MicroJam** £0.99

Microjam's loop-based approach to composition is broadly similar to the likes of Groovemaker and Looptastic on the iPhone, allowing you to drag samples onto the timeline to create tracks. The promised expansion packs have never surfaced, meaning you're restricted to a small range of samples. Still worth a try.

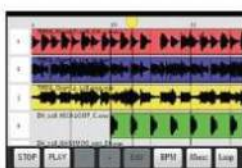
7/10



niko twenty **ReLoop** \$2.99

From the same developer as Electrum, the ReLoop sequencer undoubtedly has the potential to be one of the best Android music apps. Our only reservation is that some of the features aren't fully implemented yet. We'd like to see more advanced mixer and editing features so that ReLoop can really fulfil its potential.

8/10



Pedro J Estébanez **Robotic Guitarist** €0.99

The main idea behind Robotic Guitarist is that you use it as a virtual guitar app, and it features simulated acoustic and electric guitar sounds plus a number of cool options for added realism. As a bonus, piano sounds are also thrown in and the app can also be used as a chord guide, tuner and metronome.

9/10



Christopher Souvey
Musical Pro \$1.99

With a metronome, pitch pipe, virtual piano, keyboards, drums and a tuner thrown in for good measure, Musical Pro has a little bit of everything. It's not really a focused offering, then but if you're in the market for a fun all-rounder virtual instrument app then it's definitely worth considering.

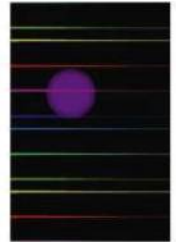
8/10



Peter Eastman
Etherophone Free

It's an unwritten rule of smartphones that every touchscreen deserves a theremin app, and Etherophone is our pick of the bunch for Android. Adjustable range and register settings, basic envelope options and cool sliders for adjusting the harmonic content of the sound make this unassuming free app a must-have.

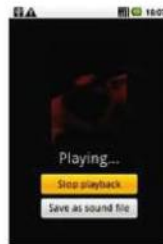
10/10



dtg-android
Spectral Free

This unorthodox app converts images into spectrograms (graphs showing spectral density of a sound), which can then be synthesised and played back as audio. Take a photo, apply some effects and then hear how it sounds. Embed hidden images into your tracks or just have fun finding out what your friends' faces sound like.

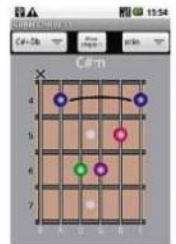
9/10



Efren Abella
Guitar Chordz Free

Guitar Chordz is our pick of the chord finder apps simply because it gets the job done with the minimum of fuss. Dial in a chord, check the diagram and strum the strings to hear how it sounds. If you need more exotic diminished and augmented chords, check out the paid version, Guitar Chordz 2.0 Advance (\$0.99).

9/10



Mark Brinton
G-Tuner Free

A no-nonsense chromatic tuner that uses your phone's mic as an input, G-Tuner automatically selects the nearest string to a played note and indicates how close you are to the correct pitch. Unfortunately it's only suitable for standard tuning, but it's perfectly accurate and won't cost you a penny. What's not to love?

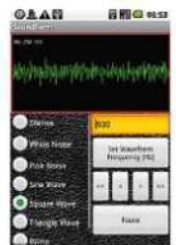
9/10



jjbunn
SoundForm Free

It's always handy to have a signal generator utility for testing speakers, tuning instruments or just annoying the neighbours. SoundForm offers all the major waveforms with a fully adjustable frequency scale and a real-time oscilloscope. We'd like to see a sweep function added but otherwise it has everything we need.

8/10



Lars Careliusson
Chordbot Lite Free

An excellent tool for writing chord progressions and experimenting with changes, Chordbot will let you hear how your changes sound. Changing a chord is as easy as selecting it and choosing a new root note or interval from the menu. Handy as a songwriting aid or even as basic accompaniment for practice sessions.

8/10



Paolo Zuliani
Loops! Lite Free

Our first impressions of this demo version of Loops! were very positive. The step sequencer makes it easy to create cool drum and synth loops. Unfortunately, further testing revealed annoyingly inaccurate timing, so we're not going to be shelling out for the paid version just yet - a shame, because it clearly has potential.

5/10



Active Frequency
RockOut Free

If you're looking for a serious guitar app then you're definitely in the wrong place. Load a song and RockOut's screen will display a guitar with pre-loaded chords. Strum different sections of the strings to play each chord and jam out your song. It's fun, but more of a toy than a serious tool.

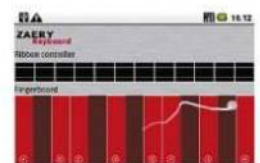
6/10



Giorgio Regni
Zaery Keyboard Free

Modelled on the Haken Continuum performance controller and Kurzweil expressionMate ribbon controller, Zaery Keyboard is a simple app that allows you to play an octave of continuous keyboard. Choose from electric piano, distorted piano, synth lead or vuvuzela sounds.

7/10



cm / windows mobile

You don't need an iPhone to join the mobile music revolution. Honest!

Planet Griff Griff £9.99

Griff is one of the older Windows music packages, and has a large feature-set. A variety of plug-in upgrades allow you to expand your sound options. If you're looking for a fully featured sequencing package on your Windows Mobile phone, Griff is one of the top choices.

www.planetgriff.com

10/10



4pockets AudioBox Micro Composer £19.95

AudioBox is an integrated sequencing package with built-in synths, sampler, drum machine and 16-channel mixer with real-time effects. Slightly fiddly, but it can create entire songs from scratch.

www.4pockets.com/product_info.php?p=58

7/10



Osymo Software Drum Loop \$6

The choice of drum software on WinMo isn't huge, but Drum Loop gets the job done nicely. With a range of time signatures and tempo adjustable from 15 to 300bpm, this step sequencer should be suitable for any genre. Import your own samples to customise the kit.

www.osymo.com/drum-loop

9/10

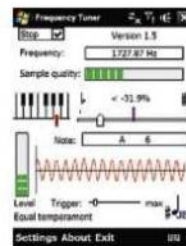


Jan Bouwhuis Frequency Tuner Free

For those of us not blessed with perfect pitch, Jan Bouwhuis has the solution. Not only can Frequency Tuner be used to tune instruments, it can also figure out the frequency of any sound and convert it into a note. The interface is on the clunky side, but this is a very handy program.

www.frequencytuner.solcon.nl

9/10



4pockets MeTeoR £19.95

If you're in the market for a multitrack recorder, MeTeoR is our pick of the bunch. 12 audio tracks, a built-in mixer and effects plus a good range of waveform editing features make it a great choice. It's little on the pricey side, but MeTeoR fits the bill perfectly.

www.4pockets.com/product_info.php?p=82

9/10



twolf ToneBox Free

"Shamefully based on" the popular online Tonematrix application, ToneBox's grid-based sequencer interface makes it easy to create patterns using the basic synth engine. It's a simple program but a great inspirational tool.

forum.xda-developers.com/showthread.php?t=574457

7/10



4pockets Pocket Stompbox £9.95

Plug your guitar into your phone's mic input and Pocket Stompbox allows you to add effects such as overdrive, chorus and delay. Presets, a metronome and a loop recorder make the program versatile, but it's a shame there's no amp simulator to add that final layer of tone shaping.

www.4pockets.com/product_info.php?p=81

7/10

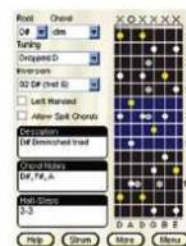


4pockets Chord Explorer £4.95

As with all the mobile platforms, there are plenty of chord applications to choose from on WinMo. Chord Explorer is easily our pick. Guitar or piano chords, scales, a chord sequencer, chord group feature and even a frequency analysis-based chord detector make it a great package.

www.4pockets.com/product_info.php?p=107

10/10



4pockets PocketRTA £19.95

Although PocketRTA is a little on the expensive side, it's as good a real-time analysis program as we've seen on WinMo. The basic version allows you to create accurate spectrographs, while the Pro and Ultra versions (£24.95 and £29.95) add signal generators and RT60 reverb calculation.

www.4pockets.com/product_info.php?p=44

8/10



Syntrax Syntrax Free

Although the interface is not as slick as some iPhone apps, Syntrax is a powerful program. It includes MIDI support, basic sample editing, a feature-packed sequencer, a software synthesiser and more. If you own a WinMo, Symbian or even old Palm OS phone, it's worth checking out.

www.finished.nl

9/10



The ultimate fix...



Actual size

...for analogue addicts

The craving for the fat, expressive synth sounds that Korg made famous in the 70s, is today creating a new race of analogue addicts. To satisfy this growing demand for pure and potent analogue synthesis we've developed the Korg monotron Analogue Ribbon Synthesizer. Loaded with our legendary MS-20 filter, voltage-controlled oscillator and low frequency oscillator, you'll be totally hooked from your first hit. It's hand-held and battery powered with onboard amp and speaker, so you can get your sonic fix on the move. And because it's outrageously easy to use, you'll be knocking out your own prodigious synth lines in minutes.

Don't be ashamed of your analogue dependency – embrace it with Korg monotron!

KORG

www.korg.co.uk/monotron

synth apps

The synth is perfect as an app. Now you can easily jack out your twisted lead lines or 80s hair-synth homages anywhere you like. Go on - you know you want to...



AudioRealism TechnoBox

£2.99

Format iPhone
Web www.audiorealism.se/technobox

Taking its cue from Roland's legendary TR-808 and 909 drum machines and the equally infamous TB-303 monosynth, TechnoBox is one of our favourite all-in-one sequencing groovebox apps. The step sequencer format is great for loop-based techno and acid, but this app's versatile enough to be used for a variety of musical genres. Coming from AudioRealism - creators of the excellent BassLine 303-clone plug-in - you can rest assured that the sound quality is top notch. TechnoBox is right up there with Bleep!Synth as our pick of the xOx apps.

9/10



Retronyms Synth!

£0.59

Format iPad
Web www.retronyms.com/synth/

This snappily titled app from big hitters Retronyms is a polyphonic synthesiser with two oscillators per voice and a number of LFO modulation options.

The presets are generally pretty good and the sampling feature is fun to play with. Unfortunately, however, it isn't quite the bargain it looks due to the fact that you'll need to fork out a further £5.49 to add the Patch Editor feature before you can access any of the real editing options. Until then, you're stuck with a (fairly good) preset synth with delay and distortion effects. It's rare for an iPad app to need extra software before you can use it properly, so this is pretty disappointing.

6/10



Akai SynthStation

£5.99

Format iPhone
Web www.akaipro.com/synthstation

Hardware giants Akai enter the iPhone arena with this all-in-one music production studio app. There's a bit of everything thrown in, from synths and drums to a sequencer, mixer and effects. The sounds are good, but the interface needs a lot of work to make things run more smoothly. The synth-editing options alone are split over a whopping 12 pages, meaning that there's a lot of jumping backwards and forwards involved. With a friendlier interface, SynthStation would be excellent. Even so, it's still worth a look.

7/10



Marek Bereza Sampletoy

£1.19

Format iPhone
Web www.mrkbrz.com/sampletoy

This bargain sample-based granular synth app is a simple concept, and it works perfectly. Record a sample, select a slice of it and then play it as a polyphonic synth instrument. Options including pitch range, delay, envelope settings and filters make it possible to create great sounds. Your samples and settings can also be saved together as user presets, making it easy to call up a fine-tuned instrument for improvisation on the fly. Sampletoy is an inspirational app for studio use and it would also double as a great live performance tool.

9/10



Takashi Mizuhiki

DXi

£1.19

Format iPhone
Web web.me.com/tmizuhiki/DXi

From the name through to the 80s-tastic black-and-green interface, it's clear that DXi

owes more than a little to the legendary Yamaha DX series. This excellent FM synth app allows you to create four-operator FM sounds from eight algorithms, though thankfully the simple interface makes DXi much easier to program than the DX7 and its extended family. The 16-step sequencer makes things even more versatile, allowing you to program loops and patterns with ease. DXi is a simple but highly effective app.

9/10

finger

BassLine

£2.99

Format iPhone and iPad
Web www.finger-pro.com

The trusty Roland TB-303 is a house music legend for a very good reason: it

sounds great. Unfortunately this means that second-hand prices are sky-high for the humble monophonic bass synth. For just £2.99, BassLine does a very convincing impression of the 303 with a host of new and updated features that bring it right up to date. Four wave shapes, overdrive, tape delay and LFO cutoff modulation make things even more flexible, but the pick of the bunch is the accelerometer-driven filter cutoff option. Shake it, baby!

8/10

Roester

TapSynth

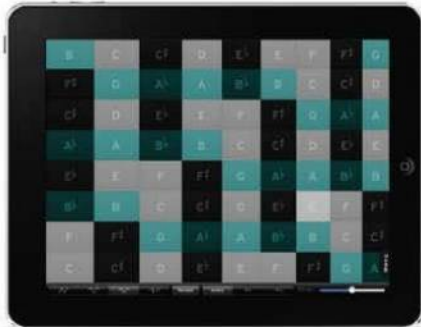
£2.99 (iPad);

£1.19 (TapSynth

Mini for iPhone)

Format iPhone and iPad
Web www.tapsynth.com

Very similar to Mark-V's Sound Squares, TapSynth is a simple grid-based monophonic synthesiser. Operation is simple: choose from sine, square, triangle or sawtooth waveforms and play the notes on the grid. An adjustable glide control allows portamento to be triggered by touching two notes at once, while the accelerometer can be used to modulate volume or pitch. Unfortunately the viciously fast attack envelope leads to clicks and pops when triggering new notes. TapSynth is a good app with a usable sound, but we prefer the more advanced features that Sound Squares has to offer.

6/10

Sonosaurus

ThumbJam

£3.99

Format iPhone
Web www.thumbjam.com

We've seen plenty of polyphonic touch-based synths on the iPhone, but ThumbJam's implementation of accelerometer-based modulation instantly sets it apart. Using your fingers on the screen controls basic variables such as pitch and pan, but shaking and tilting the device allows you to take control of more advanced options including tremolo and vibrato. With a built-in loop recorder, custom instruments, numerous scale options and sampling capabilities, ThumbJam is a great all-in-one package for composing ideas on the go.

9/10

Olsonvox

Olsynth

£3.99

Format iPad
Web www.olsonvox.com

Olsynth takes the classic analogue monosynth format and gives it a new lease of life by applying it to the iPad platform. Two oscillators (square wave, triangle, sawtooth and reverse saw) with glide, plus separate envelopes for volume and filter cutoff mean that you can achieve a huge variety of sounds with minimum effort. LFO modulation of pitch, filter cutoff or waveform adds to Olsynth's sonic arsenal, while the simple built-in arpeggiator is a nice extra to play around with. Relatively basic but brilliantly executed, at this price Olsynth is a must-have.

10/10

Michael Danes

CircuitSynth

£2.39

Format iPhone
Web circuitsynth.com

Bringing modular synthesis to the iPhone, CircuitSynth allows you to construct simple patches from up to six modules. The options includes sawtooth, sine and square wave oscillators, white noise generators, multipliers, adders and dividers. The simple interface makes additive synthesis and frequency modulation surprisingly easy. With only one octave to play with, you won't be writing symphonies on this one, but as a tool for creating unique timbres and learning about modular synthesis it comes highly recommended.

9/10

Blip Interactive NanoStudio £8.99

Format iPhone
Web www.blipinteractive.co.uk

Hot off the presses from British developers Blip Interactive, this brand-new studio app promises big things. NanoStudio is based around a sequencer for controlling virtual instruments and triggering samples.

The NanoStudio sequencer acts like a miniaturised version of the MIDI piano roll sequencer found in any DAW. Hit Record, play a part on the on-screen keyboard and all the note information is recorded. Quantisation can be applied to recorded parts, with six resolution

settings available plus dotted or triplet options and an adjustable swing setting. Editing is a lot easier said than done, but the tools on offer are more than capable of sorting out bum notes.

The heart of NanoStudio's synthesis power is the Eden virtual polyphonic sampling synth, which can be loaded up on four channels simultaneously. The synthesis power of Eden is fantastic, and it's easily capable of creating virtual analogue or modelled instrument sounds. The sampling feature also means you can import an audio file or record directly through the iPhone's mic

and manipulate the sample as if it were an instrument. Each instance of Eden runs through two insert effects in the form of the 5th Planet waveshaper and the Chronos digital delay. Drums come courtesy of the TRG-16 trigger pads, which act as basic samplers.

Overall, NanoStudio is an excellent virtual studio. We'd like to see some more effects added, and the ability to export your sequences



as MIDI files would be great, but for a version 1.0 release NanoStudio is incredibly stable, neatly thought out and packed full of features.

9/10

> Step by step Getting started with NanoStudio



1 > Song is the hub of the recording and programming activity. Play live into the recorder or draw parts directly into the piano roll. Copy and paste, delete, split, join and all the basics from your DAW are available to access. The **History** menu allows you to undo errors.



2 > The Eden softsynth is surprisingly powerful for a mobile DAW. Two X-Y pads and a pitchshift wheel are available for performing, while sound editing options include multi-mode filters, LFOs and a very powerful modulation routing page.



3 > Eden can also be used as a basic sampler. Load audio files, record via the mic input or resample the main mix to create new instruments. Samples can then be run through the same processors as Eden's built-in oscillators, allowing you to create complex sounds.



4 > The TRG16 sampler offers fewer processing options than Eden but allows 16 samples to be triggered on one channel. Record audio or load files into each of the pads and then play your drum patterns live or trigger them from the sequencer.



5 > In addition to dedicated delay and waveshaping effects on each of the Eden modules, each channel can be sent to NanoStudio's two master effects buses. Having just one reverb send means that the effect doesn't use up too much processing power.



6 > Curiously, there are no pan controls on the mixer meaning all your parts have to be panned through the Eden or TRG-16 settings. Otherwise, it's a simple case of setting the levels for each track and making sure the master output doesn't go into the red.

cm/recommended

These top-scoring apps really tickled our fancy. Miss them at your own risk

4pockets Aurora Sound Studio HD

£23.99

Format iPad
Web www.4pockets.com/aurora

The new HD version of Aurora Sound Studio for iPad is pretty awesome. The app is a full virtual studio with synths, samplers and effects. Sequences are created using 14 layers, each of which uses one of dozens of fully editable instruments including subtractive and FM synths, samplers and drum machines.

Effects including delay, reverb, distortion and filters can be applied using the three auxiliary sends, while the Beat Repeat-style Atomizer and M-Gun note repeater can be controlled via the sequencer. Songs can be bounced to audio as WAV or AAC, but the ability to export patterns as MIDI files is more exciting, making it possible to continue work on your tracks in any DAW. Aurora isn't cheap compared to many other iPad apps, but it's an amazing and inspiring mobile music-making tool.

10/10



uLoops Labs uLoops Music Composer Free

Format Android
Web uloops.net

uLoops has a cult following among Android-based musicians, and it's not hard to see why. Loops are created from a selection of 'devices' (synths, drum machines and modulators), then sequenced together to create full song arrangements. The range of sounds on offer is great. Drum sets include everything from classic 808 and 909 hits to 8-bit chiptune sounds. The results, when combined with the excellent modulation options and basic effects sends, sound fantastic.

uLoops has a very active user community: visit the official forum and you'll find thousands of users offering advice, rating each other's songs and suggesting new features. The app is free, but some features are unavailable until you pay to unlock them. Even so, this is one of the best Android apps around.

10/10



appsolute Karajan Music & Ear Trainer £8.99 (iPhone);

£5.99 (iPad);

Free (demo)

Format iPhone and iPad
Web www.karajan-eartrainer.com/en

If there's a better theory training app than Karajan, we're yet to find it. Choose from a keyboard or fretboard interface and then identify intervals, chords, scales, pitch, tempos or key signatures. In Beginner mode things are relatively simple, but as you crank up the difficulty level, things start to get much more taxing. In the chord training mode, beginners are expected to say whether a triad is minor or major. At the highest difficulty setting, you'd better be ready to tell your half diminished 7ths from your dominant 9th #5s! A powerful statistical mode lets you keep track of your progress, offering analysis of particular problem areas and pinpointing issues to work on. Karajan is the perfect app for honing your theory skills and hearing ability.

10/10



Alexander Gross Xewton Music Studio £8.99; Free (Lite version)

Format iPhone
Web www.xewton.com/apps/xms

Xewton has been one of our favourite studio apps since its initial launch last year. The 128-track sequencer allows you to create full song arrangements using the 27 sample-based instruments. A further 47 instruments can be added via in-app purchases. Real-time reverb, delay and overdrive effects can be applied to your recordings for extra gloss.

Xewton really excels as a tool for noting down ideas while on the move, and its ability to import and export sequences as MIDI means that it can work neatly alongside your DAW. It might not have the sonic potential of a full-blown DAW, but the ability to play with your tracks in Xewton and then take them back into the studio makes it a great choice for getting creative on the go. We'd like to see an iPad version, and some real-time synthesis features wouldn't go amiss, but overall Xewton is a great portable composition app.

10/10





The alternatives

Mobile music making isn't just about iOS, Android or WinMo apps. Duck out of the mainstream and play around with these kooky options

> In this issue we've deliberately focused on the more mainstream mobile music platforms. Devices like iPhones and Android mobiles are so popular and easily available that even your gran probably has one these days. However, they're certainly not the only way you can get into mobile music making. The good news for our more adventurous readers is that there are still plenty of more unorthodox approaches to consider. Some of them are much cheaper than the obvious choices, so if you can't afford an iPhone, it doesn't mean you're going to get left behind. The more esoteric options include vintage games consoles, obsolete sequencers and 90s PDAs. Thriving internet user communities mean that software, tips and support are easily available for some quite obscure devices. Let's take a look at what's out there...

Nintendo Game Boy/DS

Believe it or not, Nintendo's iconic handheld games console is also something of a legend in the mobile music world. Thanks to a couple of great tracker programs, the classic grey box was even hailed as the future of music by Sex Pistols impresario Malcolm McLaren way back in 2003. On the original Game Boy and Game Boy Color, Johann Kotlinski's LSDj (www.little sounddj.com) and Oliver Wittchow's Nanoloop (www.nanoloop.com), also available for the iPhone) both offer sequencing packages that show off the Game Boy's awesome 8-bit synthesis

capabilities. LSDj can even sync to MIDI with the addition of a DIY MIDI interface.

Even if you want to keep things a bit more modern, the newer Game Boy models have plenty to offer. Korg's DS-10 Synthesizer (www.korgds10 synthesizer.com) for the DS is an excellent virtual synth in the spirit of their legendary MS series. In addition to its two monophonic synth engines with semi-modular patching options, DS-10's built-in drum machine and step sequencer make it well worth considering as a mobile composition tool. If you're willing to accept a slightly less slick interface, NitroTracker (nitrotracker.tobw.net) is an open-source sample-based sequencer package with a loyal following. And for something a bit different, check out Protein[DS] (sites.google.com/site/gorgull/home2), a great piece of free software that allows you to use the touchscreen to manipulate audio samples.

Sony PSP

Although the Game Boy tends to hog the limelight when it comes to making music on handheld games consoles, Sony's PlayStation Portable is no slouch either. The PSP's fast processor and dedicated floating-point unit make it ideally suited to running processor-intensive sequencing, synthesis and effects software. PSPSeq (www.dsp music.org/psp) and PSP Rhythm (www.psprhythm.com) are our picks of the sequencing packages. PSPSeq has the edge when it comes to synthesis, with a variety of FM, physical modelling

and subtractive synth options. PSP Rhythm focuses more on sample-based music, with great real-time effects including filters, time stretching, distortion and delay. The great news is that they're both free, so there's no excuse not to try them out in between games of *Metal Gear Solid*.

Palm OS

In the pre-iPhone days, the Palm was the thinking man's PDA. Although Palms are nowhere near as popular as they once were, music software developers continue to work with the Palm OS. Older devices are also widely available, making it easy to find a cheap second-hand unit to run your software. Olivier Gillet's Microbe and Bhajis Loops (www.chocopoolp.com) are the standout applications on the Palm platform, both offering complete sequencing packages. The latter in particular can compete with anything on the iPhone and has built up a large user group thanks to its awesome combination of samples and synthesis. The multi-platform SunVox (www.warmplace.ru) is also available for Palm OS, offering its slick modern take on the classic tracker concept. Check out our review of the iPhone version on page 13.

Yamaha QY

At the time of its original release back in 1990, the QY10 was a revolutionary concept. Cramming a MIDI sequencer and a polyphonic sound module into a tiny box, Yamaha called the result a walkstation. That is, a workstation you could walk around with. The idea was that you could compose music anywhere you went, then bring it back to the studio and continue to work on your ideas. The concept was good, but despite releasing more powerful units and gradually reducing the price of the more basic models, Yamaha never quite managed to persuade the general public that the walkstation was the future of music making. You can still buy a QY100 new for around £500, but your best bet is probably to scour eBay for an older second-hand unit. The more basic models like the QY10 regularly sell for £30 to £40, making them something of a mobile music bargain. **cm**



OUT THERE

Accessorise and enhance your mobile production with some of these wondrous iPad accessories

Apple iPad Dock £25

To dock or not to dock? This weighty slab of plastic can't be beaten, but at £25 it's a little steep for something you can readily do without. That said, the iPad's photoframe feature sees the Dock come into its own, allowing you to charge your pad while it displays an animate collage of your holiday snaps. It's fun, but nonessential.

store.apple.com/uk



Apple iPad VGA adapter £25

Yes, it would be great if your iPad had an HDMI-out socket, but this handy add-on at least goes some way to plugging the shortfall. If you ever need to 'big screen' your iPad this is your only solution. It's a standard dock connector at one end and an old-school VGA port at the other. It works perfectly with your iPad screen, neatly scaling to fit your HD TV or monitor's girth automatically. It's pricey but faultless.

store.apple.com/uk



Be.ez LaRobe Colour Strip iPad case £25

You could give yourself up to Apple's minimal/industrial look for your iPad add-ons, but those with a little more class may want to pop their beast into this hard-meets-soft rainbow instead. It's not as easy to whip the iPad out as it is with Apple's fingerprint-'n'-grease-prone floppy variant, but this colourful pochetté allows you to enjoy your iPad as nude as its designers intended before slipping it into a padded 'n' safe home just 10 seconds later.

www.be-ez.com





Apple iPad Keyboard Dock £55

This leviathan is a dock with a full Apple keyboard attached. It's ideal for penning emails, Pages and Notepad docs, but beware - its familiar feel will have you reaching for a nonexistent mouse in seconds. Having to raise your hand to prod the screen (which is somewhat wobbly it on the stand) isn't ideal and creates a curious 'old meets new' mish-mash feeling. It works, sure, but this is still no laptop.

store.apple.com/uk



Apple iPad Camera Connection Kit £25

Curing another of the iPad's inexplicable shortfalls, this double-pack of blocks add an SD card and USB port. They work great for their intended purpose - ferrying pics off your camera - but Apple's famous rigidity means that's all they do. However, app makers are sneaking in support for audio export and more. Just be sure to check what your app claims to do.

store.apple.com/uk



Incipio Feather iPad Case £30

This ultra-thin 'hard shell' case snaps onto your iPad, instantly curing those scratched-back worries. In fact it's so thin that you can still dock the iPad in an official dock. Neat. There's even an optional stick-on screen protector in the box too, though it's rather shiny and 'visible'. But for sheer ease, speed and instant iPad 'put-down-ability' this slick Apple-simple solution is unbeatable.

www.myincipio.com

> make music now



London Music Show 2010

8-10 October / ExCeL London
www.londonmusicshow.com



Preparations for the London Music Show 2010, which takes place on October 8-10 at ExCeL London, are moving on apace.

Formerly known as the London International Music Show, LMS is now run by Future Publishing, the makers of *Computer Music* and many other leading magazines for musicians.

As well as a list of music industry exhibitors longer than your arm, the show will play host to the fully

interactive Sound and Recording Technology Zone, in association with *Computer Music* and *Future Music*. The focus of the Zone is a purpose-built 74-seat theatre, which will be used to showcase presentations, demonstrations and tutorials on all aspects of music production.

We're planning a collection of events that are going to be utterly unmissable for anyone producing music on either their PC or Mac. Seminar topics will

include mixing, effects, soft synths, making it in the industry, mastering, digital DJing and much more.

Needless to say, the team will be in full attendance, as will a galaxy of star producers and musicians, so if nothing else, it'll be a pleasure just to hang out at LMS. As a teaser, we can reveal that Grammy-winner Steve Levine and producer-to-the-stars Tommy D have already signed up to dispense their hit-making know-how.



Rocking the capital at LMS (from top): Tommy D, Steve Levine and John 'OO' Fleming

Steve Levine has been at the forefront of the UK music scene for over 25 years, his recording and mixing credits including Culture Club, The Clash, Ziggy Marley, Mis-Teeq, and 911. He's also a regular on TV and radio and holds the post of Chairman of the Music Producers's Guild.

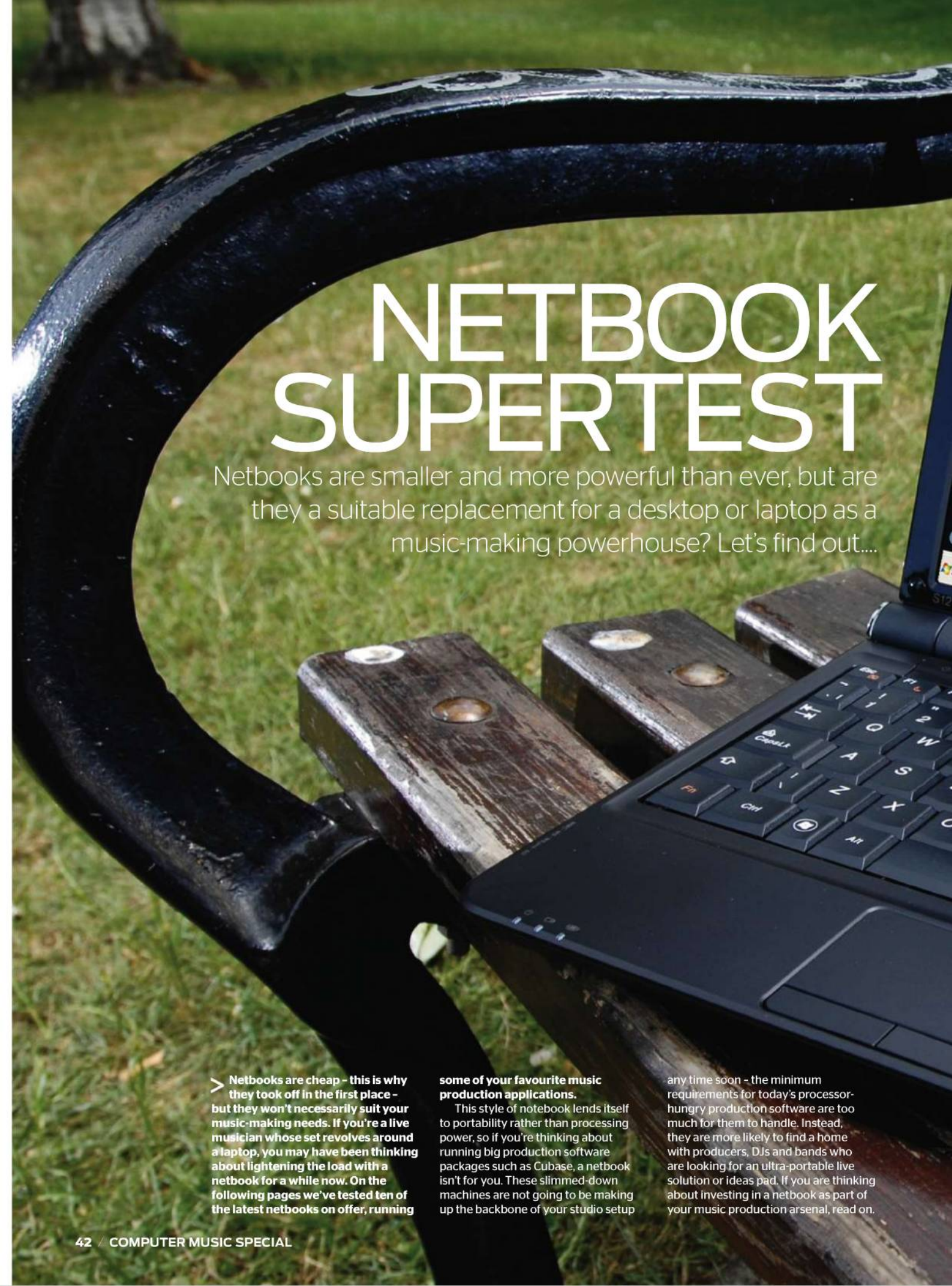
Songwriter and producer to the stars, Tommy D has worked with an equally diverse array of legendary names, including Kanye West, KT

Tunstall, Kylie Minogue, Joss Stone and Michael Jackson.

Also in attendance will be trance legend John 'OO' Fleming, who has been tearing up dancefloors from the DJ booth since the 80s, and releasing his own tunes since the late 90s. He's also remixed a ton of other artists, including acts as diverse as Muse, Mansun and Nine Inch Nails, and owns Joof Records.

Opening times for the show are

10am-5pm on Friday and Sunday, and 10am-6pm on Saturday. Tickets are now on sale at **www.londonmusicshow.com** and via our 24-hour hotline on 0871 620 7059. We'll be bringing you further details in the magazine 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.



NETBOOK SUPERTEST

Netbooks are smaller and more powerful than ever, but are they a suitable replacement for a desktop or laptop as a music-making powerhouse? Let's find out....

> **Netbooks are cheap - this is why they took off in the first place - but they won't necessarily suit your music-making needs. If you're a live musician whose set revolves around a laptop, you may have been thinking about lightening the load with a netbook for a while now. On the following pages we've tested ten of the latest netbooks on offer, running**

some of your favourite music production applications.

This style of notebook lends itself to portability rather than processing power, so if you're thinking about running big production software packages such as Cubase, a netbook isn't for you. These slimmed-down machines are not going to be making up the backbone of your studio setup

any time soon - the minimum requirements for today's processor-hungry production software are too much for them to handle. Instead, they are more likely to find a home with producers, DJs and bands who are looking for an ultra-portable live solution or ideas pad. If you are thinking about investing in a netbook as part of your music production arsenal, read on.



Acer Aspire One £240

The classic Acer Aspire One was one of the originals on the netbook market, scooping various awards thanks to its keen pricing, decent core specification and comfortable keyboard. This rendition of the netbook, the Aspire One 532, is the latest refinement to that original machine. It features a newer processor: the Intel Atom N450.

The key selling point of this relatively new Atom is that it boasts the processor and graphics core in a single package, making it both faster and more energy-efficient than its predecessors. The battery life on our rundown test came to five and a half hours. The test consisted of running multiple tracks and plug-ins at the limit of the CPU's capabilities, just using the onboard sound device.

The amount of plug-ins the Aspire One can handle is nothing to shout about. The Atom processor

and 1GB of RAM can only handle up to 16 VST plug-ins in Reaper. The Aspire One did marginally better running Presonus Studio One, with a total of 20 VST plug-ins before playback was interrupted.

The 1024x600 screen has a high-reflective coating, which can make it tricky to use in brighter conditions, but for dark and dingy nightclubs it works just fine.

The gesture-based touchpad is frustrating to work with, and accidentally tapping it while typing can be infuriating. This obviously isn't ideal in a live performance situation. Overall, the Aspire One 532 is a neat machine, but it feels

a little uninspired against the kind of competition that's currently becoming available. One for those on a budget.

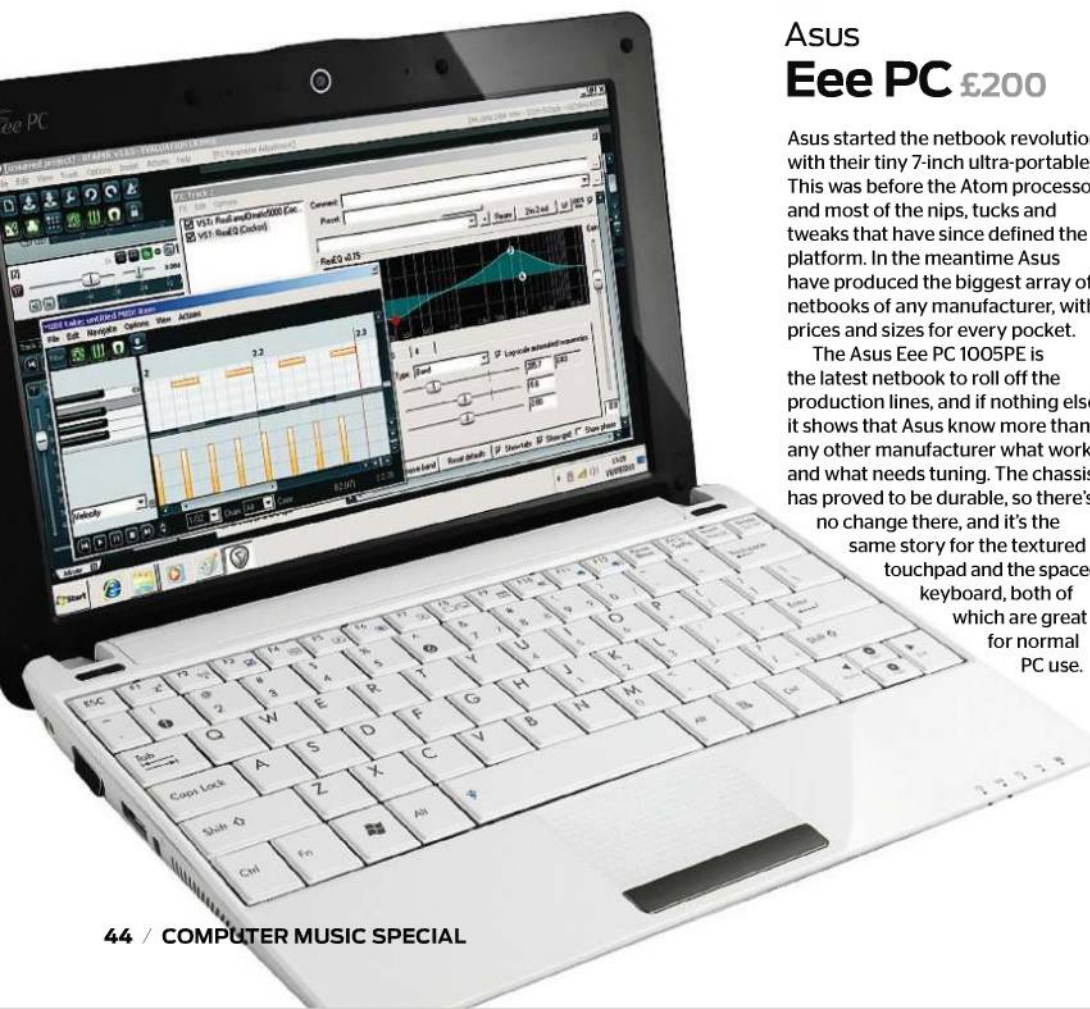
Web www.saveonlaptops.co.uk

Verdict

For One of the cheaper netbooks on test here; feels sturdier overall than its closest rivals

Against Over-sensitive touchpad is really quite annoying and will prove an issue when performing live

Overall, the Aspire doesn't inspire us. Compared to the huge amount of other Atom N450-powered netbooks that you can find on the market, it doesn't offer anything special.



Asus Eee PC £200

Asus started the netbook revolution with their tiny 7-inch ultra-portable. This was before the Atom processor and most of the nips, tucks and tweaks that have since defined the platform. In the meantime Asus have produced the biggest array of netbooks of any manufacturer, with prices and sizes for every pocket.

The Asus Eee PC 1005PE is the latest netbook to roll off the production lines, and if nothing else it shows that Asus know more than any other manufacturer what works and what needs tuning. The chassis has proved to be durable, so there's no change there, and it's the

same story for the textured touchpad and the spaced keyboard, both of which are great for normal PC use.

Asus have resisted the temptation to lavish a glossy coating on the 10.1-inch screen, making this a netbook that you can use outdoors without having to head for the shade. This is another outing for Intel's Atom N450 processor, and once again you'll find it operating alongside 1GB of RAM and a healthy 250GB hard drive. In our rundown test, the Eee performed exactly the same as the Aspire One in the number of plug-ins it could handle, but it had a longer battery life at just under seven hours. Weighing in at just 1.27kg, this is clearly a netbook that is designed to travel.

Web <http://uk.asus.com>

Verdict

For Weight-to-battery-life/size ratio is spot-on

Against At this price there isn't much wrong with the Asus Eee, except the obvious struggle with DSP

The Eee is the cheapest netbook on test and would be ideal for the cost-conscious, if you can live with its limitations.

HP Mini Vivienne Tam Edition £399

The redesigned HP Mini by Chinese fashion designer Vivienne Tam is something of an oddity. You'd be forgiven for thinking it's nothing more than an average HP Mini 210 with butterflies plastered all over it, but in fact the Vivienne Tam Edition is a different beast altogether. The specifications differ from those of the normal HP Mini – it has an extra 80GB of storage space.

This netbook reeks of style, despite being emblazoned with fauna. The gold finish is perfectly offset with the black chiclet keys. The touchpad is quite clever compared to its rivals – it took us a little while to get used to the integral buttons, but the pad is larger than the others on test. To turn off the pad all you need to do is double-tap the top left-hand corner, a nifty little feature that could prove useful in a live situation.

In the rundown test the Vivienne Tam performed pretty averagely, only beating the other Atom

N470-loaded netbooks by a couple of extra plug-ins. Even with 2GB of RAM the Atom processor still struggles, which is a shame.

The Vivienne Tam is too expensive to really win out against its 10.1-inch rivals overall, but it is quite the object of desire, even if it does resemble a clutch bag. I wonder if I can get matching shoes...

Web www.hp.co.uk

Verdict

For 320GB hard drive is the largest on test; overall design makes the HP Mini Vivienne Tam sturdy and very compact

Against High price and lack of any audio input may well deter the more practical buyer; not everyone likes butterflies

Fashionistas on both sides of the gender divide may find the styling and great design of this netbook too much to resist, but others will balk at the price.



MSI Wind £286

MSI released their first Wind netbook not long after Asus had defined the market with the Eee PC, and they have produced a constant trickle of updates to the brand ever since. This latest rendition, the U160, boasts a solid core specification boosted by a strong battery life to make for a machine that you'll be happy to take on the road with you – once you've managed to scrape off the plethora of stickers that MSI has slapped on the palm rest, at least.

Weighing in at 1.3kg, this isn't the lightest machine you'll find, but the manufacturer does claim a battery life of over 11 hours. We should add, however, that during testing we didn't activate the ECO power-saver option – for a fair test, all netbooks were run down in their default battery mode – which meant the battery only lasted

five and a half hours. The Wind's claimed extra longevity is apparently due to a battery that is slightly larger than the chassis; this also gives a useful angle to the keyboard, making typing a surprisingly responsive and comfortable experience.

The 1024x600-pixel 10-inch screen is functional, if not particularly exciting compared to much of the competition. The core specification is as expected too, with Intel providing the honours once again in the form of the Atom N450. There's 1GB of DDR2 RAM (upgradeable to 2GB) and a 250GB hard drive, providing plenty of space to work with.

Web <http://uk.msi.com>

Verdict

For When in ECO mode, battery life is reported to be over 11 hours

Against Price – for the money, you simply don't get enough; long battery life is all well and good, but you will still be struggling with multitrack DSP

The design is smart, but the Wind looks a bit too busy and doesn't lend itself to taking on the rigours of gigging.



Packard Bell Dot S2 £244

While most netbooks are available in any colour as long as it's white (or black, depending on the manufacturer), Packard Bell are a little more style-conscious and have decided to offer the Dot S2 in an alluring bright red as well. Whatever colour you choose for the outer shell, flipping the lid reveals one of the most stylish gunmetal interiors we've seen on a netbook.

This is a portable machine with a mind to keeping you up and running on the road, boasting nearly eight hours of battery life and weighing in at just 1.2kg. It's a svelte design too, although the large battery pack does protrude below the base by a few millimetres.

The core specification, as to be expected from any modern netbook, boasts the ubiquitous Intel Atom N450 running at 1.6GHz, with 1GB of DDR2 RAM backed up by a 5,400rpm 250GB hard drive. This is a capable core that powers the vast majority of 10.1-inch netbooks, and in our performance test as a DAW, the Dot achieved the same score as the MSI, Acer and Asus.

Packard Bell have packaged a copy of Photoshop Elements 7 on the machine; although the Dot is technically capable of running this, the performance is a little slow in practical terms. Even so, given the price, it's a nice inclusion.

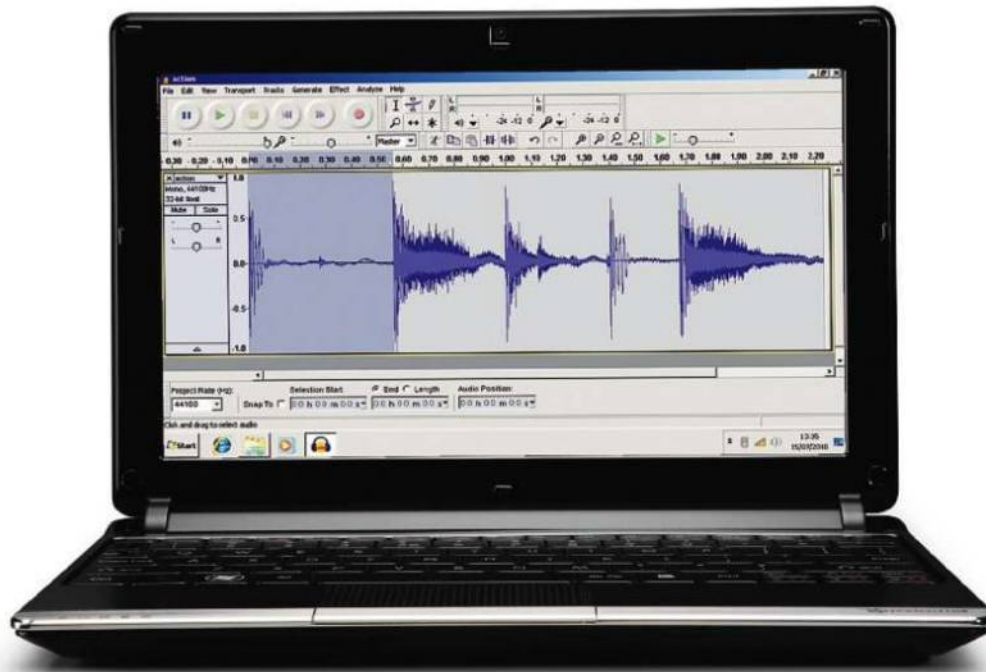
Web www.packardbell.co.uk

Verdict

For Fairly long battery life; light enough to easily carry around with you; stylish; inclusion of Photoshop Elements 7 instead of the pointless demos that you usually get free with laptops is a nice touch, especially at this price

Against The Dot's performance isn't anything to write home about, and it comes up a little short on power

The Dot S2 is one of the better-looking netbooks out there, but unfortunately it's a case of style over substance in terms of its power.



Samsung N210 £373

Samsung have tinkered with their various netbook designs over the years, and the changes they have made haven't always been for the better. Battery life, for instance, took something of a dive a few models ago, and the styling has been a little questionable at times. With the N210, however, the designers have resolved both issues to produce a workhorse of a machine with some neat touches.

The N210 scored just as well as the Dot S2, Aspire One and Wind in its handling of DSP, but the big difference has to be the battery life. At seven and a half hours, the tireless Samsung machine came top of the class in terms of stamina.

If you're in a hurry to check something on the internet, pressing **F6** as the N210 boots up will take you into a cut-down Linux distro called HyperSpace instead of the standard Windows 7. You're limited in what you can do in this OS, and Windows 7 doesn't really take that much longer to load, but it's still a handy option if you need to get online very quickly.

Web www.laptopsdirect.co.uk



Verdict

For The N210's battery life is impressive; it also comes with a free sleeve to keep it nice and shiny

Against Unfortunately it would seem that the N210's amazing longevity comes at a something of a cost - it will set you back a whopping £100 more than its closest rivals

It seems that Samsung have finally got the balance right with the N210. It's a solid netbook that won't let you down in the battery stakes - but do you really want to fork out that much cash for it?

Sony Vaio M Series £281

The fact that Sony are producing a budget netbook at all is surprising. Having built a name for themselves in the ultra-portable arena with an array of expensive to highly expensive machines, it can't have been easy for the venerable tech company to see their market invaded by a slew of budget upstarts. But as the saying goes, if you can't beat them, join them.

You know you're holding a Sony product as soon as you take the Vaio M out of its box. The build quality is high and the whole thing feels reassuringly well made, if a bit on the heavy side. Being one of the smallest netbooks on test, the Vaio will fit neatly in most handbags, let alone gig bags, despite tipping the scales at 1.4kg.

With an LED-lit, matte-finish screen, the Vaio M certainly won't put a strain on your eyes, even in the most brightly lit of indoor or outdoor surroundings. As with the majority of netbooks, the screen size is 10.1 inches with a resolution of 1024x600, though you may find that certain programs and soft

synths won't be able to shrink to fit to the screen.

The Vaio M's performance in the rundown test was the best of the smaller netbooks in terms of using Studio One and Reaper, if only by a small margin. Unfortunately it struggled with Ableton Live – so much so, in fact, that it couldn't run the demo fully.

Web www.sony.co.uk

Verdict

For Bright screen and good build quality make this a gig-worthy item, but only for running backing tracks and very little DSP

Against The inclusion of only 1GB of RAM is something of a mismatch for the higher-end Intel Atom processor

What the Vaio M lacks in battery life it makes up for in handling marginally more plug-ins than other 10.1-inchers.



Packard Bell Easynote Butterfly xs £362

Like the Toshiba Satellite, the Easynote Butterfly xs sports an 11.6-inch, 1366x768 screen and a Celeron processor – but that's where the similarities end. Packard Bell have further blurred the lines between notebook and netbook with the inclusion of an optical drive. Yes, you read that right: a netbook with a DVD drive. This inclusion has pushed Packard Bell to make the Butterfly's chassis slightly thicker than those of the others on test, and the result is a rugged machine that, though elegantly styled, feels solid enough to take on the rigours of gigging.

The Butterfly comes bundled with Adobe Photoshop Elements 7 and a free protective wallet, just like the Dot S2. Unlike its smaller brother, however, it runs Elements with no problems at all.

Our rundown test proved that the Butterfly has what it takes to cut it in a live situation. With six hours of battery life it can more than handle a live set, or even a sound installation. Like the Toshiba it can handle its fair share of DSP in

Ableton Live, even with 1GB less RAM than the Toshiba.

Web www.packardbell.co.uk

Verdict

For Optical drive, SPDIF output and Adobe Elements 7 make for a very attractive package

Against Even though the Intel Celeron processor is a step up from the Atom, its single core means it still struggles to run power-hungry software like Cubase

The Easynote Butterfly is the only netbook on test with an optical drive, and that fact alone really does set it apart from the rest.



Toshiba Satellite T110 £363

The 11.6-inch form factor may just be the rising star in the netbook fraternity, and the Satellite T110 has star quality in spades. A whopping 3GB of RAM and an Intel Celeron processor place it firmly in between the original 10.1-inch netbooks and the more familiar and expensive notebook market. For musicians, producers and DJs alike, it poses a question; has a worthy, cheap netbook/ultra-portable laptop finally arrived on the scene?

The larger screen, full-size keys and larger palm-rest area make for a more comfortable experience than you'll get with the smaller netbooks. The Satellite features the obligatory three USB ports, one of which supports Sleep and Charge; this allows you to charge USB devices even when the machine is switched off and not plugged into a wall outlet. It's very handy for when you are travelling.

As a live tool, the Satellite certainly has the power to perform, especially with the likes of Ableton Live. In our performance test it ran 20 tracks, all featuring up to three

plug-ins, and could handle twice as many channels and plug-ins on Studio One and Reaper than the Atom-powered netbooks. Cubase still proved problematic, however.

Web www.toshiba.co.uk

Verdict

For 3GB of RAM is the highest on test and helps the T110 to cope with DSP

Against With more notebook-like specs comes a greater price tag compared to the other netbooks

The Satellite's specs are the highest on test, but its success could be thwarted by its price tag.



Lenovo IdeaPad £343

Lenovo are best known for their ThinkPad business laptops, but their IdeaPad range provides entry-level machines for both corporate and consumer use. The IdeaPad S12 is a 12.1-inch offering that strikes a balance between the netbook and the ultra-portable.

As one of the larger netbooks available, the 1.6kg IdeaPad lacks the mobility of its rivals. While the battery is fairly slimline, it protrudes 14mm from the rear of the chassis, adding to the bulk of the device. Battery life is excellent, running for five and a half hours, but unfortunately the IdeaPad scored the worst by a long way in the rundown test.

Build quality is average: the matt plastics are resilient enough, but the glossy plastics on the lid are prone to scratches. You will undoubtedly find it quite hard to keep the IdeaPad in good condition if playing regular gigs, so it's a machine for those who don't mind the 'stickered' look.

The extra size of the chassis allows space for a full-sized keyboard, which upholds Lenovo's reputation for high-quality usability.



All the keys move smoothly and firmly, and this is one of the most usable netbooks on our test. It's ideal for business use, but sadly not entirely ideal for music making.

Web www.laptopsdirect.co.uk

Verdict

For The large 12.1 inch-screen is ideal for running programs with multiple windows, soft synths, plug-ins and so on; the keyboard is great

Against The Atom N270 processor lets this netbook down

The screen should be the clincher here, but the IdeaPad lacks the power to run music production programs effectively.



Verdict

All the netbooks on test shared common specs such as three USB ports, a multi-card reader, a webcam and stereo ins/outs, but that's where the similarities end. Even though they each had something going for them, none of the 10.1-inch netbooks performed terribly well when running multiple channels and plug-ins. Portability is high on the wishlist for a lot of musicians and DJs, but it's just not enough unless

it can be backed up with the necessary processing power.

This is where the larger netbooks step in. Unfortunately the Lenovo IdeaPad lost out due to its misguided attempt to run Windows 7 Home Premium using just an Intel Atom processor. That leaves us with the Toshiba Satellite T110 and Packard Bell Easynote Butterfly xs. Although the Satellite has more RAM, the Easynote wins on all-round

performance and the addition of an optical drive.

Runners-up

The Satellite comes in second by the narrowest of margins. If you can do without the DVD drive and want to spend that little bit more for the extra gigabyte of RAM, this netbook can handle a lot for its size.

Despite its price tag, the Samsung N210 is the best of the 10.1-inch

netbooks, pipping the Sony Vaio M to the post by a hair's breadth. It has a good battery life and a more rugged chassis than the rest, and is capable of getting the job done in a live situation if you are running programs like Presonus Studio One and Reaper. It's probably better suited for just running backing tracks than for running multitrack sessions, but it is certainly worth serious consideration.



Best for the money

Packard Bell Easynote Butterfly xs. Although it is slightly more expensive than the other 10.1-inchers, the Butterfly is still better value for money. At only £80 more than the average netbook, you get an excellent deal through the inclusion of Adobe Photoshop Elements 7 and an optical drive.



Most portable

HP Mini Vivienne Tam Edition. The smallest, lightest and prettiest netbook on test, the Vivienne Tam is a highly portable machine - especially when you consider that it also manages to pack in a 320GB hard drive. Just be careful you don't lose it down the back of the sofa.



Longest battery

Samsung N210. This had to be one of the biggest surprises of the test. A battery life of over seven hours on our rundown test certainly makes it the pick of the 10.1-inch crew, but it does come with a hefty price tag. A mention should go to the MSI Wind, which surpasses the Samsung's battery life in ECO mode.



Most powerful

Toshiba Satellite T110. With the most RAM out of all the machines on test, the Satellite was able to handle virtually everything we threw at it, effortlessly managing multiple audio and MIDI tracks running plug-ins with automation in Ableton Live. Oh, and the Sleep and Charge feature is pretty cool too. **cm**

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OPTIMISE YOUR NETBOOK

Tweaking Windows' settings and choosing the right music software to work with can enable you to squeeze that little bit extra music production performance from your netbook

> So far we've looked at a stack of different netbooks in our group test. There we saw that the humble netbook can be a useful and great value music-making machines for computer musicians on the move. More than just scratchpads for jotting down MIDI melodies, simple drum patterns or riffs, the more powerful netbooks in our roundup were capable of hosting relatively large projects with a fair few instruments, complex effects and multiple audio tracks. Plus, because they have USB ports and full installs of Windows 7, if you were to connect up an audio interface then you could even record multiple audio inputs.

However, it's important to recognize that you won't be able to treat a netbook as you would your desktop machine: their Atom processors just aren't designed for software with high CPU demands. However, you can maximize their potential with a little optimisation. This is by no means rocket science, and there are many changes you can make to your system using Windows' Control Panel that will reduce the load on your computer's CPU, freeing it up to run audio software as efficiently as possible.

Choosing the right software is important too. Some of the bigger and bulkier DAWs won't get

along with netbooks very well, because as mentioned in our roundup test, the minimum specifications of programs like Cubase are quite high. But there are plenty of lean mean music-making programs out there that will run well on less well-spec'd machines. If you plan on using your netbook machine as a compliment to your main music computer, it could be more practical to run a cut-down version of your main set-up on your netbook - as long as the software you're using has a stripped-back edition available, of course. If that's not possible for you, there's plenty of alternative software that will allow you to create MIDI and audio on the go and then export it to use in your main DAW.

In this guide we'll show you some optimisation tips tailored to Windows 7, the OS that most netbooks ship with these days. Follow these to ensure that your portable PC is a primed for production. We'll also show you which DAWs work best on netbooks, and recommend some excellent free instruments, effects and utilities that will give you a great sound without taxing your wallet - or CPU - too heavily! Finally, we'll go into detail on how to optimise Ableton Live - one of the most portable-friendly DAWs around - for use with a netbook. So, without further ado, roll up your sleeves and let's get tweaking...

Picking up the pace

It has to be said that the current version of Windows 7 doesn't run too badly out of the box. It doesn't require half as much tuning as its predecessors! Unlike older Microsoft operating systems, Windows 7 will run audio software to an acceptable standard on low-processing devices. However, keeping your new portable production machine snappy when performing complex tasks means tweaking the OS in order to squeeze as much power as possible from it - which will in turn please your bank balance because it increasing the performance to price ratio.

In this guide we're going to show you some quick and easy ways to

get your Windows 7 netbook running as efficiently as possible as a music production tool. None of these tips will detract from the user experience of working with Windows 7 - the most noticeable differences will be a more straightforward graphical interface and less superfluous bells and whistles such as system sounds. We're sure you'll find these changes welcome improvements that will give you a more streamlined computing experience when generally using your netbook, not just when using audio applications. In the unlikely event that you're not happy with your system's

"Keeping your new portable production machine snappy means tweaking the OS"

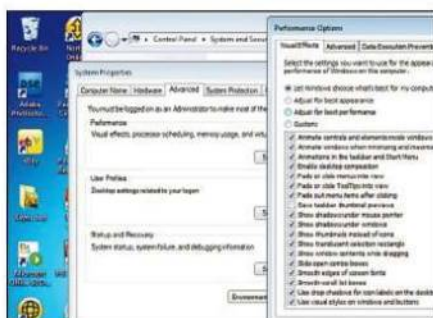
streamlined look and feel, be reassured that none of the changes are at all permanent - if you don't like any of the changes you've made then they can all be reverted back to their original settings without issue. Just use our guide in reverse to remember the tweaks you made.

If you fancy taking the tweaks further and getting more involved

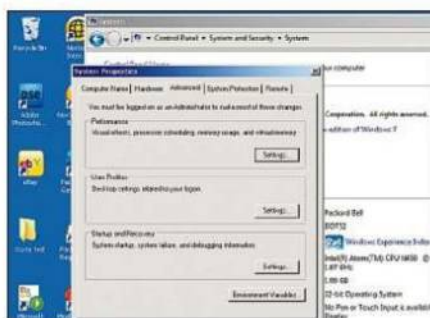
and advanced optimisation tips, you should check out this very helpful link: www.novationmusic.com/answerbase/en/article.php?id=567. For help on tricking your PC into thinking its screen resolution is bigger than it really is, visit www.liliputing.com/2010/03/hack-to-increase-the-screen-resolution-on-windows-7-netbooks.html.

> Step by step

Make Windows 7 less resource-hungry



- 1 > Click the Start button and select **Control Panel** from the menu. Click the **System and Security** option, then **System** and finally **Advanced System Settings**. In the **Performance** panel, click the **Settings** button to make the **Performance** menu will appear. Select **Adjust for Best Performance**. This will deactivate all the frills listed in the box.



- 2 > Next, select the **Advanced** tab and change the **Adjust for best performance** of setting from **Programs** to **Background services**. Click **OK** to exit. Windows 7 will pause for a bit, and when it's finished it'll look a lot more like an old-school Windows 95 system. Close the **System Properties** window and select the **Control Panel** again.



- 3 > Windows 7's system sounds and screensavers can be an annoying interruption, so let's turn them off. Click **Hardware and Sound** and then choose **Change system sounds** in the **Sounds** section. In the **Sound Scheme** menu, select **No Sounds**. To get rid of the screensaver, click **Appearance** and then **Change screen saver**. Finally, select **None** on the **Screensaver** menu.



- 4 > By default your netbook will be set to an economical power mode, but forget that: we want to use as much power as possible. To change the power mode, right-click the Power icon in the system tray and select **Power Options**. Click the **Show Additional Plans** button, select the **High Performance** mode radio button and then close the window.



- 5 > You can adjust when Windows 7 puts itself to sleep using the **Change when the computer sleeps** option in the **System and Security** section of the **Control Panel**. You're after the **Never** option, though this should already be in place when you're using plug-in power.



- 6 > Our OS is looking reasonably lean and mean now, but it's likely that your Windows 7 install will include all kinds of software you really don't need. This can take up system resources and slow down your audio applications. The easiest way to get rid of unwanted software is to use the **Control Panel's** **Uninstall a Program** applet.

Finding your workhorse

Once your netbook is optimised for music-making, you're going to need some suitable software to run on it. Some popular music apps simply aren't suitable for netbooks. Heavyweight DAWs like Cubase and Sonar require too much power and have such complex interfaces that running them on a netbook just isn't realistic. Plus, several suites require hardware copy

protection keys to be plugged into your system before they will load. This is an unappealing prospect when working with a netbook on the go – the keys take up valuable USB slots, and could become lost or damaged in transit.

Thankfully there are plenty of alternatives to these resource hogs. Some DAWs, utilities and plug-ins are much more forgiving of netbooks'

slower CPUs and more modest graphical capabilities. We've located some music-making apps that are suited for life on a netbook, including popular programs such as Reason, Live and Reaper. We've also dug up some excellent freeware instruments, effects and utilities that will give you great sound and features without running your computer's CPU ragged.

Applications



Ableton Live

Like most DAWs, Live's core functionality revolves around audio and MIDI sequencing, but it's capable of so much more. Its dynamic approach makes it a joy to use even on the most basic of machines. Working with loops is a breeze thanks to Live's excellent time-stretching and pitch-shifting capabilities, and the app includes an arsenal of excellent effects and plug-ins plus an extremely effective built-in sampler that will load audio straight from an audio track. It has modest system requirements compared to its rivals, and its flexibility means it can also be used to perform music live and mix tracks on the fly.

Web www.ableton.com



Reaper

A traditional linear audio and MIDI sequencer, Reaper has only been around for a few years, but has already garnered quite a following. Much of the software's popularity is down to its extremely modest system requirements, which makes it perfect for the netbook user. If you're after straightforward audio sequencing and production without the bells and whistles, Reaper is the perfect choice thanks to its unfussy interface, but it steps up to the challenge if you need more complexity, too. Its audio and MIDI routing is second to none and it features effects with built-in side-chain capability and a highly customisable interface.

Web www.reaper.fm



Reason / Record

Reason's unique hardware-style interface, which revolves around routing together instruments and effects with virtual cables, has made it popular with computer music newbies. Its rack-based approach works well with the smaller displays found on portable computers. It's also quite efficient CPU-wise. The main problem with Reason is its lack of audio tracks, but the introduction of Record – its audio sequencing equivalent – means you can have the best of both worlds. If Record and Reason are installed on the same system, you can use all of Reason's instruments and effects in Record, powerful creative environment.

Web www.propellerheads.se



Audacity

If you need straightforward audio editing on the go, Audacity is a great choice. Not only does it have incredibly modest system requirements, but it also includes multitrack audio editing functionality, and best of all it's completely free! If you've used any of the big audio editors before Audacity will prove reassuringly familiar, but even if you're new to the world of computer music, its uncomplicated approach will have you slicing and dicing audio in no time. The software includes all the bread-and-butter editing and processing functions you could wish for, plus some more advanced effects and the ability to host VST effects.

Web audacity.sourceforge.net

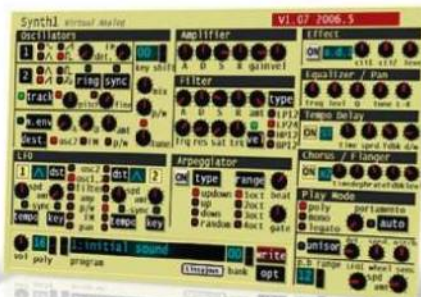
Plug-ins



HighLife

A software sampler originally coded by the late, great Arguru, HighLife has been released as open source so development on the plug-in can continue. HighLife is perfect for netbooks for many reasons. For starters the interface is sensible and uncluttered, packing a great deal of functionality into quite a small space. The instrument includes a bunch of useful built-in effects, filter modes and modulation opens, and it's even possible to process and edit audio using the plug-in's waveform editor. Most impressive of all is the instrument's ability to host VST instruments that can be frozen to create a sample-based patch. These can then be played back in HighLife without the original instrument, potentially saving huge amounts of CPU power.

Web www.discodsp.com



Synth1

Based on the Nord Lead 2 hardware synthesiser, Synth1 has been a freeware favourite of the music-making community for years. Every millimetre of its interface is crammed with cool features, including such delights as unison detune, FM, ring modulation, hard sync, chorus, phaser and delay effects, and distortion. The instrument also includes some great modulation capabilities based on its two LFOs. All of this great functionality plus fantastic sound make Synth1 an essential instrument for the netbook musician, and the plug-in even has a resizable interface, perfect for mobile music making on the smaller screen of your new netbook.

Web www.geocities.jp/daichi1969/softsynth/index.html



Kjaerhus Classic Collection

A long-time freeware staple, Kjaerhus' website has recently gone offline. Fear not though, as you'll find the entire Kjaerhus Classic Collection on the disc. This great suite of effects includes an algorithmic reverb, delay with tape and digital modes, a graphical EQ, a lush phaser, a great-sounding chorus that puts many commercial effects to shame, a master limiter, a useful bread-and-butter compressor and last but certainly not least a highly useful auto-filter effect that includes various filter modes plus built-in envelope follower and LFO. With their meagre system requirements, superb sound and sensibly designed interfaces, the Kjaerhus Classic Collection is a great choice for any netbook musician.

Web www.brothersoft.com/publisher/kjaerhus-audio.html



Crystal

If you're after more complex sounds, Crystal is the synth for you. It's based around three oscillators, each of which has sophisticated, multi-point filter and amplitude multi-point envelopes, plus an incredible modulation section with six envelopes and LFOs. The synth also includes useful tone-creation tools such as FM synthesis, sampled waveforms, and pulse width modulation. If all that sounds a bit much, be reassured that Crystal can be really useful even if you're not a hardcore synth nut thanks to the tons of excellent included presets. These cover everything from sweeping pad sounds and atmospheres to complex rhythmic effects and simpler synth and bass tones.

Web www.greenoak.com/crystal



TAL-Elek7ro

An awesome virtual analogue synth from prolific freeware developers Togu Audio Line, TAL-Elek7ro is a great source of big bass and lead sounds. It's based around two main oscillators plus a third sub-oscillator, and includes both ring modulation and frequency modulation knobs for creating those big, dirty synth noises we all know and love. Various parameters including the oscillators' pitch and pulse width can be modulated by the two LFOs, plus there's a simple dedicated modulation envelope and the filter envelope. While the synth lacks niceties such as unison detune and built-in chorus, it's still great for big bad basses and nasty lead noises. Whack it on your netbook pronto.

Web kunz.corrupt.ch



Digitalfishphones fish fillets

Decent dynamic effects are essential for creating polished-sounding productions, and Digitalfishphones excellent fish fillets suite is an awesome collection of free and funky effects. The fillets include Blockfish (a versatile compressor with adjustable saturation), Spitfish (an easy-to-use de-esser) and Floorfish (a flexible gate and expander). As well as having a top-notch sound, the effects have uncomplicated interfaces that won't fill up your display with unnecessary knobs and faders. If you need the extra tweakability, Blockfish includes an extra screen with advanced settings, giving you access to features you wouldn't normally be able to adjust on most compressors.

Web www.digitalfishphones.com

> Step by step Optimise Ableton for netbook use



- 1 > When running audio software, its performance depends on your audio driver. Live will use the Windows MME driver by default, but things will run much smoother with an ASIO driver. If you're not using an interface with a dedicated ASIO driver, try universal audio interface ASIO4ALL instead. The installer can be found on the disc or downloaded from www.asio4all.com.



- 2 > Once you've installed either your audio interface's device driver or ASIO4ALL, load Live and bring up the **Options>>Preferences** menu. Select the **Audio 1** tab. At the top of the window, set the **Driver Type** to **ASIO** and the **Driver** to either your audio interface's driver or **ASIO4ALL**. To access the driver's control panel, click the **Hardware Setup** button.



- 3 > To squeeze as much processing power as possible from the driver, turn up the buffer size as much as you can. How you do this depends on your particular audio driver, however. In ASIO4ALL you increase the buffer size by dragging the bar at the bottom of the interface. When you've increased the buffer size, close the window.



- 4 > In the **Sample Rate** section of the **Audio** menu you'll find the **In/Out Sample Rate** option. You may only be able to select 44.1kHz or 48kHz, but some soundcards will allow you to select lower rates. Lower sample rates will reduce sound quality, but processing requirements will also drop. If you need to render or bounce audio, select a higher rate to export it at full quality.



- 5 > Once you've got your audio drivers sorted, the next thing to deal with is your netbook's display. By default it will be set to the highest possible resolution. This is a good thing! Check that this is correct by right-clicking the desktop and selecting **Screen resolution**. Click the **Resolution** dropdown menu and select the highest resolution possible if it's not already ticked. Click **OK** to exit.



- 6 > Click on your Live window to enter the program again, and press **F11**. This will put the software into full-screen mode, allowing Live to take up the entire display, temporarily hiding the menu and task bars. This is handy for working as it gives you some extra space, but you'll probably need to use the menus at some point. To bring them back, simply press **F11** again.



- 7 > Live features a customisable display that allows you to hide and reveal panels at will. This is achieved by clicking the arrow icons next to the panel in question. Close the **Help** panel by clicking the cross icon in the top left-hand corner. To hide the **Menu** and **Effect rack** panels, click the arrow icons in the top left- and bottom right-hand corners.



- 8 > It's also possible to customise the displayed elements of the mixer in both the Session and Arrangement view. To do this, click the black and lime buttons in the bottom right-hand corner of the main display panel. When working on an arrangement, you can bring up the mixer elements, or bring them up on the session view and tap **Tab** to switch when you need to use the mixer.

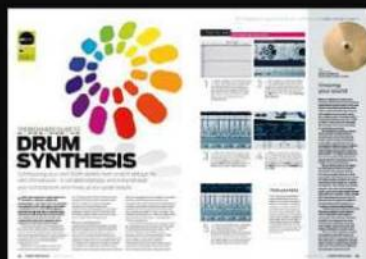


- 9 > You've now got a decent display to see your project, but it's possible to pack even more on the screen. Open **Options>>Preferences** and select the **Look Feel** tab to find a parameter called **Zoom Display**. This allows you to decrease or increase the size of Live's graphical elements without changing your monitor's resolution, so you can fit lots of information on the screen. **cm**

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Simple synths in Sunvox

Sunvox is a multiplatform sequencer/synthesiser that's a great fit for the iPad – and it isn't as scary as it looks

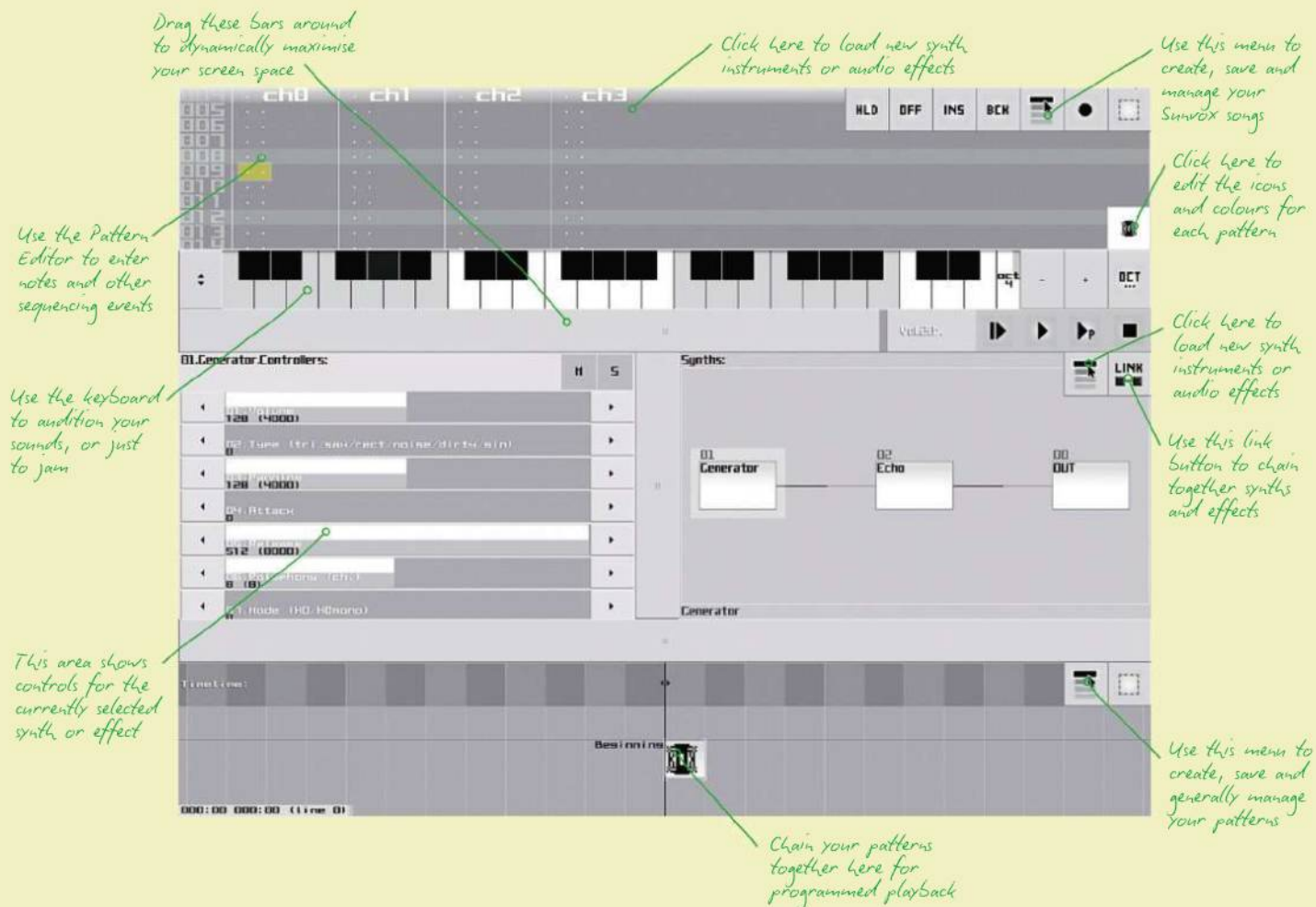
➤ Sunvox is a powerful but portable modular synthesiser and sequencer that you can use as a sound design aid, a songwriting tool or a jamming instrument. The 'portable' part? You can run Sunvox on a lot of different platforms – iPhone, iPad, Windows Mobile, Palm OS, Mac OS X, Windows and Linux – and the Sunvox patches you create on one platform can be opened on another. The interface, which has never really felt that user-friendly, translates brilliantly well to touch control, especially on the larger iPad screen. Sunvox has only one view – one main

window – which means it can look crowded, but all of the sections within that window are resizable; simply drag their borders.

Sunvox is modular – you build your synth patches by mix-and-matching individual elements. That's probably what gives it a old-school, scary synth vibe that makes it a little more daunting than something like Korg's iElectrube. Sunvox is a blast to use on the iPad, though, and more accessible than it looks. If you're a crusty old synthner then you'll get to grips with it fast, and patient newbies should find it makes a good introduction to synthesis and sequencing.

Unfortunately there's only room to cover the basics of patch building here. Sunvox can do so much more, though, including exporting to WAV or MIDI files, sample importing and deep pattern-based sequencing – it even has a theremin! It wouldn't be an exaggeration to say that Sunvox is currently one of the most highly developed synth-based iPad apps.

You should be able to tell already if it's something you might like, so if it is, give it a try – the desktop OS versions are available as free downloads from www.warmplace.ru, while the Universal iPhone/iPad version is only £2.99.



> Step by step Build a basic synth patch in Sunvox



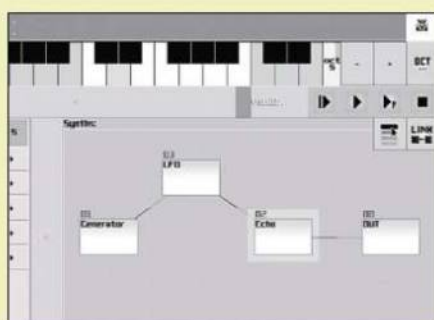
1 > Load Sunvox and choose **New Song** from the small icon at the top right of the screen. This loads a default song setting, which you can then audition by tapping on the virtual keyboard. Use the octave $\pm$ buttons to hear different pitches. Drag the grey dividing bar to resize the Synth patching area.



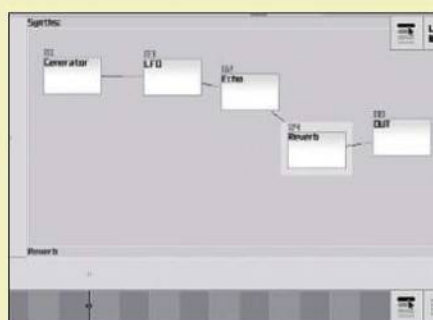
2 > Tap on the default Generator synth module that has loaded to make its controllers appear at the left. You could choose a totally different type of synth, but we'll get to that in a minute. Keep dragging those grey bars around when necessary so that you've always got a good view of what you're doing.



3 > The Sunvox master volume defaults pretty low, so grab it and move the slider up to **50%**, or whatever your ears think is bearable! Go to those synth controls at the left and change the **Type** setting to **(1) - saw**, the **Attack** to **24** and the **Release** to **25**. Keep previewing the changes on the keyboard.



4 > Tap the menu icon at the top right of the Sound Network, and choose **New Synth** LFO. Drag the new LFO so it's not sitting on top of the Echo. Tap **Generator** and the **Link** button, then tap the LFO to chain them together. Use the same method to unlink the Echo and then rechain it after the LFO.

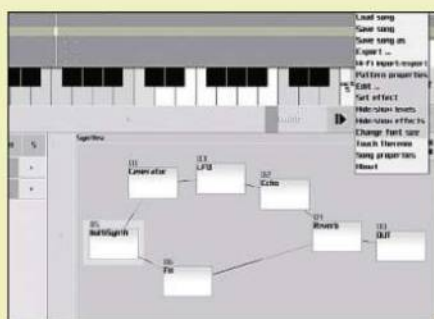


5 > Let's mess around with some settings. Change the LFO **Volume** to **512**, then set **Type** to **Pan** and **Frequency** to **128**. Tap the Echo module and set **Wet** to **64** and **Delay** to **128**. Use the same method to add a Reverb effect after the Echo so that everything will go through it, remembering to link it as before.

POWER TIP

>Live performance with Sunvox

The iPad version of Sunvox makes for a pretty good performance instrument. If you set up some patterns on the timeline, you can tap on them to go in and out of loop. Patterns can be colour-coded and given distinctive icons - that plus the dynamic resizing really helps. Of course, you can still go into the synth parts at any time and edit the sounds too...



6 > Put the MultiSynth at the front of the chain, then add the FM synth alongside the Generator. MultiSynth lets you send MIDI notes to more than one synth at a time for richer sound processing. Save your patch through the menu at the top right of the screen. These building blocks are the most important part of using Sunvox.



7 > Try replacing the Generator or FM modules with the Sampler, and use the **Load** button to navigate to, and load, a sample. Then use the **Edit** button to maximise the sample volume, add fades, reverse it, set loop points and so on.



8 > See those transport controls by the volume bar? Tap **Play**, and a play head will scroll down through the Pattern Editor. Tap the **Record** button at the top right of the screen to enter note information as well as other fun stuff like pitchbends. Use the **Pattern** properties menu item to set pattern length. **cm**

Record your own BeatMaker beats

BeatMaker's great for sample-based beats: use the included kits, import sounds from your computer or record your own

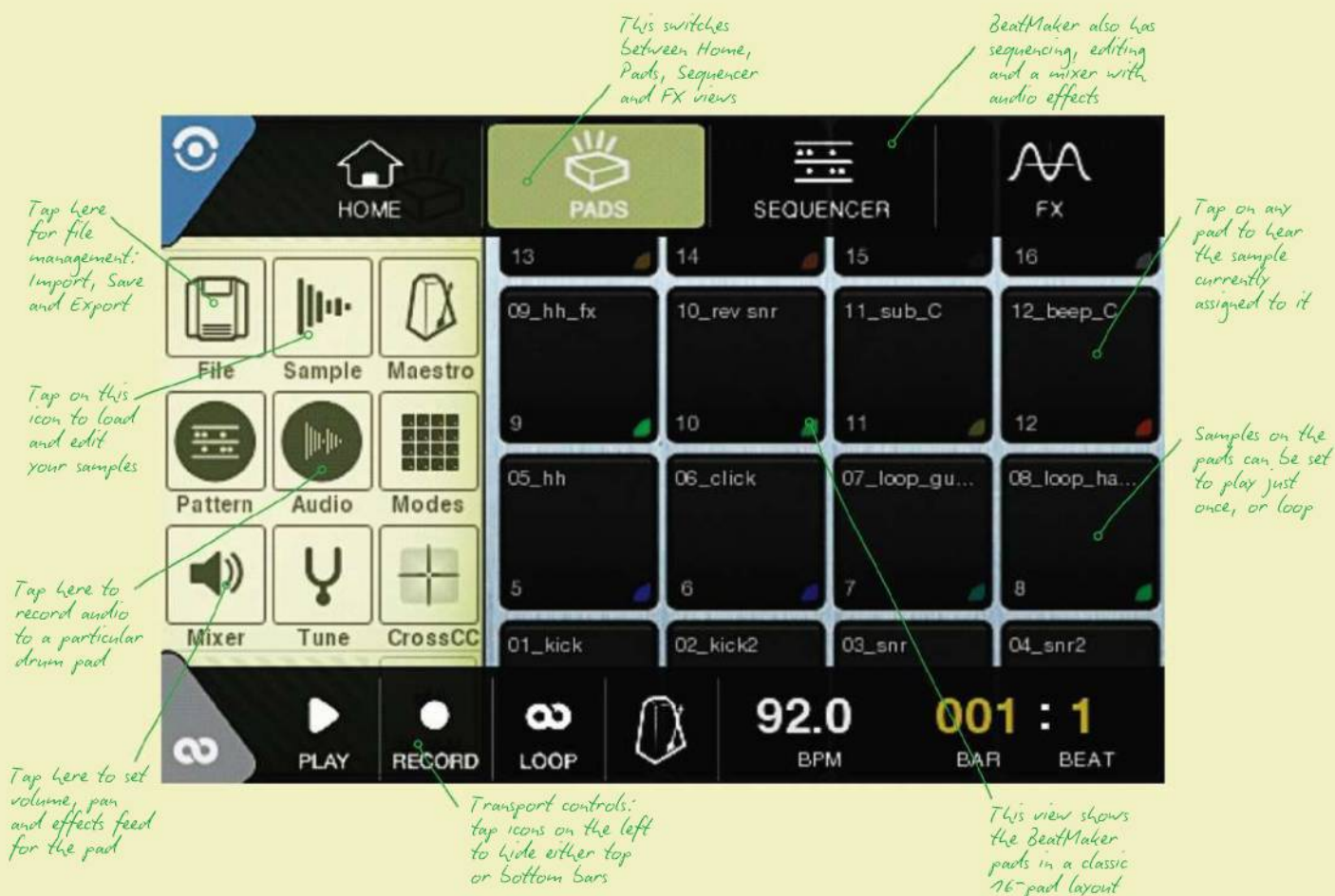
➤ **BeatMaker rode in on the first wave of iPhone music apps, and it's still going strong - which is just how it should be. It's a sophisticated drum production tool that's limited only by the size of the iPhone screen and the imagination of the user.**

BeatMaker isn't officially iPad-compatible at the time this **cm** Special goes to press, but it runs fine scaled up to 2x mode, and it's a lot easier to work with at that size. The BeatMaker app includes a decent collection of 'factory' and 'artist' kits. Everything is sample-based, and you can use the free Intua BeatPack application for

Mac OS X or Windows to wirelessly upload your own kits to BeatMaker. Your kits can contain a mixture of sounds from whatever sources you choose - vinyl, loop libraries, other music programs on your computer or recordings that you've made yourself, somewhere on location... and here we get to the heart of what makes BeatMaker so cool.

The iPhone and iPad are superbly portable devices, and they both have built-in microphones (though iPod Touch users can play too, if they have a headset with a microphone). Add to this the fact that you can record audio directly into

BeatMaker, and you have the makings of a pretty awesome DIY drum-sampling setup. It enables you to cut out the middle man and record your own drum hits straight into the app. There's a good chance that kits made this way will sound rude, crude and downright inconsiderate, but that can be a good thing - and it gets even better when you mix your nasty new drum hits with slicker sounds from more 'traditional' sources. When you're finished, you can save your new DIY kit for use in other BeatMaker projects, and of course export the WAV version of your beat back to your desktop.



> Step by step Make DIY drum kits in BeatMaker



1 > For this tutorial you'll need an iPhone, iPad or iPod Touch with a microphone. Launch BeatMaker, tap the **LOAD** icon and then choose **BeatMaker Soundbank»Breakbeats»Cold Beats»Cold Beats.bmk»LOAD**. This is just an example - if you prefer another kit, then feel free to use it. We're going to combine some of our sounds with the default sounds in this BeatMaker kit.



2 > Back at the BeatMaker home screen, tap the top left circular icon to open the navigation bar, then tap **PADS**. You can now see your chosen kit laid out over the 16 drum pads. Preview the samples by tapping the pads. Let's pick the top four pads to replace with sounds of our own.



3 > Tap on the top-left pad - lucky number 13. Then tap on the **Audio** icon in the middle of the nine icons on the left. You'll see that pad 13 is now shaded (slightly) grey. You can use the **Select** button to record into several pads simultaneously - just tap each pad that you want to use - although we're not really concerned with that here.



4 > Now you need to find something to record. Here are some things we've used in the past at **cm**: finger clicking, grunts, tables being tapped, somebody saying 'Sshhh', beatbox-style percussion sounds, a Tibetan singing bowl being hit with a spoon, and background noise from a train ride. Have a look around you for more inspiration!



5 > When you've completed step 3, you should see a big **RECORD NOW** button at the left of the screen. Tap on this, and a "Recording..." message will pop up. Make your drum hit, whatever you're using, and then tap **STOP**. As we're trying to create drum samples, it's better to keep things short.

POWER TIP

Sample chop shop

Here's a fun exercise for old-school sampling: when you've recorded and cut your sample, tap the **Modes** button and then navigate to **SPREAD MODES**. Make your sample pad is highlighted and then tap **TUNE**. Now your sample is pitched across all 16 pads, ready for playback. This works especially well on the bigger iPad screen!



6 > Now you should see get another window with options to **LISTEN**, **EDIT**, **SAVE** or **CANCEL** your recording. Tap **LISTEN** first, to make sure you've got what you're after - if not, tap **CANCEL** and make another recording. Otherwise, tap **SAVE**, give the new sample a name and tap **OK** (we'll look at editing later).



7 > The pad you chose to work should now be showing the new sample name. Tap it to hear your sample (by the way, it's best to wear headphones when you're doing all of this). Your sample might be too quiet, or it might have some silence at the beginning, so you may have to trim it in some way.



8 > If you do, let's get trimmin'. Tap the **Waveform** icon at the top left of the screen to return to the previous menu and then tap the **Sample** icon. Tap the down arrow at the bottom to view the **EDIT WAVEFORM** button and the handy **Fade In** and **Fade Out** buttons. Next, hit **EDIT WAVEFORM**.

> Step by step Make DIY drum kits in BeatMaker



9 > Use the **Play** button at the bottom to preview your sample, and use the **+/-** zoom controls at the right to show more or less of the waveform. Use the edit button at the bottom left to set the start of your sample, and the one at the bottom right to set the end. Now only the area between those points will play. After you've done this, tap **CLOSE**.



10 > Here's a tip: if you go straight into edit after recording, set start/end points and then tap **CLOSE** and **SAVE**, your new recording will actually be cropped to keep only the area that you just selected. When you're back at the main PADS screen, the last thing to do is experiment with the **Fade In** and **Fade Out** buttons under **EDIT WAVEFORM**.



11 > Now repeat this for the other three pads. Take a look around your room/studio/shed, and find some other interesting-sounding things to hit! Whether you're a drummer or not, drum sticks are useful at times like this. Remember, BeatMaker doesn't let you monitor inputs, so keep checking your levels after each take.



12 > Tap a pad, then tap the **Mixer** icon located at the left of the screen. You can then edit the volume level, pan position and FX output routing for that specific pad. You can use the **FX** icon in the top navigation bar to enable/disable or edit effect settings for Delay, EQ, BitCrusher and Filter.



13 > Once you've finished building your kit, save it - accidents will happen! Tap the **File** icon at the left of the drum pads, then tap the down arrow at the bottom until you see **SAVE>BeatMaker Kit**. Tap that, then **My Kits** and the **+folder** icon at the top of the screen. Name your kit, tap **OK** and you're done.



14 > The only true way to test any sample-based drum kit is to program some beats with it! You can activate the metronome in the bottom navigation bar, hit **Record** and play along on the pads. Alternatively you can use the sequencer to program drum patterns in a more painstaking fashion.



15 > Going slightly off-topic for a minute, you can also paste in samples from other iPhone/iPad music apps such as Reforge and bleep!Box. Audio copy and paste is a standard iDevice feature, so hopefully we should see more music apps supporting this. It's not exactly 'integration', but it gets the job done!



16 > From your computer, download the BeatPack app to manage uploads and downloads of BeatMaker kits and projects. You can export your beats as WAV files, ready to import into any desktop audio app like GarageBand or Live. You can also export them as MIDI files, though obviously that's deviating from the whole point here, which is to use our new samples.



17 > With practice, you can get very usable results out of the built-in iPhone and iPad microphones. If you want to bump up the sound quality a bit, attach an add-on microphone, like the lovely Blue Microphones Mikey (www.bluemic.com/mikey), to the dock connector. This will also solve the audio-in problem for iPod Touch users! **cm**

Record and sample with Reforge

Can we edit audio on the iPad? Yes we can, thanks to the device's big screen and on-board microphone – and Reforge

> **Pad music production just keeps getting better, and nowadays there are apps to cover programming, recording and jamming. What's really been missing, though, is a fully functional audio editor – so trying to complete any serious audio work means you have to go back to base and transfer your recordings to your 'other' computer.**

Tibor Horvath's Reforge is a £2.99 iPad-only creation that claims to be the "Swiss army knife for audio files on iPad". It features audio recording, file import via Wi-Fi or iTunes, volume, pan and filter automation, copy and paste between files

and Wi-Fi upload of finished edits as MP3, WAV or AIF files. Reforge supports audio copy and paste with other compatible apps, such as BeatMaker, and it can also use a system called Audio X to transfer audio files from one iPad to another without the need to go through a desktop PC. Reforge lacks some basic features at the moment – primarily the ability to zoom in on waveforms – so it hasn't reached Swiss army knife status just yet, but we're told an update is coming soon.

Nonetheless, the basic automation and copy and paste features are very useful, because they enable you to use Reforge as your dedicated iPad

audio recorder and editor, and then copy and paste your finished sonic masterpiece onto one of the drum pads in BeatMaker (for example). BeatMaker has its own audio recording and editing features too, as you've just seen in the previous tutorial, but Reforge has the advantages of a (potentially) larger waveform display, and those automation controls.

In this walkthrough we're going to record an audio sample into Reforge, do some simple editing and then paste it into a BeatMaker drum pad. We're using the iPhone version of BeatMaker, running at 2x size on an iPad screen.

> Step by step Move Reforge samples into BeatMaker



1 > Let's start by recording an audio sample into Reforge so that we can create a percussion part for BeatMaker. Double-tap the **Reforge** icon to launch the app. It doesn't matter if you hold your iPad in portrait or landscape mode, but when it's in portrait, Reforge will display a brief tip for the current control.



2 > Tap the **Record** button, then tap the record pop-up. Reforge will now be recording through your iPad's built-in mic (yep, that little hole on the top edge). Rap your knuckles on a tabletop to create a percussion sound (not the same tabletop the iPad is on – that'll be too jarring and noisy). Tap the **Stop** button.



3 > Your waveform will now be displayed on Reforge's tasteful orange screen. The first thing we can do is crop it – tap the **Select** button and drag the selection area to cover the section that you want to keep. Now tap the **Render** button to create a new sample that contains only the chosen area, and rename it.



4 > Tap the **Volume** button and you'll see two automation controls on the screen – drag them to create a short fade-out. Double-tap to add more controls as you need them. You can also automate stereo balance or width, or add a low- or high-pass filter. Use **Render** again to create another sample with these automations 'embedded'.



5 > Now use the **Select** tools to highlight the part of the waveform that you want to put into BeatMaker. Next up, tap the **AudioCopy** button, then the **AudioCopy** button in the following pop-up, then **Copy AudioDone**. Close Reforge, then launch BeatMaker and load the kit that you want to add your sample to. Go to the **Pads** view.



6 > Tap the **File** icon, then hit **Clipboard**, then **PASTE**. Next, tap **My Audio Recordings**, then **PASTE**. Name your sample. Navigate backwards, then tap the **Sample** icon. Tap on the target pad, then tap **LOAD»My Content»My Audio Recordings»reforgesample.wav»LOAD**. Now you can use BeatMaker's file editing tools to fine-tune the sample. **cm**

Take control of Ableton Live

As well as hosting their own apps, the iPad and iPhone can do some amazing stuff with your desktop computer

> **If you've ever drooled over those fancy – and expensive – touchscreen controllers that artists like Björk sometimes use to control their music software, then the iPhone and iPad have the power to make your lustful dreams come true (no, not the ones about Björk – we mean the controllers).**

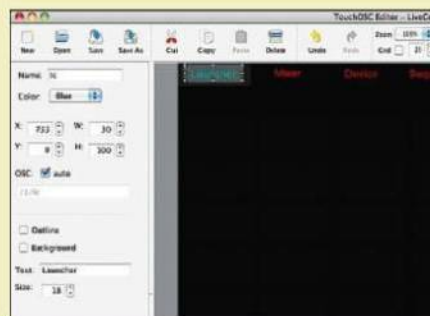
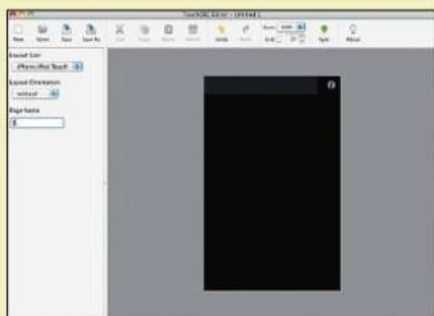
Even on a budgetary level, it makes sense – iPhones and iPads ain't cheap, but once you have them, the apps are very affordable. This means that the whole package still comes in at a fraction of the cost of the older touchscreen gear. The great thing about using touchscreens for music is

that they're infinitely upgradeable and incredibly flexible – the screen can show you whatever type of control you need for the job in hand. The only real negatives could be that you're still lacking the tactile vibe that comes from using real faders, knobs and big fat buttons, and a touchscreen device is one more delicate/twitchy piece of technology to deal with.

The control setup that we're looking at here consists of three things: an app called TouchOSC, which is based on the open-source OSC communications system envisioned as a replacement for MIDI; the LiveControl template

and app; and Ableton Live, running on Mac OS X or Windows. Don't worry if you're not comfortable with OSC or MIDI – no previous experience is necessary. There's no room to explain Live here (other than to say it's a great real-time performance, remixing and production application), but go to www.ableton.com and download the demo if you don't have it. If you don't like Live, you should remember that there are templates knocking around for other music programs like Logic and Pro Tools. This kind of setup can be fiddly, but once you've got it working, you'll be very glad that you did.

> Step by step **Control Ableton Live with LiveControl**



1 > Purchase the TouchOSC app for £2.99 from the iTunes Store – it'll run on both your iPhone and iPad. Next, go to www.hexler.net and download and install the TouchOSC Editor for Mac or PC. Finally, you'll need to download and install LiveControl itself; get it from livecontrol.q3f.org.

2 > We're going to be using an iPad for this walkthrough, though you can of course use an iPhone. Connect your computer and iPad to the same Wi-Fi network. This can be your regular home or studio network, or an ad-hoc or computer-to-computer network set up specially for this purpose.

3 > Open the TouchOSC Editor on your computer. Click the **Open** icon and find the **LiveControl** folder. You can choose **LiveControl_iPad.touchosc** or **LiveControl.touch.osc**, depending on your device. Launch TouchOSC on the iPad. Click **Sync** on the TouchOSC Editor to upload the LiveControl template.



4 > Once the template has finished uploading, you can select the **LiveControl** template within TouchOSC. Now we need to set up the LiveControl application on the computer. Launch the LiveControl application, then, back on the iPad, select **LiveControl** from the **Found Hosts** list on the **TouchOSC Network** page.

5 > Make sure that the outgoing port is set to **5000**, and the incoming port is set to **5001**. Then go to the main TouchOSC screen and tap **Done**. This will take you to the first page of LiveControl, which should be displaying what looks like the grid from Ableton Live's Session View screen. Next, go to the **Install** tab in LiveControl.

6 > Choose your Ableton Live directory (where the Live application is located – see the suggested links in the app) and click **Install**. Next, go to the **Configure** tab, and if your iPad shows up in the **Automatic Configuration** list, click on it. If it doesn't, don't worry – click **Get IP**, and then click on the IP number in the resulting pop-up box.



7 > Refer to TouchOSC's **Network** window on your iPad, and type that local IP address into the **Remote (iPad/iPod) IP Address** panel. Click on the **Using an iPad?** checkbox. Next, click on **Save Configuration** at the bottom of the screen. You can quit LiveControl when you're done - it doesn't need to be running in the background.



8 > On your computer, launch Ableton Live and open a Live set that has some clips and audio effects in Session View. Open Live's **Preferences**, and under **MIDI Sync**, choose **LiveControl**. **TO** from the Control Surface list - you don't need to select anything else. Go to the TouchOSC Session View clips layout, where you should see that your Live clip names have appeared!



9 > If everything is working as planned, a red rectangle will have appeared around the Live clips that are currently under TouchOSC control. You can move this rectangle by using the **Up/Down/Left/Right** buttons on the TouchOSC Session page. This is the same navigation you would get if you were using a dedicated Ableton Live controller like the Novation Launchpad.



10 > Now it's time start exploring. The LiveControl tabs are pretty logical, and they relate well to Live's functions - that's the advantage of a dedicated controller. Tap a clip icon, and that clip will start playing. Tap a scene button at the right, and the entire row of clips will play. There are **Mixer**, **Effects** and **Sequencing** tabs too.



11 > The LiveControl Mixer works really well - it's surprisingly responsive, and gives you touchscreen mix control that previously would have cost well over £1000. Have a twiddle with the faders, check the volume level display, and play around with the **Mute**, **Solo** and **Arm** buttons.



12 > The Device page gives you instant control over the audio or MIDI instruments and effects in the currently selected track, including on/off switches. There are navigation controls, so you can cycle left/right when you're working with multiple devices in a single track. You can also work with effects in the **Master** track.



13 > There are also tabs that take you to the **Sequencer**, **XY Pad**, **Track Control**, **Drum Pads** and **Keyboard** pages, though those last two need a bit more setting up. Go back to the LiveControl application on your computer, and choose the **Router** tab. Select a MIDI output port, then hit **Start Router** and **Save Configuration**.



14 > Now, software instruments in Live can receive MIDI notes from LiveControl's keyboard or drum pads. How you configure your MIDI routing will depend on your computer's OS. Mac OS X users can activate the IAC Driver Bus in the Audio MIDI Setup utility, but Windows users will unfortunately have to find third-party routing solutions.



15 > If you want to use this kind of setup for live shows, password-protect your network to minimise hacking and make sure that your iDevice is fully charged and in a good protective case. If you're using an iPhone, remember to put it into Airplane mode - unless you really don't want to miss any calls during your gig!

Working with patterns in iElectribe

High-tech meets retro with the iPad version of Korg's classic Electribe groovebox. Let's dive in and see what it can do...

➤ Instead of burying their heads in the sand like some other people, Korg have plunged into the touch-control world with an iPad version of their famous Electribe groovebox. In case you're wondering, a groovebox is a self-contained piece of hardware that can be used to program rhythmic and/or melodic patterns, as well as containing instrument sounds and audio effects. It's usually topped off with enough knobs and buttons to interact with the sounds in a spontaneous way. This box would also feature stereo outputs, a headphone socket and usually some kind

of expansion option in the form of a floppy disc, SCSI drive or memory card.

The laptop music revolution killed off a lot of grooveboxes, but they still have their die-hard users, and iElectribe is a way of using the iPad to replicate that self-contained feel. It features 96 factory presets, with styles including dubstep, house, trance and techno, as well as 64 user patterns. Load a pattern, hit the Play button and you're jammin' - it's that simple. When you start feeling a little more ambitious, you can edit the presets and save them into the user memory slots, or load one of the empty user (Init) slots

and start from scratch. Unfortunately there's presently no way of archiving presets to or from a computer, except as WAV audio files.

Building a pattern means using the sequencer buttons to program notes over a range of 16 to 64 steps and then using the knobs to edit the sounds themselves. The knob movements can be recorded as a motion sequence, so that every time you play that pattern, the movements will be repeated. In this walkthrough tutorial we're going to find out how to make the most of iElectribe's patterns, and how to get the finished result onto a computer.



> Step by step Manage patterns in iElectrify



1 > Let's start by stating the obvious: you ought to wear headphones when you're using these music apps, as the built-in iPad speaker just can't do them justice! Launch iElectrify and tap the **Browser** button. You'll now see a pop-up Pattern list where you can scroll through all of the available presets, which are organised into banks **A** to **E**.



2 > There are 96 factory presets, which are organised into genres, and 64 user patterns; as well as pattern names, the list displays pattern BPM and any tags that have been added. If you tap on a pattern name, it'll play immediately. If you're not in the browser, use the big dial to select the next pattern. All of the patterns loop continuously.



3 > Use the **Settings** button at the top to set pattern lengths, which should be between one and four bars. The **Laststep** slider lets you set the number of steps in those bars (between one and 16), so you're covered even if you're into math-rock-polka-techno or whatever. Go on, try it - we promise you won't break anything!



4 > Now that you've created or edited a pattern, you'll want to save it. Tap the **Write** button to reopen the Pattern browser, and tap the pattern you want to overwrite. Be aware that you can overwrite the factory patterns! Choose **Write** to keep the same pattern info or **Write & Edit Info** to change the name or tags, and then tap **Save**.



5 > A live jam doesn't consist of playing the same loop over and over, so as well as tweaking knobs and buttons, you can move between patterns as part of your performance. Tap the **Pattern Set** button, then tap the first **Step** button. Use the browser or dial to choose a pattern to assign to that button. Repeat this up to 64 times!

POWER TIP

>Customise your iElectrify screen

While you're in iElectrify's **Browser** or **Settings** menu, you might notice an **Appearance** tab. Here you can load a new background image and edit the text colours used in the app. For example, we created a black image in Brushes, then loaded it into iElectrify via the iPad's photo album. We then took the green right off the print colour. Luckily there's always the **Initialise** button!



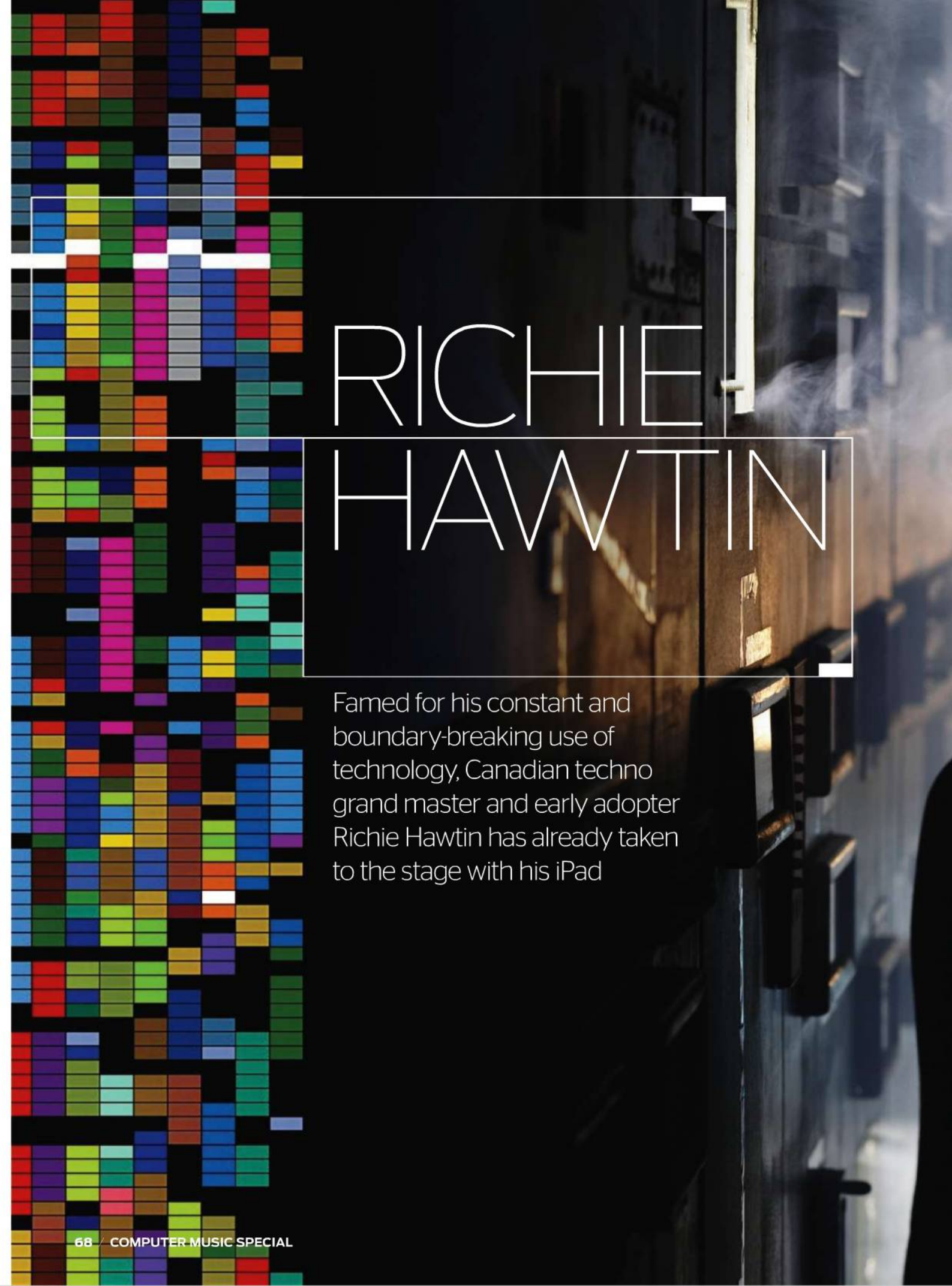
6 > Tap **Pattern Set** again to exit, or if you want to move seamlessly to another pattern, tap **Pattern Set** and then the **Step** button that is bound to the pattern you want to play. iElectrify will wait until the end of the current loop, then switch patterns. Use **Settings** > **Pattern Change Grid** if you want to edit the timing of the pattern changes.



7 > There are two ways to save patterns as audio files. Tap **Settings** > **Export** > **Bounce Pattern** to create a 16-bit/44.1kHz stereo file containing a one-shot rendering (not a loop) of your chosen pattern. Alternatively, tap **Settings** > **Export** > **Real-Time Recording** > **Rec** to start recording, then play through your patterns and tweak your knobs. Tap **Rec** again to stop.



8 > When your iPad is connected to your computer, open iTunes, click on the iPad icon, select the **Apps** tab and then scroll down until you can see iElectrify in the **File Sharing** list. Click on it, and all of your exported audio files will appear beneath the icon. Drag and drop to your computer desktop, or use the **Save to...** button to transfer the files. **cm**



RICHIE HAWTIN

Famed for his constant and boundary-breaking use of technology, Canadian techno grand master and early adopter Richie Hawtin has already taken to the stage with his iPad



> Richie Hawtin is a DJ, producer and all-round technological pioneer whose Plastikman Live gigs have showcased some of the most interesting and innovative uses of technology ever seen in an electronic music show. It's fair to say he's part of a significant second wave of techno trailblazers that have kept the genre at the beating heart of dance music. Based primarily in Berlin but found travelling around the world for most of the year, Hawtin is currently touring Plastikman Live and pushing technology to its limits in the process. His current setup is based around Ableton Live; JazzMutant's Lemur controller; hardware MIDI and audio controllers; a fully spec'd laptop; and now a pair of iPads running Liine's brand new Griad software. Hawtin himself helped co-develop Griad alongside various other passionate technology gurus, including the cofounder of Liine, Gareth Williams. We were lucky enough to catch up with Hawtin during a gap in his hectic Plastikman schedule, and we got him to spill the beans on the ultimate Ableton controller for the iPad.

cm What's your current live rig? Tell us how it all works together and how it has evolved.

RH The current Plastikman Live setup has evolved and continues to evolve from gig to gig. At the moment the main computer for the entire show is a fully loaded latest-generation 17-inch MacBook Pro that sends out audio, MIDI, DMX and OSC - and just barely gets the job done. The main thing that has evolved over time has been the way that I control all of these things. As you can imagine, getting real-time access to an Ableton set that is nearly 200 tracks wide and 150 scenes deep requires a very intricate setup.

cm Tell us about Liine's Griad software. How did you get involved, and why?

RH Gareth [Williams] and I had worked together on some custom Lemur setups for the Kontakt events we had been doing in 2008/09, and in early 2010 we both seemed to get in touch with each other at the same time wanting to talk about a similar idea. I was approaching him for some custom work to help manage my ever-growing Plastikman Live shows,

and he wanted to talk to me about the Lemur Mu system he was working on. So in one quick meeting Gareth asked me to come on board and help with his project, and I asked him to help with Plastikman. It was really perfect timing, as Gareth and Nick [Bugayev, Grid co-developer] were already working on something that I was going to ask them to program!

cm What does Grid offer that other Ableton controllers do not?

RH First off, Grid offers all the things that people have come to love about their iPads: beautiful graphics, seamless touch navigation, timely responsiveness and simple, straightforward setup - basically plug and play. Beyond that we have spent a lot of time working on the

"I can honestly say that without Mu and now Grid, Plastikman Live wouldn't be what it is today"

'intelligence' of Grid so that there are no misunderstandings of your gestures and how you expect Grid to respond, which is very important in a live setting. We've also focused on providing fast navigation through seriously large Ableton sessions - remember the size of the Plastikman session that this was developed on! - and quick shortcuts to jump back to the clips that are playing. I guess for me as a user, having the ability to see the playback ratios on each active clip and jump back to any playing clip on a track in one touch is a life-saver when running the

whole Plastikman show! And as you've probably seen in some of the promo videos, the ability to have wireless access over your set is another amazing feature - having the freedom to wonder around during the soundcheck and even during your set is quite amazing!

cm Explain how you use it when playing live. What has it replaced in your setup? Or is it an addition to your setup?

RH The original Plastikman Live setup had three Lemurs and a host of other controllers - faders, knobs and so on. One Lemur for modulation and specific song controllers is still in place, but the other two Lemurs originally running a modified version of Mu have been replaced by two iPads running Grid. We've re-enlisted one of those Lemurs to control song selection, although we will be porting that over to another iPad running a custom TouchOSC patch in the near future - as Rob, the creator of TouchOSC, is also the developer of our Plastikman iPhone SYNK app. It's a very cool, close-knit group of people on all of the projects I'm working on now. I'd seen TouchOSC, so when Gareth and I first started working together, I emailed Rob to ask him if he'd like to help develop an iPhone app for Plastikman. He replied, "Sure, I just moved to Berlin yesterday - let's have a coffee!" Crazy!

cm Do you ever miss the tactile feeling of non-touch controllers?

RH Sure, I sometimes miss the tactile feeling of non-touch controllers, and to be honest we have both in the Plastikman Live setup. Even though we have the Lemurs and iPads going, there are two other boxes, one with knobs and one with faders that are hard-wired to certain controllers for the entire show. These are for certain effects - controllers that I use all the time and need direct

Hawtin demonstrated Grid's possibilities with Ableton Live at the Sonar Festival 2010 in Barcelona



Once hooked up to Ableton Live, you can take control of an enormous amount of clips using GRIID's brilliant interface



access to at various moments in the show; something that I know I can grab onto and use to do one particular thing.

The beauty of both GRIID and the Lemur is that they can continue to give new information and allow different types of access throughout the show - different parts of your session, different controllers and so on. To be honest, I do sometimes still feel a little bit tied to hardware controllers - sometimes you can't beat simply grabbing hold of something - but for clip launching, navigation and overall playback and session manipulation, I would not give up my iPads and GRIID. I can honestly say that without Mu and now GRIID, Plastikman Live wouldn't be what it is today!

cm Will the iPad ever replace your Lemur?

RH That's a very hard question because I was one of the first users of the original Lemur, and the fact is that JazzMutant, Lemur and Mu are what helped Plastikman Live come to fruition.

But as we all know, technology moves fast, and I must admit that the iPad and applications like GRIID and TouchOSC have already started to replace the Lemur. The tides have already begun to turn.

cm Are you helping with the continuing development of GRIID? What's next?

RH I'm in constant communication with the rest of the team as we continue to improve GRIID for Plastikman Live and test things that we feel other users might find useful. There are still some very cool navigation hotlink-type shortcuts that we want to integrate, as well as a host of other exciting features.

cm Do you use GRIID for any studio work, or just for the live stuff?

RH It's mainly been live use. We have also been using TouchOSC for some of the Plastikman Live shows, and I'm currently integrating it into my regular DJ gigs as well.

THE COFOUNDER



> **We also caught up with Liine cofounder Gareth Williams, who told us more about the new Grid software.**

cm How did the Liine team form?

GW Everyone at Liine met through being involved in music or the multimedia art world. I initially met a man called Nick Bugayev when he was a resident artist at a new club here in Berlin. He was doing a lot of exciting stuff, not only in his own productions but with a full-on multimedia bent, involving installations tying together Max/MSP, Lemur and contemporary dance, among other things. We discussed the possibility of creating a clip launcher for Ableton Live and iPhone but didn't immediately pursue it as we weren't sure how many people there were that

would benefit from it. Once the iPad was announced, however, our minds were set - we knew that the time was now and that this was what people had been waiting for.

cm Is there anyone else working on Grid apart from you, Richie Hawtin and Nick Bugayev?

GW Yes. Nick and I realised that we'd need a hardcore coder to help us implement our concepts on these mobile devices. We needed someone who fully understood what we wanted to do and also someone who knew and loved multimedia art and music and could contribute at a higher level. Nick introduced Etienne Noreau-Hebert to the team - he's a former collaborator of Nick's with experience in technologies like Max/MSP, and someone

> Step by step

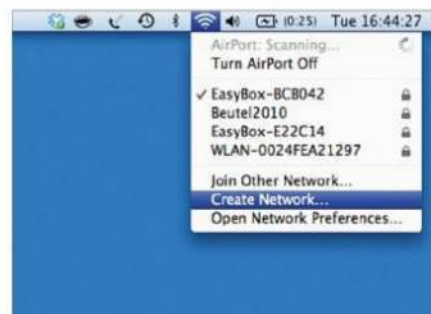
Set up virtual MIDI ports and take your first steps with Grid



1 > To use Grid, you'll need a pair of virtual MIDI ports. If you're using a Mac, you can set these up (if necessary) within IAC Driver in Audio MIDI Setup. If you're on a PC, you'll need to download and install a free utility such as MIDI Yoke. Virtual MIDI ports are very useful for getting different audio applications to speak to each other on the same machine.



2 > Run the installer. Grid will then be available as a control surface within the MIDI Sync section of Live's Preferences. Setting the control surface MIDI Input and Output to your virtual ports is a one-off task. There are no MIDI mappings, so no Live set templates are required. This means you can use Grid just as easily on new or existing Live sets.



3 > Since Grid uses Wi-Fi to connect to your computer, it's important to make sure you have optimal network settings. The best option is to create an ad-hoc network on your computer. This can be done on a Mac by clicking on the **Airport** icon in the menu bar, and then on **Create Network**. PC users can check out these instructions: www.tinyurl.com/plbnr.



4 > After you've set up your network, connect your mobile device to it. Open the Settings app on the iPad, choose the Wi-Fi tab and select the network. Make sure you have the Grid Connector up and running. Tapping the **Grid App** icon enables you to choose between automatically or manually connecting to your Grid host computer.



5 > Grid's main screen shows a fully zoomable grid of clips, each with its own name and colour. For many Live users, colour-coding clips has long been a useful feature. The colour-coding information used to be split between your controller and the computer screen, but now it's all at your fingertips on the controller itself.



6 > The clip itself shows several pieces of information. The muted colour region shows the clip's name but also acts as a status indicator: it will pulse when cueing or turn solid white when playing. If you find the muted colour distracting, adjust the contrast between the clip background and the coloured bar at the bottom of the clip in the **Grid Settings** panel.

for whom live multimedia art runs in the family! At around the same time, Richie asked Nick and I to work on his Plastikman Live show. Richie was also a very early adopter of touchscreen technology, having used it in his performances since the very early days of the Lemur. While working on the show we started to talk about the exciting things that the iPad had to offer, not only to Plastikman but to musicians/performers in general. The pieces started to fall into place and we got excited about doing something together.

"We want the task of launching sonic elements to be an enjoyable, fluid, musical experience"

Richie called up John Acquaviva, who Nick and I had also known for a few years, and we decided to go for it!

cm What are the plans now for Grid?

GW At Liine, our mission statement is to redefine the way people interact with sound. Touchscreens – particularly the cost-effective and advanced iPad – are one way to help us achieve that. Grid is our line of products for controlling Ableton Live. It is beginning its life as a device for launching clips that offers the rich visual feedback we believe is essential in a performance situation. We're very much focused on the experience itself – we want the task of launching sonic elements to be an enjoyable, fluid, musical experience, rather than a technical task of 'page to clip, select, fire'.

Further down the line, Grid will also become the core module in a range of controllers that will handle other aspects of Ableton Live. We have some really exciting new ways to interact with Live using the touchscreen, and we think we can truly augment the Live experience – but we're keeping all that up our sleeves for now!

cm Is Grid available at the App Store?

GW Grid should be available at the iTunes App Store now and will be available in iPad and iPhone/iPod Touch versions. The exact pricing has not yet been finalised but we are sure that people will consider it to be very good value and comparable to other apps available at the Store. There will also be a free Lite version which will allow as many people as possible to try Grid out and see if it's for them.

cm What is it that sets Grid apart from any other way to control Ableton, touchscreen, iPad or other device?

GW We've used our experience as musicians and our long history in performing with touchscreen technology to bring our users an experience that is playful, powerful and driven by the stage rather than by features. The touchscreen gives us the ability to create dynamic interfaces that can adapt and offer richer visual information than is possible with hardware controllers. It gives us the opportunity to invent truly new ways of interacting with music.



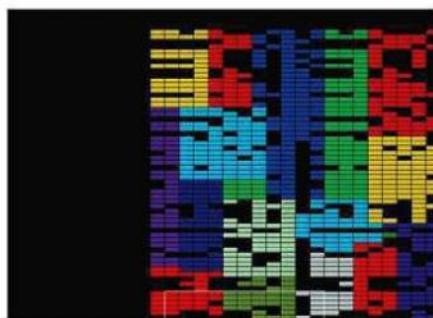
7 > Alongside the track names at the top, you can see performance-critical information about the clip that's currently playing. When looping, clips show a pie chart; otherwise they display a progress meter. This can help you to choose when to fire your next clip or scene, or whether you're going to let your audience ride those sounds for longer.



8 > If you're lost in a sprawling set and have forgotten where to find that bassline currently rocking the speakers, just tap once on the **Bass Track Header** and Grid will jump straight to that scene. If you need to stop that clip in a hurry, pressing the star-shaped button in the top right-hand corner brings up the **Track Stop** buttons in the **Track Headers**.



9 > With Grid, you no longer have to worry about compacting your set and keeping things close together – iPhone-style inertia scrolling lets you travel medium distances quickly, or you can tap the **View** key on the bottom right to see the Overview of your whole Live set. Tap anywhere in this view to visit that area in the main view.



10 > The Grid Overview gives you a new outlook on your Live set and allows you to organise things in different ways. The whole Live set can be seen as a sound library, with the Overview as the map of this library. For example, sounds that go well together but are in different areas of your session can be coloured similarly and thus quickly spotted and accessed.



11 > Many people who use different instruments or audio channels with different processing for different songs use the 'diagonal approach', where the first song takes up the first eight tracks, the second song the second eight and so on. Overview allows you to easily see individual songs and bring them into focus on the main screen.



12 > Not everyone is so tidy and organised, though – some people simply throw audio loops onto channels with little consistency or planning, and the result is a Live set that's a big bank of disorganised loops. If this is the way you like to work, you can use the Overview to quickly leap around the organised chaos that only makes sense in your brain. **cm**

OUT THERE

Awesome accessories for your music-making arsenal

PowerJolt SE £16.95

Of course we would never suggest getting busy producing on your iPhone or iPad while actually driving, but this device will charge your iDevices from the cigarette lighter. At this price, it's a must for frequent drivers and bored passengers everywhere.

<http://store.apple.com/uk>



Griffin A-Frame £39.95

Solid rubber edges and a sturdy aluminium build make this a great add-on for propping up your iPad. It can be used at an upright angle or in a lower, wrist-friendly desktop position (as pictured). Great for use both on stage and in the studio.

<http://store.apple.com/uk>



Griffin Flat Cable £14.99

OK, so it's just a 3.5mm-to-3.5mm stereo cable, but this top-notch lead from Griffin boasts a flat, low-profile design that makes it great for sneaking into the tightest of spots and connecting your music-making bits and pieces together.

<http://store.apple.com/uk>





iBallz \$19.95

Designed to clip onto the four corners of your iPad, these ping-pong-ball sized bits of hard foam will protect your pride and joy from all manner of filthy surfaces. The adjustable cord means they will also happily work on a number of other tablet devices. Adjust one of the balls to sit under your iPad in landscape mode and it will be tilted to a much more comfortable position for two-handed working. www.iballz.info

Griffin Jumper £14.99

Snuggle your iPad into this protective case from Griffin. The sturdy wetsuit neoprene on the outside and fleecy white inner skin will help to keep everything safe and scratch-free. It's quite a tight fit though, so it may not be the most practical solution for pulling out your iPad when inspiration strikes. www.carphonewarehouse.com



Griffin iPhone Case £24.95

Griffin have teamed up with online clothing design community Threadless to produce a range of snazzy iPod cases. The one pictured here is by Josh Perkins, who claims that the design represents the important decision musicians must make when choosing between acoustic and electric guitars. www.threadless.com

HEADPHONE ROUND-UP

Your headphones are the missing link between you and your mobile gadgets. We grab our cans and go out and about...



> The explosion in popularity of mobile gadgets over the past decade came with an explosion of accessories to accompany them. This - along with the huge rise in mobile music-making attributed to a combination of incredibly powerful laptops and high-end plug-ins - created a new market for headphone manufacturers: high-quality yet mobile cans for the on-the-go producer.

Headphones have always been a difficult purchase for more serious music makers and listeners because it's impossible to properly test them before you buy - and just what is it that makes a good set of headphones anyway? Are you looking for crystal-clear clarity so that you can mix accurately while away from your beloved monitors and studio? Or are you looking for hi-fi-style hype to make your music shine and to

help stop your ears from getting tired over long journeys or during outdoor sessions?

Here we're going to cover both aspects over a wide price bracket, and we'll be tackling both open and closed headphones from a variety of manufacturers. We'll take some that are made for the studio out on the road, and vice versa, as we try to find the best all-rounders for our mobile mission.



Sony MDR-XB500 £59

Once you've clasped these big-bass cans over your ears, you'll feel every bit of the £59 you paid for them. They're certainly very comfortable and provide quite a bit of isolation due to the reassuringly tight grip they take on your head. One small gripe is that the cable comes out of both ears rather than one, which can be annoying when getting them on and off.

With a 40mm driver, the XB500s deliver an extremely powerful bottom end - so powerful, in fact, that it kind of fights off all the other frequency bands. The mid is present but not very prominent, and the treble is much too shy.

Using an EQ with a hefty treble boost brings these headphones to life, making them sound fantastic for the price, but that's hardly ideal. So, the XB500s definitely aren't suitable for mixing, but if you love big-bass genres like hip-hop, dubstep and reggae and don't mind EQing or a dealing with a rolled-off high end, you'll like them a lot.

Web www.sony.co.uk

Verdict

For Comfortable; good noise isolation; pretty accurately priced

Against Hyped bass and not nearly enough treble to match it

7/10

Numark PHX £39

Numark are the first to throw their cans into the ring with the PHXs, which, although quite flimsy - and with a plastic ball joint that seemingly begs to be broken - appear to deliver plenty of bargain for your buck. There are even three different types of cables as well as a storage pouch and replacement earpieces included in the box, which is almost unheard of at this price.

The PHXs deliver serious isolation and, as they are aimed at DJs, have a notched sound that peaks around the mid section. They don't sound particularly bad as such, but they are quite uneven across the frequency scale.

At this price, bearing in mind the bundled extras, we'd recommend them if you were looking for an all-rounder that could be used for general listening and DJing on a budget. For any other tasks such as field recording or mobile mixing, however, you might want to look elsewhere.

Web www.numark.com

Verdict

For Cheap and cheerful, with lots of extras and good isolation

Against Peaked sound and fragile plastic joints

7/10



Beyerdynamic DT100 £152 (400 Ohm versions)

Often referred to as the Yamaha NS10s of the headphone world, the Beyerdynamic DT100s are a professional audio staple in studios around the world due to their excellent isolation, comfortable earpieces and accurate representation. They might not be too pleasant to listen to, but they deliver incredibly accurate sound reproduction, warts and all. Coming with a detachable, proprietary cable, every element of the DT100s is replaceable, right down to the earpads.

The DT100s' bass response is weak to say the least, but that's not what they're made for. Where they excel is the midrange and mid-highs: the vocal range. Their clarity at this scale goes beyond their price bracket, and they make it easy to dissect very specific elements of the mix. If you want a second mix opinion with the added bonus of the best recording headphones in the business, go ahead and pick up a pair.

Web www.beyerdynamic.com

Verdict

For Clear mid- and high-end response; comfortable to wear

Against Very little bass; headphone amp required for louder volumes

8/10

Bose On-ear headphones £120

On first seeing the rather timid-looking Bose on-ears, you could be forgiven for thinking they weren't up to much. Give them a listen, though, and you'll take it all back as the sounds of your environment instantly fade into a comfortable and snug silence.

The Bose on-ears deliver a fantastic bass response for their size - in fact, it's one of the best bass responses that we've heard in headphones of any size. It might be hyped, but the way that the sub-bass complements the cushioned earpieces provides serious comfort and makes these headphones a joy to listen to. Listening is about all you can do, though - mixing is out of the question due to Bose's hi-fi approach. Nonetheless, for long journeys or testing out music-making apps, these are some of the best cans around, delivering a warm, colourful and enjoyable response.

Web www.bose.co.uk

Verdict

For Very comfortable to wear; warm bass and clear mids, portable

Against Not a very true response; expensive

9/10



headphones <

Audio Technica ATH-M50 £149

Audio Technica's M50s certainly look and feel more expensive than their price tag would suggest. With a steel-reinforced headband, a coiled cable with a gold-plated connector, replaceable earpads and plenty of comfort over long use, they definitely make a good first impression.

So what of the sound? The best word to describe it is: clear. There's a huge amount of stereo field considering the M50s' closed nature, and the high end sparkles - although probably a bit too much. We can't help but feel there's hyping occurring from about 10k upwards, though that's not necessarily a bad thing; it's not enough to ruin a mix, and it definitely adds some excitement if you're using these for general listening. The lack of a replaceable cable is worrying at this price, but apart from that, the M50s are good value and have enough of everything to make them a great all-rounder.

Web www.audio-technica.com

Verdict

For Sound more expensive than they are; wide stereo field

Against A tad hyped in the high end; no replaceable cable

8/10

M-Audio Q40 Studiophile \$180

M-Audio's only over-ear headphones are a closed-back affair with a removable cord and a storage bag included. While they claim a flat frequency response and excellent sonic isolation, in use the bass was quite boomy and the isolation was minimal. Boomy bass isn't always a bad thing, of course, and when turned up loud the Q40s deliver a lot of power and supply a huge bottom end, especially considering their closed nature. This can be a bit much for more bass-heavy genres, though.

The mid and treble are flat but truthful in comparison. They're not compressed away at lower volumes, so this is where the Q40s deliver the best response. The headphones are comfortable to wear over long periods, with softly padded earpieces that cover your whole ears and enable you to pick out specific sounds easily. Collapsible for portability and with reinforced joints, they feel pretty sturdy, too.

Web www.m-audio.com

Verdict

For Comfortable and sturdy, with accurate mid and treble

Against Boomy bass for this price point

8/10





Sennheiser HD25 II £199

At first glance, the HD25 IIs certainly don't look worth their fairly high price tag, with their tiny earpieces and plastic headband. Once on, though, they clasp your head like a vice. It does take some time to get used to the tight environment, but after a while you actually grow to like the space they create with their isolation and grip.

Sound-wise, the price is justified by the quality. They are tight at all frequencies, providing a very transparent response. Their closed nature helps to keep the bass up-front without boominess or rumbling, the high end is crystal clear and the stereo imaging is very impressive considering their tiny size. I did have some concerns about build quality, though I was able to do some serious stretching and bending with them without feeling like they were too close to snapping. These are perfect for DJs, keeping your ears focused on the music in the noisiest of environments.

Web www.sennheiser.co.uk

Verdict

For Portable; clear; accurate; isolated

Against Slightly cheaper feel than the price tag would suggest

9/10



Audio Technica ATH-M35 £59

The cheapest of the three offerings from Audio Technica on test here, the M35s feel very sturdy for their price, with steel reinforcements at the joints. Though the earpieces feel like they're pressing right up against your ears, there is actually a good stereo field and it's easy to pick out certain sounds from left to right.

In terms of response we have no complaints either, with the midrange being particularly present and clear. In fact, the sound is flat and generally appealing all the way across the spectrum - there's no hype occurring anywhere. We would be quite happy to use the M35s in just about any situation, be it travelling, writing or even checking a mix.

The earpieces themselves are a bit thin, so we'd be concerned about them wearing down overtime, but as it stands, the M35s may be the best all-rounder at this price point. Plus, they leak very little sound - which is a welcome bonus.

Web www.audio-technica.com

Verdict

For Even, flat response; sound more expensive than they are

Against Thin earpieces seem like they may wear down over time

9/10

Numark HF125 £6.99

Aimed squarely at the DJ market, the HF125s may be the very definition of cheap and cheerful. Boxed with nothing but the headphones themselves, they're a rather small affair, with a tight grip on your ears that, oddly, doesn't really provide any isolation - I could even hear my hard drive spinning away as I loaded up some music while wearing them.

Unfortunately, things didn't get much better after the music started playing. The response of the HF125s isn't exactly what you'd call flat. The bass is very prominent - so much so, in fact, that anything around 7 or 8kHz sounds rolled off. I suppose that's fine for DJing if you just need to cue in to a four-four beat, but for pretty much all other uses, it can be highly irritating.

Still, in the context of the price point, you can't really expect perfect audio fidelity. What you do get from the HF125s is a fairly solid set of cans that will deliver adequate results in the booth for next to nothing, if that's your budget range.

Web www.numark.com

Verdict

For Cheap and cheerful; plenty of bass

Against Weak, rolled-off treble response; little or no isolation

6/10



Allen & Heath Xone:XD40 £75

Well known in the DJ world for their high-quality mixers and DJ equipment, you would expect Allen & Heath's XD40s to be heavy on the bottom end for cueing up records in a blaring club – but we were pleasantly surprised to learn that's not the case. While the XD40s are a tad teeny on your ears, they don't suffer for it, delivering an acceptable top end, crunchy mids and pleasantly rounded bass. Their closed back keeps the sound contained quite nicely, and they also fold up flat – perfect for travelling.

Being from Allen & Heath, these headphones definitely excel at club music and bass-heavy genres, though the mid is tight enough to extend to more acoustic genres too. Though the treble is perfectly tolerable, it does lack something in terms of balance. The XD40s would be adequate for tracking and some early-stage mixing, but we think they're most suited to exploring music apps and general listening.

Web www.allen-heath.com

Verdict

For Portable; fairly wide response; good isolation

Against Not as bright as they could be; not very comfortable over long periods

7/10



Audio Technica ATH-ANC7b £189

Having to put a triple-A battery into your headphones is a weird experience, but it pays off with the ATH-ANC7bs. These noise-cancelling headphones offer real isolation once clasped onto your ears. They're very comfortable too, and although the output is very hi-fi and clearly hyped all over the scale, it's never harsh or detrimental to the overall sound.

The ANC7bs are definitely more suitable for general listening than mixing or any kind of serious audio work, but they excel at mids and highs and have a very tight and rounded bass response. We would recommend these if you're serious about your sound – and you'd have to be at this rather high price point – but don't need a particularly flat response. Turning the noise cancelling switch off makes them fall a bit flat, however, so make sure you carry a spare triple-A with you.

Web www.audio-technica.com

Verdict

For Very comfortable, warm, tight; exciting sound; noise cancelling

Against Nowhere near as good without a battery; not suitable for mixing

9/10

Sony MDR-NC500D £269

The NC500Ds are the world's first digital noise-cancelling headphones. On opening the rather minimal parcel they arrive in, you're greeted with a classy black case filled with all the extras that make the noise cancelling happen. Turn them on and press the AI NC MODE button to analyse your space – it's a surreal experience as the space around you gets sucked away to silence.

The sound of the NC500Ds is suitably hi-fi, which is exactly what you'd expect – these are made for travelling and are hyped in the right places for long listening sessions. There isn't a huge amount of mid presence and they could be brighter, but once you're in your own silent world, they are certainly very pleasant. Having to charge them up can be annoying and the large amount of accessories means they'll take up a lot of space in your bag, but as a high-end all-rounder with the bonus of noise cancellation, the NC500Ds are a nice package.

Web www.sony.co.uk

Verdict

For Noise cancelling; open and appealing sound

Against Lots of accessories to remember; not suitable for mixing

8/10



> headphones

Pioneer SE-MJ51 £55

Pioneer are better known for their prowess in the DJ booth, but their SE range aims its sights squarely at the mobile music market. The MJ51s (I'm sure the presence in this moniker of Michael Jackson's initials and his age at the time of his death is purely a coincidence) certainly look good, with brushed-aluminium earpieces that shine like brass, but the cable looks very thin and fragile, especially at the earpiece end.

Sound-wise, the MJ51s are quite notched in the mids, with a restrained high end and somewhat hyped bass. It's a mismatched sound, especially when listening to genres where mid-range frequencies are important, such as rock and pop. The MJ51s perform best on dance music, but it's a very closed sound that only really appeals at lower levels. As soon as you pump anything loud into these headphones, it's compressed into a flat wall of mid-range frequencies. They're fine for DJing, but not much else.

Web www.pioneer.co.uk

Verdict

For Look good; very light

Against Closed, notched sound; not too sturdy for the price

5/10



Sennheiser HD650 £390

Delivered in a rather elaborate box, the HD650s from Sennheiser are some of the most coveted cans in town, with Toccato, David Guetta and Eric Prydz all rumoured to use them religiously. Their open-backed nature provides pretty much zero isolation from the outside world, so they might not suit use on public transport, but that's pretty much where our complaints end. For accurate representation, the sound of the HD650s is almost perfect. There is absolutely no hype occurring, and whatever you play is flatly represented. The stereo detail is vast and it's easy to follow even the faintest of sounds in the busiest of tracks. If we were to nitpick, and we must at this price, we'd say that their open nature means the sub-bass - below 40Hz - is a little weak.

The price screams professional, but so does the sound. If you work on the road a lot and you need to trust what you're hearing, you must try the HD650s.

Web www.sennheiser.co.uk

Verdict

For Incredibly accurate and flat response; wide frequency range

Against Expensive; lots of sound leakage

9/10

Beyerdynamic DT990 Pro £183

Beyerdynamic are no strangers to the professional audio scene, so you'd be forgiven for expecting a lot from these cans. The DT990 Pros are open-backed, meaning they leak sound quite a bit, but they make up for it in their incredible stereo detail as well as their crisp and tight mid and high response. They are bright but not harsh, thick but not cloudy, warm but also sincere, and in terms of comfort they are a joy to wear for long periods.

The nature of open-backed headphones means that the sub response isn't huge, so if you're looking for high-end multimedia headphones and nothing more, or if you make very bass-heavy music, the DT990 Pros might not be for you. That's not to say the bass response isn't true, though. Their leaking will definitely bother fellow passengers on a bus, train or plane, but for mixing duties indoors - in or away from the studio - or for outdoor iPadding in the park, they are very hard to fault.

Web www.beyerdynamic.com

Verdict

For Beautifully crisp mid- and high-end range with fantastic stereo representation

Against Open back means sound leakage and not a huge amount of sub-bass

9/10





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OUT THERE

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Native Instruments Audio 2 DJ €99

Pocket-sized yet powerful enough to act as a serious upgrade to your netbook's sound card, the Audio 2 DJ features two 0.25-inch output channels that can be used as separate stereo outputs, or as a master out and headphone monitor when using the internal mixer in your DJ software. www.native-instruments.com

Gear4 World Tour Dual Charge £24.99

This handy little adaptor sends mains power to dual USB charging ports. Four interchangeable AC connectors are included, allowing you to charge up your USB devices almost anywhere in the world. www.gear4store.com



Korg Kaossilator £149

This tiny little synth runs on four AA batteries and includes a stack of great synth sounds for you to trigger using the touchpad. Select the key and tap out the BPM to easily create some wonderful sounds and melodies. There's also a built-in arpeggiator with selectable styles and a Hold switch so you can free up your fingers to do other stuff. Be warned - try it once and you'll buy it. www.korg.com



Power Traveller MiniGorilla £99.95

Need to charge large, power-hungry devices on the go? The MiniGorilla is the answer. Netbooks, laptops and more can be charged here: this power-brick features a range of voltage settings, and of course there's a 5V USB output for your mobile and iDevices. www.powertraveller.com

Korg Monotron £59

The Korg Monotron is so small, you'll struggle to believe it's analogue. Based around a micro-keyboard, a single oscillator, an LFO and a filter taken straight from Korg's legendary MS-20 synth, this is a little machine that's capable of producing some seriously big sounds. There's also a 3.5mm jack input to the filter, so it's a great way to add some analogue class to your mobile synth signal path. www.korg.com



Korg miniKP £140

Based on the same idea as the fully fledged Korg Kaoss Pad, this micro-version offers the same great effects and hands-on control. Hook up this pocket powerhouse to your phone, netbook or iPad and it's a cinch to add real-time fluid effects to your signal. www.korg.co.uk



Power Traveller PowerMonkey £34.95

Charge up the PowerMonkey and it will then charge any device it has an adaptor for, with all mobile phones, iPods and USB devices covered. It will charge most devices fully, and with some phones it can even manage two full charges - giving you peace of mind when performing or producing on portable devices. www.powertraveller.com

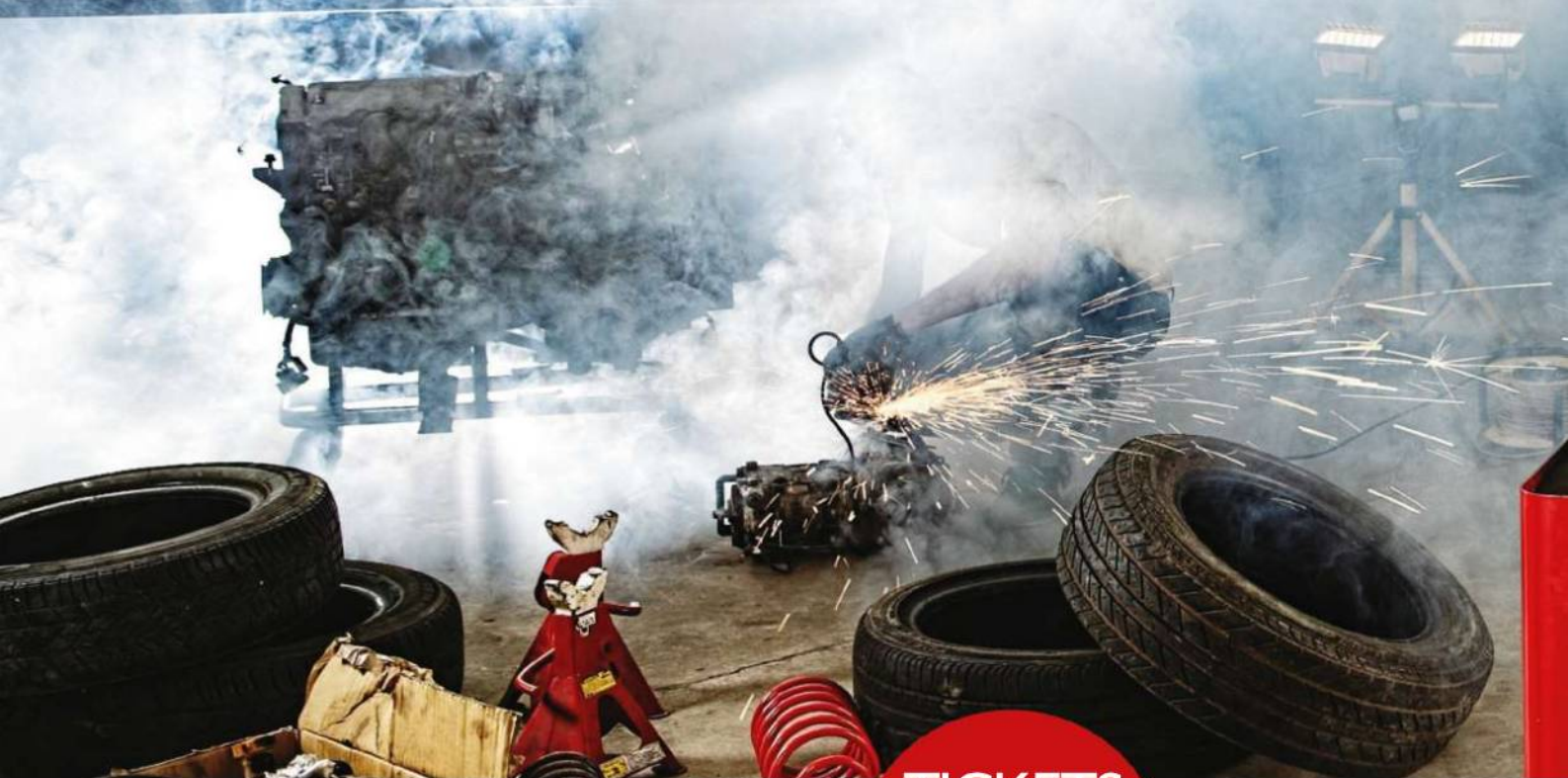


Tonium Pacemaker from £369

Available in 60GB and 120GB sizes, this handheld device can replace two decks, a mixer and an effects box. It also lets you manage, store and mix your music exactly like a DJ. A circular touchpad acts as the virtual jog wheel, while a touch crossfader and Cue and Jog buttons take care of the rest. Incredible! www.pacemaker.net

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The iPad challenge

Is it possible to create a meaningful track from scratch using just apps available for your iPad – and in just one hour?! We started the clock ticking, took a deep breath and dove headfirst into 'Pad composition to find out

> When mobile phones first became popular in the late 80s, it was Michael Douglas' iconic white brick in the hit film *Wall Street* that became the defining image of this new technology. Few people would have predicted that such devices would eventually spawn the capacity to make us all creative on the go.

Yes, making calls is useful, but it's not nearly as fun as being able to listen to and even create brand new tracks when you're out and about. Manufacturer bias notwithstanding, it's fair to say that Apple's iPhone, iPod Touch, iPad and App Store have been central to this movement. Keen software developers have been quick out of the traps to provide musical applications for the iDevices that range from fun to deadly serious. You only have to look through the reviews of assorted apps elsewhere in these pages to see that some wonderful musical tools are being

"Apps have an important role to play in the ongoing evolution of music"

developed for live performance and on the move sequencing. Some are designed to inspire and provide instant rewards, whereas others contain significant layers of musical possibility and sophistication that hint at an exciting future for portable devices. They have an important role to play in the ongoing evolution of music.

Back in the here and now, this wealth of musical apps got us thinking about whether it would be possible to create meaningful tracks on an iPhone or iPad alone. We're gluttons for punishment here at **cm**, so we decided to turn

things up a notch and limit the challenge to the time of the average London commute: one hour. Is it possible to create a whole track on your way home from work? Read on to find out.

One thing that became clear very quickly was that the tools available to us were dictated hugely by how apps export audio files. There are some wonderful drum machines, pattern sequencers and synths out there, but many of these are closed shops – fine for working with by themselves but a problem if the results need exporting to a sequencer in order to combine with files from other programs. As our challenge meant that we'd be combining audio from several different apps, we had to rule out a series of tools that would have been very exciting to use for this feature. So before you take a look at just how the challenge played out, here's a quick summary of the apps that made the cut.



Monle

This four-track editor allowed us to take the patterns created in other programs and arrange them into some sort of order. Like returning to the good old Portastudio days - in theory at least...



DrumTrack 8

A useful grid-based drum sequencer that features a good range of kits and the all-important direct pattern export. No frills, and nearly no fuss.



BassLine

This attractive bass app has one eye on the TB-303 that inspired it at all times, but it is capable of other sounds too. It proved rock-solid throughout our iPad challenge.



Vox3000

Fun on toast. Type a phrase, hear it spoken back and export the resulting audio file ready to paste elsewhere.



ThumbJam

A powerful sound generator with internal loop facilities, polyphonic playback and serious tweakability. Its multiple scale type integration is a big selling point.

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> Step by step The iPad challenge



Monle (the app that we are using as a sequencer here) allows you to have four tracks of stereo audio playback, so the first thing we need to do is fill up its library with our files. These are all going to come from apps that support direct Audio Copy/Paste, as we don't have access to other gear and need fast, direct file transfer.



We kick things off with the drums, using DrumTrack8 as our pattern creation program. We've decided to make three patterns - one basic, one 'full' and one fill, based on the same sound set and at 120bpm. Using the 606 Kit, the first pattern is a four-to-the-floor kick pattern with a snare on beat four and some closed hats. We export this by copying the pattern to the Intua Pasteboard.



Back in Monle, we access the Intua Pasteboard via the **Disk** icon, then hit the **Paste Into Monle** option and finally name the incoming file. This process adds it to the list of sound files, which we can access by pressing the **+** button. We name our file **Drums Basic**. Selecting it adds the pattern to Monle's first track at the very top of the arrangement.



Now we need to copy this pattern a few times into the **Arrange** window, which means repeatedly pressing **+** as there's no copy and paste facility. After adding three copies, we manually move them to create a loop. This doesn't work well if the loop is assigned to the same 'lane', so we toggle between Lanes 1 and 2, dragging the loops to move them and pinching the screen to resize.



Once we've saved the Monle arrangement, it's time to return to DrumTrack8 to create our other patterns, which need making one at a time. First we make our 'full' loop. Once it's finished, we export it as before and import the file into Monle before repeating the whole process one last time for the fill loop.



Back in Monle, we add six versions of the main loop one at a time before adding two versions of the fill loop at the end of the phrase. Lining up these beats is a painstaking process, and we are concerned that the Export process appears to have pinched the first part of the waveform off the initial kick. Will this prove a problem later?



Now it's time to add some music to this rhythmic foundation. For the basslines, we're using BassLine, which has some tasty 303-style capabilities. We get going on creating two patterns, the first of which is centred around C. We use the **Cutoff/Resonance** and **Envelope** tools to help us shape the sound.



We export the file using AudioCopy, which is the most intuitive way to shift audio files between programs. Once copied, we open it in Monle and add it to the file list in the same way as we did the drum patterns. Next we repeat this process to create a second bass line in F, with this file copied and transferred the same way.



Back in Monle, we add these new files to the growing arrangement, with the **Bassline C** file added to the final two **Basic Beats** to create an introduction before the piece shifts to F for the moment where the main beats are intended to drop. It's hard work getting these to lock, and that pinched kick is already proving a problem.



It's time to open up ThumbJam, which is going to create our synth parts. The first of these is a Sawtooth sequence part recorded using its internal loop sequencer. Once the scale is set and the part is recorded, we export it via the Prefs and add it to Monle's library.



Back to ThumbJam for a second part now. This is a string pad that only plays for the second half of the loop. Once it has been sequenced, we export the loop as an audio file and incorporate it into Monle via the Intua Pasteboard just as we did for all the other files.



We've encountered our first import problem. While placing the two eight-second files from ThumbJam, a dialogue box in Monle pops up. There's no room to incorporate the audio, as all of the tracks are busy within the first eight seconds. We clear some space at the beginning for these two files and feel frustrated as the time we spent arranging things earlier is wiped away.



Once we've cleared some room, the ThumbJam parts can be integrated. As you can see, the SawLead part would be about to kick-start our track - except that Monle can't cope with the additional files. It won't save the master arrangement and keeps crashing. With the clock ticking, we've no option but to abandon them - a big shame.



Instead, we turn to Vox3000, which is a simple app a bit like an old Speak 'n' Spell. Simply type a word or phrase into it and hit the **Speak** button to receive an appropriately lo-fi spoken result. We're going to use Vox3000 to say 'one', to reflect the single hour we've had to make our track. Type the word **one** and hit the **Speak** and **Export** buttons. Open Monle and add the file.



In Monle, we add the spoken phrase and drop it right at the top of the intro. We would like to add this file again at the end - but despite a time-sapping restart, Monle insists on crashing if we attempt to add the file a second time. It's clear that there isn't going to be room for any more audio in this track.



Now it's time to start tidying up the audio for the second time. The arrangement has really suffered because so many regions have been moved to accommodate elements that we can't actually incorporate. We start with the drum loops, whose timing still isn't perfect.



Next we move onto the basslines. It's impossible to get these to lock properly to the beats. The pinched kick drum export is taking its toll as the bassline needs to start a fraction before each drum loop if the syncing is to be successful. After five minutes and more crashes, it still isn't perfect.



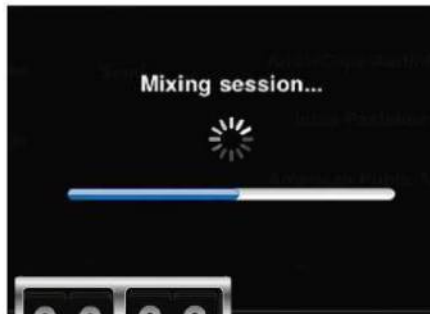
Holding two thumbs down on a region in Monle allows you to adjust the volume of entire files. It's possible to add fades in and out too, but we're just dropping the level of a couple of files to create some wider dynamics. We drop the levels of the second and fourth drums/bassline sections.

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> Step by step The iPad challenge (continued)



By holding a file with two fingers and dragging in opposing directions, you can create cuts in a file too. We really wanted to try this out but each time we did, Monle couldn't cope and crashed. Frustration mounted and sweat clung to our brow: we had just three minutes of the challenge remaining after so much lost time.



Time to bounce the whole track down. Monle has a **Mix** option that allows you to name your track before providing a progress bar as the mix goes down. Our overall result is hugely disappointing, but we're still struck by how much sound work can be done in an hour - even if the arranging proved so problematic.

POWER TIP

> Paste problems

Until the AudioCopy/Paste options are standardised, you should be very careful about which applications you choose to generate your content. There are some truly wonderful synths, effects and sound-generating apps available on the iPhone/iPad platform but many were 'off limits' to us as this specific project was all about whether it was possible to create a track on an iPad without plugging it into a laptop or having a Wi-Fi network available to bounce files to a third-party device. If you want to be truly creative on the move, they're off-limits to you too - so choose carefully!

Did we do it?

So, is it possible to make a track with the iPad alone? Without doubt. Is it possible to do it in an hour using a range of different programs and relying on a four-track 'sequencer'? Not really. To be fair to Monle, its principal function is to act as an audio-editing program for journalists so that they can record and combine voiceovers with audio files for broadcast purposes. Our early experiments saw it pass these tests with flying colours. What it doesn't do is allow the fine-tuning of dragged and dropped files, so lining up tempo-accurate regions is almost impossible.

The other big problem we encountered was the quality of the audio exports from one program to another. While most did a fine job of rendering patterns to audio files, DrumTrack8 pinched the first kick drum of the patterns it exported, creating yet more problems when trying to get these to sync to our basslines. In the main the AudioCopy/Paste facilities worked a treat, though, and when these processes become the norm later in the year, this challenge will be easier due to the increased range of apps

available for use. We'd even go so far as to say that this development could be as significant to our musical making futures as the standardisation of MIDI between rival synth and sequencer manufacturers was back in the early 1980s.

What's also clear is that if we'd spent our hour experimenting exclusively with the sound-making potential of all the apps we'd chosen, we would have discovered a great deal. Great sophistication often lies below the surface, and whereas the trend for DAW plug-ins at the dawn of their popularity spawned a collection of instruments that initially struggled to find their own identity, developers have not had that problem when writing for the iPhone and iPad. The result is a raft of applications that range from the quirky to the fantastically complex, and once the export options are been ironed out, a new wave of sonic expression will be with us. Many apps are switching their focus from being 'live' tools to 'mobile studio' ones - meaning that the iPad could truly become a music-making device to rival DAWs in the years to come. **cm**




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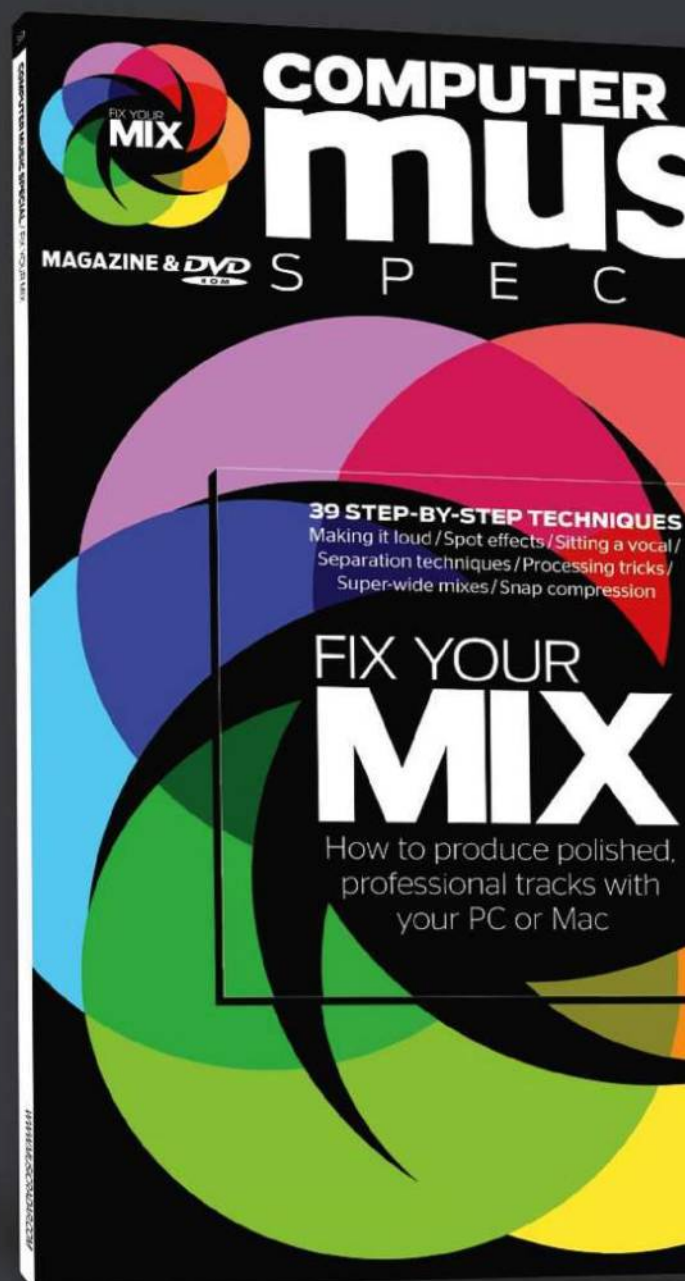
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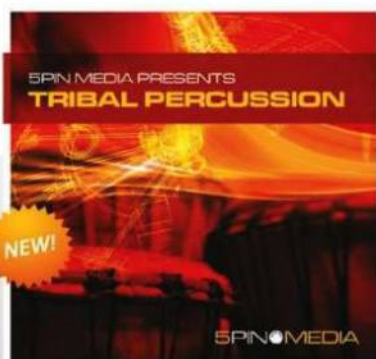
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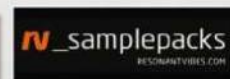
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