



FMCD TRACK 01

£349

**INFO**

**Native Instruments  
Guitar Rig**  
Comprehensive guitar  
soft/hardware

**Software  
components:**

**Amp Models: 3**  
Plexi, Twang Reverb and  
Instant Gratiifier

**Cab Models: 14**  
With up to eight available  
simultaneously

**Distortion: 2**  
Sreamer, Distortion

**Mod: 6**  
Tremolo, Stoned Phaser,  
Chorus+Flanger, Ensemble,  
Rotator, Oktaver

**Filter: 5**  
Wah Wah, Talk Wah, EQ  
Shelving, Parametric,  
Graphic

**Volume: 4**  
Volume Pedal, Limiter,  
Noise Gate, Tube  
Compressor

**Other: 4**  
Split (creates parallel sig-  
nal paths), Quad Delay,  
Spring Reverb, Studio  
Reverb

INFO (cont.)



# NATIVE INSTRUMENTS GUITAR RIG

JUMPING ON THE BANDWAGON OR BUILDING THE SUPERHIGHWAY TO GUITAR HEAVEN? STEVE EVANS POWERS DOWN THE AMPS, PUTS AWAY THE PATCH CORDS AND PLUGS INTO THE ULTIMATE GUITAR RIG – NI STYLE...

IF THERE'S ONE company that embodies the concept of software generated sound, innovation and stability it's Native Instruments. So when NI announces the creation of a guitar amplifier modelling tool complete with a hardware (yes, hardware) controller/interface – the immediate response is to pick up the phone and start blathering to anyone who'll listen in an attempt to get ones greasy little mitts on the thing.

It's such a juicy prospect, because I think NI are the so-called bollocks of the dog when it comes to getting a clear, fat sound out of a computer, and the prospect of NI's quality control being applied to the world of amp modelling is a bit like knowing the Swiss are on their way round to sort your plumbing out, and that you'll have high pressure, hot water and no leaks for all eternity!

**The concept...**

The full Guitar Rig comprises the software and the Rig Kontrol foot-pedal. Patches can be created by adding modules to a virtual rack, which form the signal path for the guitar. There are different amp types, effects, splitters and a naughty cab emulator where classic cabs can be modelled and bastardised at will, and then miked up from different positions (including behind the cab) using different microphones, pan positions and even phase relationships.

The Rig Kontrol hardware also acts as a DI box to ensure your guitar signal arrives at your soundcard at the correct level, to ensure a crisp and full-bodied result, and the control signals are transmitted without any MIDI or USB nonsense to worry about.

The inclusion of a tuner, output limiter and two virtual 'tape decks' with

time and pitch controls for practice, recording and ping-pong over-dubbing are the cherries on this big and very tasty looking cake.

The rig can be used as a standalone program or as a plug-in in your favourite working environment, and really does offer a comprehensive and very well thought out way of recreating the business of getting a guitar sound, but keeping it simple, recallable and (due to its modular open architecture) updateable too.

### How does it look

The Guitar Rig interface is a bit like your brain, in that it has a very definite split up the middle. The logical left hand side deals with the sensible business of managing presets, components and preferences, the right hand side is the creative bit and contains the virtual rack where the modules are placed and where the tweaking and sonic experiments occur.

The modules are dragged from their 'reservoir' on the left, and dropped into place on the right; a thick red line shows which modules the new module will land between to make this process a bit easier. This is the fun looking bit of the rig. The modules are careful not to infringe on iffy trademark or copyright territory, but the graphics, colours, fonts and funny names leave you in no doubt as to the inspiration behind the modules – and can I just say that any conclusions drawn by this reviewer in respect to this, are purely the reviewer's own opinion and in no way a reflection of the opinions and/or intentions of Native Instruments or Future Publishing... lovely!

It's the modules that form the nuts and bolts of Guitar Rig, so let's pile in and have a detailed look at them all.

### Amp it up...

Each of these amp modules has a secret bottom panel that can be expanded by clicking on a little '+' button on the right. This panel contains the Expert Mode controls, which faithfully model the idiosyncratic behaviour of old valve amps that make the sound that people love so much. These are the real nuts and bolts of valve circuitry. There are five expert controls on each amp:

'Variac' mimics a variable AC power supply to the amp. 'Power Supply' chooses between a virtual AC power supply frequency of either 50 and 60Hz. When you boost the virtual power with the Variac control with the power at 50Hz, the ripple

## THE AMPS



### INSTANT GRATIFIER

The beautifully rendered Instant Gratifier amp is clearly an affectionate nod to Mesa Boogie's classic multi configuration tube amps the Dual and Triple Rectifiers. This is the model with a gain/master volume arrangement, and is capable of the most 'gainy' modern Nu-Metal type sounds, but is by no means limited to that. There are four channels: Clean, Raw, Vintage and Modern, the last being the filthiest – think Blink, Limp Bizkit...



### PLEXI

This module is modelled on the '68 Marshall (Plexi) Super Lead. There was no master volume so the amp had to be fully cranked to get the definitive rock guitar sound of the late sixties and seventies. This was the same amp Hendrix used and also the same model that was apparently responsible for Van Halen's 'Brown' sound, where the amp was either under or over powered (no-one ever seems to agree which) with a variable AC (variatic) supply. Sneaky! Use Plexi with a distortion pedal for your 'Classic' rock tones.



### TWANG REVERB

This one seems like a bit of a mix of a Fender Deluxe Reverb and a Twin Reverb, the classic 'blackface' workhorse of the mid sixties. The Deluxe remains a firm favourite of country players and bluesers alike (who often use one alongside a more modern amp through a 4x12 perhaps). Crank this up with a bit of trem for that Twin Peaks goes surfing kind of sound.

### FMCD TRACK 01

On the CD you'll hear a range of example sounds showing the versatility of this software

### Presets:

Guitar Rig comes with several banks of 128 pre-set guitar tones and effect patches, and has the capability to look after over two million presets if required!

### Rig Kontrol

#### Controllers:

4 footswitches, 1 rocker pedal (control is over a dedicated audio channel)

#### Inputs:

2 x 1/4" jack unbalanced mono (high impedance)

#### Outputs

2 x 1/4" jack unbalanced mono (low impedance)

#### Power:

9V battery or external power supply (DC 7.5 – 24V either polarity, 20mA or more) (AC 6V – 18V, 20 mA or more)

#### Dimensions:

303 x 211 x 60mm

#### Weight


1.9kg

#### Authorisation:

Challenge/ response (The registration tool generates a unique hardware ID. This is emailed/posted to NI with the serial number and the authoriser code is returned)

### INFO (cont.)



 The complete package...

**System requirements:**  
**Windows XP:**

Pentium with 700MHz or Athlon with 1GHz processors, 256Mb RAM Mac OSX 10.2.6 (and OS9) G3 800MHz or faster, 256Mb RAM (64Mb RAM) Audio interface compatible with CoreAudio or ASIO, CoreMIDI interface (for standalone version)

**Windows compatibility:**

Standalone: ASIO 2.0, Direct Sound, MME

Plug-in: VST2.0, Cake-walk DXi, RTAS

**Mac compatibility:**

Standalone: CoreAudio Plug-in: VST 2.0, Audio Units, RTAS face compatible with CoreAudio or ASIO, CoreMIDI interface (for standalone version)

**Windows compatibility:**

Standalone: ASIO 2.0, Direct Sound, MME

**Plug-in:**


VST2.0, Cakewalk DXi, RTAS

**Mac compatibility:**

Standalone: CoreAudio

**Plug-in:**

VST 2.0, Audio Units, RTAS

 modulation that would occur in a real valve amp also occurs here. 'Sag' is what happens when the power supply can't quite keep up with what you're asking of it. When you play a loud signal the supply voltage – well – sags. This control can enhance or eradicate this anomaly.

'Response' also affects how quickly the amp responds to playing dynamics, but this time by altering the efficiency of the power supply's capacitors.

'Bias' controls what's called the grid bias for the virtual valves. It can be used to alter tone but it can also be used to simulate the sound of older valves.

This is the most detail I've ever seen in an amp modeller, and as well as being able to make some truly lovely valve tones, it's equally easy to set it all wrong and create the worst amp in the world! Fortunately each amp model has a few in-built presets to put you on the right track from the off.

**Toys, Toys, Toys!**

Of course it's not just about amps and cabs. Most guitarists will attempt to create a pedal board resembling an architect's model of a small housing estate, but with all those pedals come patch leads and power supplies, and you can soon render a perfectly good guitar sound into a hissy, dirge-like mush. Guitar Rig comes with a hefty arsenal of toys that, like the amps, can be dragged from the toybox on the left into the rack.

**CABS, MICROPHONE POSITIONING AND PHASE.**

Having seen the detail in the amp modelling it came as no surprise to see an equal amount of care has gone into the simulation of the all important cabinet and microphone scheme. Amps are nothing without cabs, and cabs are nothing without microphones if you're recording so it's good to see the amount of flexibility that exists within this one module.

You can call up a limit of eight cabs in one go if you like. For each cab you summon up you will get three windows, the first of which shows a picture of the cab. The cabs are easily scrolled through using the up and down buttons beside the window. There's also a slider beneath the window where the cab can be enlarged up to 40% or reduced down by 30%, so a humble 1x12" cab could become a 1x9" or 1x17" if the mood takes you.


The next window along shows a pictorial representation of the virtual mic position. The five available positions are On Axis, Off Axis, Edge, Far and Back (that is not available on the closed back cab emulations obviously). Next window along shows a picture of the mic, which could be one of three dynamics including a Shure SM57 and a Sennheisser MD 421, as well as a Neumann U87 condenser and a Neumann Bottle tube condenser.

Once you have your basic cab and mic position set up, you can further perfect the arrangement with the six controls on the right.

Volume, Bass, Treble and Pan speak for themselves. Air introduces early reflections into the signal and Distance (which only comes into play when there is more than one mic present) delays the signal, thus causing phase-based frequency anomalies between the mics. A reverse phase button is present for each mic so you have a pretty accurate replica of a real multi cab/multi mic array with all the flexibility and tonal control that goes with it.

A master volume for the whole cabinet module controls the output to any post processing or the master output module.



 Amps are nothing without cabs, and cabs are nothing without microphones

“This is the most detail I've ever seen in an amp modeller. As well as being able to make some truly lovely valve tones, it's equally easy to set it all wrong, and create the worst amp in the world!”



 **OKTAVER**

The unmistakable ‘how much more brown could it be?’ finish coupled with Oktaver’s white lettering marks it out as a thinly disguised Boss OC-2 Octaver emulation. This model has main controls for the Direct, Oct 1 and Oct 2 levels, but strides ahead of the original by including independent cut-off frequency and resonance controls for both synthesised Octaves. As long as you play one note at a time the tracking is brilliant and the tone is as fat and round as the Southern Hemisphere. Possibly the most fun module in the rack.

**WAHWAH PEDAL**

For anyone born in the last fourteen seconds, a wah-wah sweeps a resonant



 Oktaver

peak over a frequency range with the resulting onomatopoeic monica.

This particular wah-wah is probably one of the most tuneable I’ve used. All the useful stuff is in the Expert section. Here you can select whether you use a low-pass, band-pass or high-pass filter and also mix some dry signal back in. The groovy bit is being able to set the frequency, resonance and volume of the effect for the minimum, midpoint and maximum travel of the pedal. This means you can create exactly the right kind of wah for your needs.

**TALKWAH**

You may have seen pictures of long haired guitarists getting into the groove




 Talkwah

while seemingly having their stomachs pumped, if not you’ve almost certainly heard the intro to Bon Jovi’s *Livin’ On A Prayer*. One of the guitarists was probably Peter Frampton and he was playing his guitar through a TalkBox, a little device that plays the guitar sound through a little speaker, up a tube into the ‘oral cavity’, where the



 Stoned phaser



 Chorus and flanger



 Ensemble

**PLUG-IN OR STANDALONE?**

Guitar Rig will run as a standalone application and will access your audio hardware outside of any host DAW program. A preference box will ask which interface, what sample rate and which output device, and a slider is available to alter the latency.

Obviously the lower the latency the more work the CPU must do, and if you ask too much there will be snap, crackle, pop and eventually nothing, so you need to compromise. I was running a Macintosh G4 867DP and had a latency of 6ms using a MOTU 896 interface and had no problems at all (you have to remember to switch off any direct monitoring where the input signal is fed straight to the output for latency free monitoring though).

The software operates equally well as a plug-in within your DAW as an insert on an audio track. In this environment you get the added benefit of being able to automate any of the parameters throughout the song, and full recall of any session settings.

At present Cubase, Nuendo, Logic 5 and 6, Sonar, Pro Tools 6for OSX, LE and Free are all supported with both RTAS and HTDM versions for Pro Tools.

‘talker’ makes the sound resonate by – er – talking, and the whole appalling mess is then picked up by a vocal mic. If you’re very lucky you end up with the intro to Bon Jovi’s *Livin’ On A Prayer!*

This isn’t the most impressive module (in fact the best talk box emulator I’ve come across is on Korgs’ AX10G which is reviewed on page 52).

**EQ SHELING**

This is a no frills shelving EQ for general sound shaping duties. A high and

low frequency cut/boost will help control boom and sparkle.

**EQ PARAMETRIC**

For pinpoint accuracy we have the parametric, which is capable of some very precise cutting and boosting, as each band has a variable bandwidth or ‘Q’.

As with the shelving, there are only two bands, however, more complex EQ needs could easily be met by using a shelving followed by a parametric perhaps.

 EQ GRAPHIC

Quite a precise shape can be created with the graphic, which uses eight band-pass filters to shape the tone. All of these EQs work well and are fairly uninspiring on their own, but when you start using them before and after effects, they can dramatically alter the behaviour of all the other modules and become powerful tools.

## DYNAMICS

## VOLUME PEDAL

Like the Wah-wah, the Volume Pedal module is essentially very simple, but has the facility for customising the curve, so the sound doesn't go completely at the minimum pedal setting, and so the level at the mid point is right for what you need at the time. This is useful for times when a compressor may be next in the chain for example.

## LIMITER

A limiter is just what you need when you are using extreme resonance or feedback effects. Sometimes a particular frequency will jump out at you, and a limiter like this will simply prevent it from getting too loud and distorting the next module's input.

## Noise Gate

Although there is a basic noise gate built in to Guitar Rig's input module, this more flexible one is provided for use

after modules that may generate unwanted noise later on down the line. Its Hold, Attack, and Release controls should help make the gate 'invisible', and NI's useful Learn function is a quick way of automatically setting the threshold just above the residual noise floor.

## TUBE COMPRESSOR

This is a good all-round compressor with some real muscle there if needed. The attack and release times are fast, but they don't sound fast like some compressors you might use for a strat style funk rhythm track, say. It's a good character compressor though, with control over the 'knee' (how viciously the compressor kicks in when the signal crosses the threshold).


The Saturation control in the Expert section is a real bonus and adds some warmth to the sound (in fact it's downright dirty if you crank it). It's really good for fattening up a bass guitar and reminds me of the sound of driving my Summit TLA-1 tube compressor.

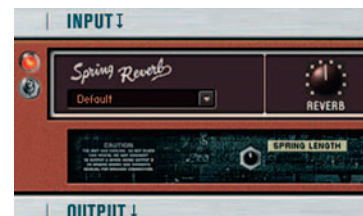
## DELAYS AND REVERBS

## QUAD DELAY

Quad delay is so named because it employs four taps to ping your sound right back at you. In the Expert section, you'll find controls for Diffusion and Sync, and between the two of these it's possible to achieve anything from simple clear delay to an almost ambience like early reflection. The delays can be modulated to quite hideous



 Quad delay



 Spring reverb



 Studio reverb

effect (try the Baby Talk preset if you get chance), but when you get the hang of it you realise that this is a flexible delay, and several working together could be bonkers.

## SPRING REVERB

Spring Reverb is an emulation of just that, except that it's capable of creating some massive springs. With everything maxed out I was still hearing reverb after twenty seconds of playing a note, and it's a natural sound all the way.

The manual points out that with a virtual spring there's no hiss and hum, but it almost sounds weird without it! Can we have a hiss and hum generator, please!

## STUDIO REVERB

This is the posh reverb for your finishing touches. Time, Bright and Mix are the main controls. The Expert section has high and low damping and a Pre-Delay.

This is a pretty good reverb but it's a shame they couldn't include an impulse sampling delay (like Audio Ease Altiverb or Emagic Space Designer) for maximum realism, mind you, I imagine that would probably bring my poor CPU to its knees!

## SPLIT

Right here is one of the most powerful modules in the rig. The Split module

## IMPEDANCE

This is a little understood aspect of electronics, certainly to most guitarists, who normally think that if they can find an adapter to turn their 1/4" jack into whatever connector they need then they should have no problem – wrong!

One of the reasons why plugging your guitar straight into a line input on your soundcard often sounds pony is that not only is the level wrong (usually too low), but there is also an impedance mismatch. Impedance is a bit like resistance but takes some other esoteric qualities like reactance and capacitance into account.

Guitars have a high impedance output and guitar amps have a high impedance input, which means that you don't need a lot of drive current to make the sensitive valves and FETs work. Line level inputs are low impedance, which means you need a strong drive current to prevent the signal from disintegrating under the stress of driving the circuitry.

This is why you sometimes end up with a weak and noisy signal from a perfectly good guitar by the time you've boosted the signal to a suitable level.

The Rig Kontrol acts as a DI box and boosts the guitar signal to a high level, low impedance signal that's perfectly matched to the line input of your audio interface. The result is a clear, strong and noiseless guitar sound.

← “All of these EQs are fairly uninspiring on their own, but when you start using them before and after effects, they can dramatically alter the behaviour of all the other modules” →



#### Split



#### Tuner

creates parallel signal paths that can include whatever modules you wish (including other splits!) and brings the split signals back together to be balanced with a cross-fader.

To use the split you simply drag modules between the Split A and Split B modules for one signal path, and between the Split B and Split Mix modules for the second signal path.

I've made a very basic patch where the signal is split into two, half going to the Gratiifier amp and the other half going to the Plexi.

The sound from each split is then panned hard left and right at the Split Mix module to create a stereo sound with an entirely different amps/ cab setup on either side.

Imagine the scenarios with splits within splits and the crossfades for the various Split Mix modules being automated within your sequencer... awesome potential for mind bending sound morphing action, I think!

## FIXED RACK COMPONENTS

You can add what you like from the above list of toys, but whatever you do there are six components that live in the rack at all times. They don't all have to be visible but a quick tap on the control centre bar at the top will snap them into view.

### INPUT + OUTPUT

This is where your guitar signal enters the Guitar Rig. A dual-channel horizontal virtual LED on the left shows the input level, and as usual with all things digital you want to be as hot as possible without distorting.

A volume knob adjusts the incoming signal level and a very simple noise

gate with an adjustable threshold and a Learn button to auto set the threshold are on the right. The rest of the controls are to do with the Rig Kontrol foot-pedal, so we'll look at them later.

The Output module has a Preset Volume that is saved with a patch and a Master Volume that controls the whole output level to the next link in your chain. A basic limiter sits across the outputs with a red LED to indicate any activity.

### TUNER

A tuner module has sensibly been supplied so you don't need any extra pedal complications on the way in to your soundcard. It works in either cent or strobe mode and has presets for Bass, open tunings in D, E, G and A, and DADGAD, as well as standard guitar.

The tuner can be tuned 15Hz in either direction and a handy Drop Tuning function is included for you C# merchants. There's a reference tone generator if you need one too.

## KONTROL

As well as the Rig Kontrol you can use any other MIDI controller to access any of Guitar Rig's parameters. The process is made very easy by the Learn function. The settings you define in the controller window will affect exactly what controls what and different controller sets can be saved for different instances e.g. live you may have foot-pedals that call up different presets, but in the studio the same pedals may turn individual modules on and off.

You define how many controllers there are and what they do within the rack and within individual presets.

Right-clicking or control-clicking on the desired parameter control in the rack brings up a little dialogue box with a list of controllers as defined by you. You can click on one of these or click on Learn and move the actual controller itself. Guitar Rig will then assign that parameter to that controller, overriding a previous assignment.



← “Imagine the scenarios with splits within splits and the cross-fades for the various Split Mix modules being automated within your sequencer...awesome potential for mind bending sound morphing action, I think!” →

### METRONOME

As well as providing a tempo reference the metronome also acts as the master timing reference for the sync'able aspects of the effects modules. It will of course sync to the master clock of a session in which Guitar Rig is used as a plug-in.

There are about twenty different time signatures to choose from, including two different feels for 5/4, 7/4, 9/4, 5/8 and 7/8, so any budding Bartoks out there should be very happy!

There's a Tap function, which can (like any other function) be assigned to a pedal on Rig Kontrol, and you can choose your own sounds for the metronome's downbeat and sub beats.

### TAPEDECKS 1 + 2

These 16-bit audio file players and recorders are there to help with practising and recording what you play through Guitar Rig. Tapedeck1 has a time-stretch engine that will



## ALTERNATIVELY

### IK Multimedia

**Amplitude** (FM128, 10/9/8/9/9, £279)

Both standalone Live and plug-in versions are available. Amplitude features amp and cab modelling with basic mic types and positions. A virtual stomp box set-up included wah, delay and distortion, and post processing includes stereo delay, reverb and parametric EQ.

[www.ikmultimedia.com](http://www.ikmultimedia.com)

**Line 6 Pod XT** (FM131, 9/9/9/9/9, £329)

The follow up to the kidney bean shaped Pod hardware has an improved editor/interface and can hook up to your computer with a USB cable for editing and patch librarian purposes. Great range of amp, cab and stomp box models plus effects – good live choice with optional foot-pedals.

[www.line6.com](http://www.line6.com)

**Line 6 Guitar Port 2** (FM143, 9/10/8/8/10, £149)

Software based with a USB hardware dongle, Guitar Port is a great budget modeller with an all-round basic effects set-up. Its strength is its embedded browser which uses the vast resources of its website to provide backing tracks, tabs, patches and all kind of info.

[www.line6.com](http://www.line6.com)

### Tapedecks

independently alter the tempo or pitch of the file to suit your needs (the quality can be adjusted to optimise CPU load in Preferences).

Tapedeck 1 will also playback loops, so it's an ideal practise tool, and there is a bunch of audio supplied to get you going, including instrumental loops and some bars of drums and bass at varying pace.

Tapedeck 2 has no time-stretching but will record you playing along with a backing track from Tapedeck 1. You can then bang this file straight up to deck 1 using the purpose built button and repeat the process, thus creating a

multi-layered harmonic masterpiece, like Brian May an' that.

### Rig Kontrol

The hardware element of Guitar Rig is the blue foot-controller Rig Kontrol (I know K is a good marketing hook, but konstantly using it does get on your knerves after a while!).

Rig Kontrol does a great job of eradicating all the problems you normally get with software amp modellers regarding the basic guitar signal that goes to the A-D converters.

This foot-pedal acts as a DI box and ensures that the guitar signal gets to the

audio interface at line level and at the correct impedance (see the Impedance box on page 36), and there are independent gain controls for both inputs – yes there are two inputs, so you can plug in a second guitar or a stereo guitar – if you sacrifice the controller functions of the pedal. Allow me to explain.

Unlike most external controllers Rig Kontrol uses an audio signal instead of a MIDI or USB signal. The audio control signal (which sounds like a tone that uses different octaves for each controller) enters Guitar Rig alongside your guitar tone, so the stereo input LEDs on the Input module would show your guitar signal on one side and a constant level on the other that fluctuates slightly when you fiddle with the pedal.

The Input module has an Auto button that will detect which channel is carrying what information and will distribute it accordingly.

The rocker pedal on the board is optical and as the control signal is audio there is a much finer resolution to the sweep than the 127 steps afforded by MIDI, and so slow movements produce no aliasing (that annoying stepping effect).

So, the two 1/4" jackplug outputs on the back of Rig Kontrol hook up to two inputs of your soundcard. One guitar goes into one of the 1/4" jack inputs if you want to use the controller. Otherwise you can use a stereo guitar like a Rickenbacker or Chapman Stick

## STORAGE – BANKS, PRESETS AND TEMPLATES

**Guitar Rig has an awesome recall system. A Template stores a setting for an individual component within a Guitar Rig Preset. A Preset stores all the modules in your rack along with individual module settings. A Bank contains 128 Presets. Using Guitar Rig's Bank Select messages enables you to have access to 16,384 banks of 128 sounds. This gives you over two million different presets if you want them!**

Each module has a little drop down menu of settings. As soon as you change something a save, overwrite or delete option is available, and your setting will forever swell in that menu.

Right clicking or control clicking on any of the banks or presets will also bring up a list of sensible housekeeping options to help stay organised.

A Properties tab even allows you to store the author, instrument, tone and date modified, as well as an info box for detailed description and a Favourite check-box for instant inclusion in your Favourites bank.

Using the Search function means you can enter any of these parameters and the likely suspects will pop up. You need never lose a guitar sound again!



“No doubt about it, NI have delivered a barnstormer. The detailed amp, cabinet and microphones modelling is the best I’ve used”



NI have delivered a barnstormer

(remember those?), or you can plug in two guitars and use a Split module set to Dual mode and create two entirely separate guitar sounds within the one set-up and jam baby – or both play along with a drum track and record it.

Although NI keep mentioning live use in the manual I have a feeling that the layout of the pedal could be better for that application. At the moment the four foot-switches are laid out in a two by two square with the rocker pedal on the right. It’s hard enough hitting the right pedals when they’re all in a line on stage in the dark, let alone when they’re one above the other. The existing layout is okay for the studio, but a more live-friendly and flexible option for stage use would be awesome.

The pedal-board is powered by a separate AC or DC adapter or by a 9V battery. I’ve kept mine on for three days straight and the battery shows no sign of abating yet.

### Conclusion

No doubt about it, NI have delivered a barnstormer. The detailed amp, cabinet and microphone modelling is the best I’ve used, and I wouldn’t hesitate to recommend it to any of the purist valve-head nutcases that I frequently find myself recording.

The effect modelling is as almost as good but there are some holes. The inclusion of some pitch change, classic fuzzbox, envelope following and alter-

native waveform generators would put this package right at the top of the tree for computer-based guitar tone solutions. This is an open system, though, and there is scope for the inclusion of all of these in time – I wonder whether we will be charged? It’s a bit like this is the core system and there could be many treats to follow, we’ll see.

As far as stage work goes I wouldn’t use it yet. There’s no bypass on the effects modules and assigning a foot-switch to one of the on/off controls has too much of a lag and clunk effect to use live in a performance, Line 6 still have my vote for that side of things – again this and a couple of other minor jitters will undoubtedly be improved in future upgrades, this is version 1.0.0 after all!

The rocker pedal is a different matter though, it’s tweakability makes it the perfect software wah and volume controller. The whole controller thing is easy to get to grips with and actually the Guitar Rig itself is easy to find your way around without resorting to the manual too much.

In conclusion, I highly recommend Guitar Rig as the cleanest, smoothest sounding amp modelling software there is. You couldn’t do better in the studio environment. You’ll need a powerful computer, NI recommend a minimum 1GHz processor but it’s worth it. Right then, I’m off to do some crap finger-tapping! **FM**

### LATENCY AND THE BUFFER

When you play a guitar through a computer you are always going to get latency – the delay between you hitting a string and the sound being converted into digital information, the information being processed and then reconverted back to analogue again. Even the best systems will still have one or two milliseconds but that shouldn’t really be a problem.

NI offers a nice analogy in the manual about how computers handle audio, which is worth repeating here. Imagine you need to create a continuous flow of water but your hosepipe is intermittent. You could get round the problem by filling a bucket from the hosepipe and then slowly pouring the water from the bucket. As long as the bucket holds enough water and the hosepipe doesn’t stop for too long you should achieve a constant flow – right?

Although audio is continuous the computer occasionally has to do other things, so it stops doing audio for a bit, but it has filled a buffer with audio that keeps playing while the computer is otherwise occupied. Assuming the buffer is big enough, and the computer doesn’t get distracted for too long then the audio will continue.

A small buffer means quicker delivery of audio, but the computer has to work fast to keep it filled, which is why you get lower latency with a more powerful computer.

### \*STOP PRESS\*

Just as we were going to press an update appeared which takes Guitar Rig up to version 1.1. Here’s a quick rundown of what’s changed...

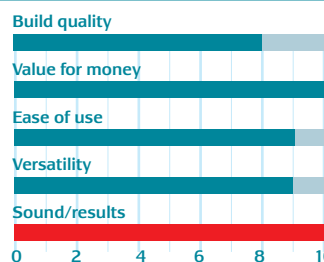
#### NEW COMPONENTS


- "AC-Box" Amplifier
- Treble Booster
- Psychedelay
- Pitch Pedal

#### IMPROVEMENTS

- "Audio Engine Off" Button
- "Mute Sound" Button in the Tuner
- Various cosmetic changes

### VERDICT NI GUITAR RIG



 An awesome sounding, highly detailed amp combo with infinite expansion potential.