







### DOING THE DOUBLE

**TWO** five-position voice switches provide access to a huge range of clean and distorted tones

### BOOST!

**THE** booster control works on any voice, with three boost types in the editor app, and footswitchable convenience, too

### CONTROL PANEL

**THE** simple, easy to use, totally analogue control panel makes playing the THR100D as easy as falling off a digital log

### AT A GLANCE

**TYPE:** Digital preamp, digital power amp

**OUTPUT:** 50 x 50W

**CABINET:** 2x12 dual mono cabinet

**CONTROLS:** Voice select, booster level, gain, bass, mid, treble, presence, reverb level, master volume, 2x channel volume

**SOCKETS:** 2x input, 2x speaker out, 2x line out, effects loop (dual loops on TRS jacks), headphones out, USB

**WEIGHT:** 4.5kg

**DIMENSIONS:** [HxWxD] 125x405x215mm

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## YAMAHA THR100D £755

A digital amp that's really as good as valves? You'd better believe it...

**WHEN** Yamaha came up with the THR combos a few years ago, a lot of guitar players liked the novel 'third amp' concept that drove their design. You had your big amp for gigs and a smaller one for band rehearsals, so what you needed was a small, unobtrusive, lounge-friendly amp that wouldn't annoy your significant other by taking up valuable floor space. Add stereo speakers, great onboard effects and a handy USB recording interface, and the THR was a great success. So much so in fact, that lots of THR users started to use the amp for gigs as well, which in turn drove the development of the head you see here – the all-new THR100D. It's a THR, but this time one that's intended for live use.

So what makes the new head so impressive? Well, for a start, it has Yamaha's THR front-end, which we already know sounds great, but what makes the THR100D special is its clever digital power amp, which faithfully mimics the operation of real valves. Then there's the fact that with the THR100D, you get two of everything: two preamps, both with a built-in booster function that behaves as a stompbox; two effects loops; two power amps; two XLR line outs; and if you use it, Yamaha's specially designed dual mono speaker cabinet, which has two different-sounding loudspeakers. Many pro players use separate amps for clean and lead sounds, and often combine them; that's how those elusive lead

sounds that have distortion with no loss of clarity are made, and this is the THR100D's party trick.

The THR100's cream steel case has the same character as the THR combos, with pleasing proportions and a hint of Art Deco from the angled slots over the controls. The control layout cleverly hides the fact that inside the THR100D are two seriously powerful Yamaha digital signal processing chips. The interface is entirely analogue, with no LCD displays, no presets or confusing buttons with hidden features. What you see is very much what you get, with a five-position amp voice selector, which packs three overdrives – crunch, lead and modern – and two cleans: solid, and er, clean. There's also a

channel volume control, because the master volume control works inside Yamaha's Virtual Circuit Modelling environment, adding more drive to the THR's digital power amp simulation, which in turn has five different valve choices, as well as Class A or Class A/B operation. Yamaha has restricted onboard effects to reverb only, but these come from their SPX library and are as good as those found in many top studios. You also have two effects loops, which can be used separately or combined and used as one for both channels as needed.

Lurking on the rear panel are two speaker-simulated balanced XLR line-outs, with a ground lift switch that uses the latest Impulse Response cabinet simulation.

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### Virtual Circuit Modelling

How Yamaha built an amp in the digital domain

Virtual Circuit Modelling, or VCM for short, is Yamaha's proprietary way of digitally emulating analogue circuits. A valve amplifier is made using quite simple components – resistors, capacitors, transformers, loudspeakers, and of course, valves. However, the interaction between these components is far from simple. In a high-impedance, high-voltage valve circuit, components placed too close begin to affect each other through inductive coupling, while the complex relationship between an output valve, transformer and loudspeaker is very difficult to model, changing all the time with frequency and amplitude. With VCM, Yamaha basically recreates each component in the digital domain, complete with all the characteristics of the real thing. These digital components are then connected to each other digitally. When Yamaha's engineers are happy with the results, the digital source is ported into code that can then be used by Yamaha's DSP chips – simple!

There's also a USB socket, which lets you hook up the THR100 to your PC or DAW for recording, as well as tweak some aspects of the amp from a handy offline editor. Again, Yamaha keeps this really simple, with a choice of three different boosters and four reverbs. You can change the effects loop mode from series to parallel, activate a noise gate, and load your IR data for the cab emulation, and of course, save all of this separately for both of the channels.

All of this sounds great, of course, but does the THR100D sound any good? In short, yes, it



Each channel has five voicings, from crystal cleans to screaming lead



You can select the valve type and class for each of the power sections

absolutely does. There are superb Fender-influenced cleans, bluesy touch-sensitive crunches and a choice of classic or modern lead tones, all footswitchable for your convenience. They sound so convincing it's really hard to believe there are no valves. The interaction of the clever digital power stage with the loudspeaker is just like that of a good valve amp, and the virtual valve choices are uncannily authentic. The reverbs are superb, but some are a little on the bright side – we'd like to see a simple tone control added to the offline editor app.

For the price, we think that the THR100D is incredible value for money – there are loads of other modelling amps around, of course, but none that deliver all these features at the price. All things considered, the THR100D could be a game-changer.

Nick Guppy

SUMMARY	FEATURES				
	SOUND QUALITY				
	VALUE FOR MONEY				
	BUILD QUALITY				
	PLAYABILITY				
OVERALL RATING		★★★★★			

### ALSO TRY...

#### BLUGUITAR AMP1

£589

This is probably the THR100D's closest competitor, but it doesn't do the two-amp rig thing. Nevertheless, it's a brilliant, highly portable product with great tone and flexibility.

#### HUGHES & KETTNER SWITCHBLADE 100 TSC

£1,299

It isn't strictly a digital modelling amp, but the Switchblade combines analogue solid-state and digital effects with a very slick digital control interface and typically great H&K tone.

#### KEMPER PROFILING AMP

£1,199

It has similar tonal finesse and can mimic any amp rig, but the Profiling Amp doesn't have the touch-sensitive realism of the THR, which we think puts the THR100 in a class of its own.