

# Krell K-300i

We're a long way from the old idea of hairshirt hi-fi here: the latest heavyweight integrated amp from Krell's Connecticut factory comes fully-loaded – and then some!  
 Review: **Andrew Everard** Lab: **Paul Miller**

**Y**ou need to do some serious rethinking on first encountering the Krell K-300i. If you're expecting a simple device all about massive power and minimalism, you're going to be disappointed, but for those looking for an amp able to handle all the needs of the modern music listener, this one could just be bang on the money.

Of course, being a Krell, that's bang on quite a bit of money, at least by the standards of the European competition. Available in a silver or black finish, the K-300i comes in at £7500, with the optional digital/streaming module that was fitted to the review sample bringing the price up to the £8800 mark.

Mind you, writing this review just after returning from Munich's High End show [see p18], where almost everything I listened to seemed to have one more zero on the price than I'd been expecting, that tag seems anything but outrageous. In a world where the high-end industry seems firmly on a course of 'premiumisation', as I heard it described, the pricing of the K-300i almost seems modest.

## STATES OF THE ART

That's particularly the case when you consider what you get for your cash. This is the most affordable route into Krell ownership, and the size of the amp is well suited to European tastes, being a standard (ish) 43.8cm wide and just 10.4cm tall. What's more, while weighty enough at around 20kg, it's hardly a monster. For all that it does look impressive, especially in the black finish of the review sample – never been too sure of the silver – and with its use of thick metal and substantial construction. And, of course, the K-300i is still made in the USA...

As standard the amplifier comes with five analogue inputs – three on stereo

**RIGHT:** A massive 770VA toroidal transformer [lower left] supports multiple regulated PSUs, feeding the optional digital board [upper left] and iBias output stage [under heatsink, lower right]. Note 80,000µF reservoir bank [top right]

RCA's and two on balanced XLRs, with the option of 'home theater' bypass on one input to allow it to be combined with a surround receiver or processor. A single set of speaker outputs, on high-quality combination terminals, is backed up with RCA preamp outs, and that's about as complex as the amp gets, though there is an Ethernet port as standard, alongside RS232, infrared remote in and 12V trigger sockets, to allow it to be controlled in 'custom installation' systems. A matching, metal-clad system remote handset is also supplied with the amplifier.

It's possible to rename inputs to suit your requirements, and trims are also available to enable levels to be equalised across all sources. One can also change the IP address of the amplifier when its

Ethernet port is being used for control, error reporting, and also for downloading and installing firmware updates.

## HIGH-END HUB

However, things get much more interesting if you specify the optional digital module, which turns the K-300i into a complete digital/analogue hub. Based around an ESS Sabre Pro DAC it gains conventional S/PDIF optical and coaxial inputs, a USB-B port for computer connection, and a front panel USB-A socket to play music from memory devices. There's also a trio of HDMI sockets – two in and one out – that take sound from video sources using the Audio Return Channel part of the HDMI specification, while passing through 4K HDR video to a suitable monitor.



While becoming slightly more common on stereo amplifiers these days, such a provision is still a comparative rarity in this sector, even though it's standard on AV receivers. It's a welcome addition here, and a sign of the real-world thinking behind this amp. While some may still be lucky enough to have their music system in a separate 'sound only' room, many will find their hi-fi sharing space with the TV, and this provision allows very high quality sound to be enjoyed from TV via the main system speakers.

The same goes for the streaming capability of the K-300i when fitted with the digital module. Using the dedicated Krell Connect app running on an Android or iOS phone or tablet, or the generic mConnect Control app, it turns into a network audio renderer able to play AAC, ALAC, AIFF, FLAC, WAV and WMA files up to 192kHz/24-bit, as well as DSD up to DSD128, from UPnP-enabled computers and NAS units. It'll also play online services including Spotify, vTuner Internet radio, Tidal (with MQA decoding for Tidal Masters), Deezer, and Qobuz.

The K-300i is also Roon-ready, so it can be played to as an endpoint by a Roon core, and has Bluetooth with aptX for wireless music streaming.

Although the circuit design is all-new, the basic amplifier technology here is familiar Krell stuff [see PM's boxout, below]. In short, the amplifier uses the company's differential 'Krell Current Mode' topology

*'The sound is dramatic and yet fluid, big and expansive'*

from input to output, with an iBias-based power amp delivering a claimed 150W/8ohm, doubling into 4ohm. As PM's Lab Report makes clear [p43], the amplifier exceeds these claims with ease, and certainly in use the impression is always one of an effortless delivery of the music.

## STARTLING SOUNDS

For those with an awareness only of the mythology that accompanies Krell, the K-300i may come as a surprise, for though it is powerful it is not a fire-breathing amp that storms through everything you choose to play. That's a common caricature of big American amps, and (usually) an ill-founded

**ABOVE:** The K-300i has a set of cursors to the left for source and menu operation; volume control is on two more little buttons below the display, plus headphone and USB-A sockets

one, that the K-300i dismisses with a sound that's generous, rich and closely detailed, while at the same time having plenty in reserve for the dynamics of the music.

One thing that's very much there from past Krell amplifiers is the solidity and punch of the low-end. Used with speakers able to reveal it, such as my PMC OB1s, the music is built on substantial foundations, but has the agility to propel even the deepest, fastest bass-lines. Play The Who's 'Pinball Wizard' from the original recording of *Tommy* [Polydor 9861011; DSD64], and the power and deftness of 'The Ox' is clearly audible, driving the track on.

With Olivier Latry's wonderful recent *Bach To The Future* release of the organ of Notre-Dame de Paris [La Dolce Vita LDV69; 96kHz/24-bit], the K-300i comes into its own with the groundshaking pedals. Yet it's not all about the bass, for the beauty of the '300i is the way this magnificent low-end is just the underpinning of a sound that's both absolutely 'of a piece' but also packed with internal detail.

That's heard in the Latry recording in the sense of this great instrument filling the enormous space, and the way in which air is being shifted to musical effect – not to mention the speed and definition of the notes, and the vivacity with which the timbre of the pipes is revealed.

Whether used purely as an amplifier with sources delivering analogue output – in this case a Sony SCD-555ES SACD/CD player and my usual Naim ND555 network player [HFN Apr '19] – or via its onboard streaming capability, the K-300i is one of those real 'get on with the job' amplifiers. Whatever your chosen recording has to give, this amplifier seems capable of delivering it to sometimes startling effect.

For example, playing the recent Budapest Festival Orchestra/Iván Fischer Mahler 7 [Channel Classics CCS SA 38019; ↗

## COOL RUNNING KRELL

Nearly 40 years after Krell's iconic Class A power amps [HFN May '11] hit the high-end, the company looks to be offering far less 'brutal' designs. When its iBias output stage technology was introduced [HFN Oct '14] the company suggested it was doing its part to modernise flagship hi-fi, increasing its appeal to consumers who were not as accepting of bulky intrusions into their living spaces as dyed-in-the-wool audiophiles. Now, as then, Krell claims that its iBias circuit technique combines the 'sonic benefits of Class A operation without the heat and power consumption of traditional Class A designs'.

In practical terms, rather than maintain a constant, high standing current (or bias) in the output stage – the brute-force, but wasteful, Class A approach to eliminating NPN/PNP transistor crossover distortion – these iBias amplifiers spontaneously adjust the bias to suit the music signal. This sliding bias technology differs from Technics' 'New Class A' and JVC's 'Super-A' regimes promoted through the 1980s because, in the K-300i, bias is calculated from a direct measure of the current delivered by the output stage. As a result it incorporates your choice of speaker – with its distinctive sensitivity and impedance vs. frequency trend – into the calculation of required bias. PM

## KRELL K-300I



**ABOVE:** No phono stage here as the K-300i services five line ins (three on RCAs and two balanced on XLRs). The optional digital card adds USB-B, coax and optical digital plus HDMI (up to 192kHz and DSD128) and a network streaming via a mobile app

SACD/DSD 128], the magnificence of this remarkable recording is served well by the Krell amplifier's combination of sheer weight and speed. The sound is dramatic and yet fluid, with a big, expansive sense of ambience and presence, and a totally natural-sounding arrangement of the musicians in a sharply-focused soundstage.

The brass in the second movement sounds spectacular, with the call and response effect dramatic and believable, while the building orchestra forces see the K-300i maintaining its grip on the music – and the speakers – even when working very hard indeed.

### PUNCHING PERCUSSION

As with the previous pieces, the instrumental timbres are realised extremely impressively, benefiting the overall listening experience. And yes, this is a very easy amp to enjoy, not because it's forgiving of a recording, or smoothing or warming the sound, but due to its complete honesty of musical delivery.

Even when pushed hard with recordings of rather less dynamic range, such as OutKast's punchy 'Hey Ya' from *The Love Below* [Arista 82876 52905 2], the K-300i's combination of speed and control is nothing short of remarkable. Even when playing at very high levels, the

bass stays tight and focused, and everything going on up above is resolved very well indeed. The sound is gutsy, exciting and hard-hitting, but underlying it all is a sense of maturity and refinement.

**LEFT:** Traditionally solid Krell remote offers volume, input selection, balance and access to the configuration menu



Go a bit more audiophile fare with the Rhiannon Giddens/ Francesco Turrisi collaboration *There Is No Other* [Nonesuch 591336-2], which combines close-recorded female vocals with lovingly-captured instruments without going all John Lewis ad on you – I told you I'd just come back from a hi-fi show – and the K-300i's combination of focus and generosity of sound is much appreciated. Giddens' plaintive vocals bounce off the Mediterranean/North African instrumentation on 'Gonna Write Me A Letter' to winning effect, the amp punching along the percussion while allowing the other instruments to soar out of the mix.

With the infectious piano jazz of *Ai Kuwabara, Live At The Blue Note Tokyo* [Verve UCCJ-2164; 48kHz/24-bit], the K-300i is able to demonstrate further its combination of low-end extension and speed as a platform on which music is based. It renders Kuwabara's piano with a delightful lightness of touch, while Steve Gadd's drums have slam and crispness and Will Lee's grumbling bass is tight and precise. Add in a fine sense of live atmosphere – got to love that oh so polite Japanese jazz audience applause – and you have a compelling set that's clearly right up the K-300i's alley, so well does it deliver it. ☺

### HI-FI NEWS VERDICT

This may be the 'baby Krell' – as if one could ever have such a thing! – but it has a big, clean sound that's as much about clarity and finesse as it is all-out power and drive. The digital/streaming section is well worth having, so well does it handle music from network storage and online sources, and it helps make an even more compelling case for what is a particularly fine – and refined – integrated amplifier.

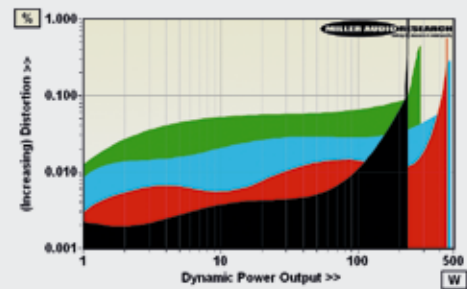
Sound Quality: 87%



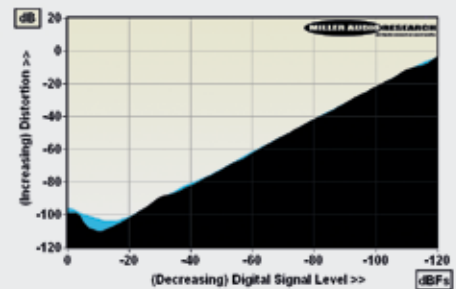
Based on appearances alone it might be tempting to compare the K-300i with Krell's earlier S-300i [*HFN* Feb '09] but, in fact, it has much more in common with the Duo series [*HFN* Oct '14]. Specifically, the K-300i is free of the S-300i's odd-order harmonics while distortion *increases* with level (0.0016-0.014% over the specified 150W range at 1kHz) rather than decreasing – an atypical scenario – as in the S model. The frequency response is both flatter and more extended with  $\pm 1$ dB limits of <1Hz-95kHz (vs. 4Hz-60kHz for the S-300i), the output impedance is reduced by a factor of four to just 0.018-0.030ohm (20Hz-20kHz) and, most impressive of all, noise is suppressed to the point of achieving an A-wtd S/N ratio of 95.5dB (re. 0dBW).

Power output exceeds the 150W/300W spec. at 2x208W/8ohm and 2x370W/4ohm, with 230W and 450W into 8/4ohm under dynamic conditions. However, despite the potential of that massive toroid [pictured, p40], power into low 2 and 1ohm loads is protected at 480W and 288W [see Graph 1, below].

The optional digital board is based on the ESS ES9028 DAC, implemented here with its minimum phase digital filter, free of pre-ringing and offering a 75dB stopband rejection. The A-wtd S/N is some way behind what is achievable with this DAC at 101dB (re. 0dBfs, preamp output at 2V) but jitter is very low at <15psec with all 48kHz-192kHz sample rates. Distortion falls to as low as 0.0002% at 1kHz and 0.001% at 20kHz (re. -10dBfs) and – important from a subjective standpoint – is otherwise very consistent with frequency [see Graph 2, below]. The frequency responses reach out to -0.67dB/45kHz and -2.1dB/90kHz with 96kHz and 192kHz files, respectively. PM



**ABOVE:** Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 17.0A



**ABOVE:** Distortion versus 24-bit digital signal level over a 120dB range at 1kHz (black) and 20kHz (blue)

### HI-FI NEWS SPECIFICATIONS

Continuous power (<1% THD, 8/4ohm)	208W / 370W
Dynamic power (<1% THD, 8/4/2/1ohm)	230W / 450W / 480W / 288W
Output impedance (20Hz-20kHz)	0.018-0.030ohm (200ohm, pre)
Freq. resp. (20Hz-20kHz/100kHz)	+0.0 to -0.11dB/-1.1dB
Digital jitter (48kHz/96kHz)	14psec / 10psec
A-wtd S/N ratio (re. 0dBW/0dBfs)	94.5dB (Analogue) / 100.9dB (Dig)
Dist. (20Hz-20kHz; 0dBW/-20dBfs)	0.00035-0.007%/0.0005-0.001%
Power consumption (idle/rated o/p)	61W / 575W (18W standby)
Dimensions (WHD) / Weight	438x104x462mm / 18.2kg