

# hi-fi news

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# Rock around the Block

**KRELL EVOLUTION 600** (£12,900 each)

Boasting 600W of power, this massive monoblock continues the Krell legend for creating heavyweight amps that deliver current with clout, all held in check by a sophisticated microprocessor monitor system



Tested by Ken Kessler

**A**lthough it took a decade too long, at last there's a major backlash against the three-watt brigade. Those benighted fools who think that a single-figure-wattage 300B into some absurd high-sensitivity horn is a substitute for real-world power have been purveying compressed, compromised sound for too long. With the likes of Musical Fidelity's crusade via the 'Supercharger', the success of Ayre's 300W MX-R monoblock, *et al*, a growing number of audiophiles are rediscovering what they've been missing: dynamics, speed, slam.

Power is something in which Krell always believed. Although one of its greatest achievements was a 50W stereo amp, Krell's street cred is based on unbridled power. And if it wasn't simply a case of sheer wattage – the company still offers an integrated with 'only' 200W/ch – then it was a notion that Krells could drive any load without complaint. With the Evolution series, and the latest incarnation of CAST technology, the bar has been raised substantially. But then, so has the price.

At a time when the green movement wants everyone to feel guilty about everything, it's hard to talk about hi-fi equipment that utilises so much of the earth's resources in manufacture, and then sucks up a lot of juice when in use. But this is not *New Scientist* and I'm not Jonathon Porritt, so let's just accept that such stuff exists, and that it's far less contributory to the world's ills than, say, the filth spewing out of factories in China.

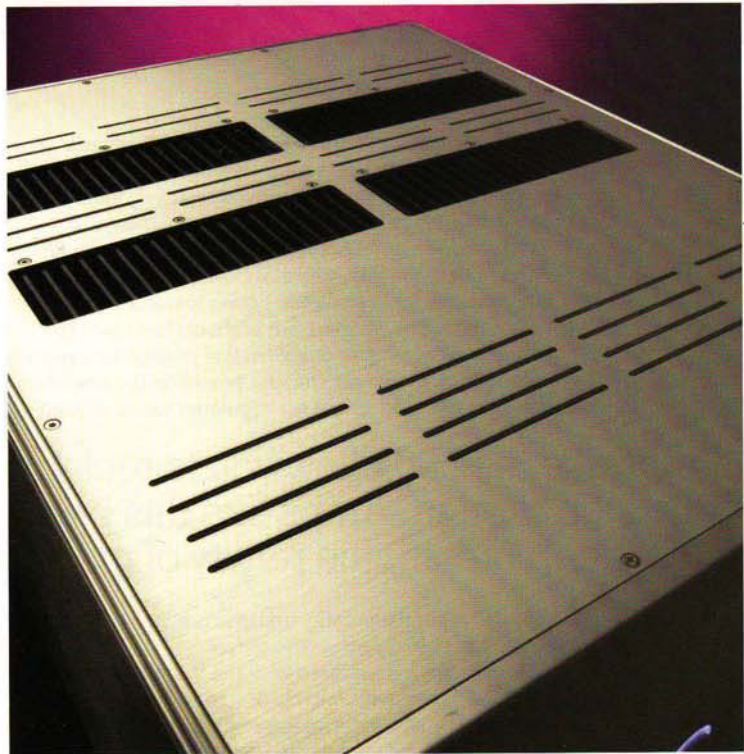
### WEIGHTY ISSUES

Utterly inexcusable, though, is manufacturing a power amp weighing a ludicrous 61.1kg: materials, shipping costs, user-unfriendliness. Whatever sonic excuses Krell may come up with, I'm not about to be convinced when I also have before me a genuine 600W monoblock from a rival weighing 10kg. The Krell's 5000VA power supply,



### INTRODUCING THE CAST..

CAST (current audio signal transmission) technology took much stick when it first arrived, due to some odd characteristics, but there's no doubt that it adds an undeniable sense of command to the proceedings. In this respect, older audiophiles will recall the sheer presence of the first Krells a quarter-century ago: they wee-wee'd all over the limp dross being hawked in the UK as state-of-the-art. State of the arse, more like. Krell came on like gangbusters with huge amplifiers offering seemingly limitless power; CAST II via the Evolution series bring back that phenomenon in a way that has been missing for some time.



massive construction, whatever: the words 'balls' and 'swinging' spring to mind. What morons judge hi-fi on size and weight? End of rant.

But once you've manhandled the Krell Evolution 600 into place (it would have killed them to fit handles?), a magical journey commences. Even ice-cold, the Krells were doing something so right, and so impressive that I was almost able to overlook the fact that a pair costs the same as a BMW 320i M Sport.

In order to experience the full-on Evolution 'event', I also used the Evolution 202 preamplifier, connected in balanced mode with CAST II in play. I also used other preamps, but the serious listening involved the 202 and CAST II because, in my experience, it's the best way to extract all that this amp can deliver.

### NOTHING NEGATIVE

Krell employs what it calls Active Cascode Topology to eliminate global negative feedback, using only nested

'The words "balls" and "swinging" spring to mind. What morons judge hi-fi on size and weight?'

local feedback around individual gain blocks. This is said to produce 'an extraordinarily open, liquid, effortless sound.' No arguments here: for an overkill solid-state amp, the sound is deliriously lush.

Equally, Krell opts for – as it always has – arch detail, control and precision, much of which can be credited to Krell Current Mode and CAST II circuitry in the signal path. Briefly, in Krell's words, CAST uses 'proprietary multiple-output current mirrors in a complementary and balanced arrangement for extraordinary open loop linearity.' I don't know what that means either, but I can tell you this, having tried the 600 with and without: the effect of employing CAST is like tightening up the screws in a headshell, or ensuring that a wrecking ball couldn't dislodge your speakers. It improves control and focus, and the effect is not subtle.

Sheer complexity contributes, no doubt, to the aforementioned weight. The massive power supply ↪

ABOVE: All the Evolution series products include what the company calls 'Krellcoat' finish, intended to 'give Krell components a look that is timeless, with a feel that is inviting and built to last'

## AUDIO FILE

600W monoblock power amplifier with Krell's CAST II and choice of balanced or SE inputs

Made by:  
Krell Industries

Supplied by:  
Absolute Sounds  
Telephone:  
020 8971 3909

Web: [www.krellonline.com](http://www.krellonline.com)

section features 'extensive electrical and magnetic shielding to keep radiated interference out of critical amplifier circuits.' The Krell proved relatively indifferent to the four types of AC rings in my room, thanks to its internal line-conditioning circuitry, which filters RF noise from the mains. Krell also points out that this compensates for asymmetric power waveforms and DC on the mains, so there are probably few gains to be made by adding an outboard line purifier. Or even a regenerator. Moreover, the rails powering the amplifiers' low-level and gain stages are regulated twice, as Krell

'Amps like the 600 allow you to reclaim the high ground. Amps like this bring back (deep breath) the reality of music'

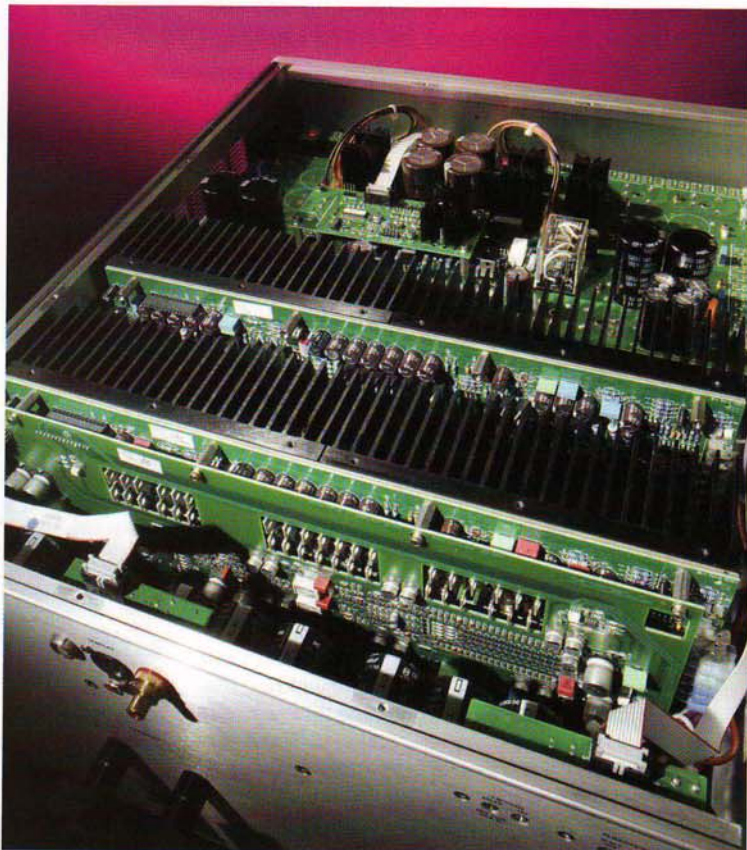
puts it, 'for total immunity from fluctuations in the AC mains and virtually noise-free output.'

Everything is monitored with the thoroughness of the latest Lexus, with microprocessor control to monitor continuously all critical operational parameters. These include bias, load impedance, regulator output voltages and operating temperature. The amps didn't misbehave once. The only disarming thing about the 600 is that the lights dim momentarily when you switch on the primary mains toggle at the back.

BELOW: Inside, the Evolution 600 includes microprocessor control to continuously monitor output current, DC offset, rail voltages and operating temperature

**WATTAGE RACE**

For primary listening, I fed the 202 preamp with the Musical Fidelity kW two-box CD player and SME 30/SME Series V/Blue Angel front-end via the Audio Research PH5 phono stage. Speakers were Sonus faber Guarneri and Apogee Scintilla, wired with Yter cables. And it was like a throwback to one of hi-fi's 'golden ages': 1983-90.



ABOVE: The Krell evolution 600 can accept a normal RCA unbalanced or XLR balanced input, or Krell's proprietary current source connection, via a four-pin connector

In that unashamedly non-green era, the wattage race was like the arms race of the 1950s. Every month, a humongous new amplifier would emerge. (At least, from the USA. Prior to the arrivals of Musical Fidelity, Chord, *et al*, the British were content to putt-putt along with wimp amps.) I distinctly remember being wowed by the sheer presence that music had back then, rather than the politically-correct, washed-out, downsized nonsense that passes for it today.

Put it down to the iPod, or fear of upsetting neighbours or whatever, the only sound systems with guts today are, unfortunately, the in-car systems owned by morons with backward baseball caps, listening to that most hateful of music: hip-hop. Amps like the 600 allow you to reclaim the high ground. Amps like this bring back (deep breath) the reality of music.

If we are to be honest about what hi-fi should do, then we must place realism to the fore. Whether the speakers needed all that the 600s could muster (Guarneris, Scintillas) or if I was just 'having fun' (LS3/5As, Quad ESLs), the sensation afforded by seemingly limitless power is liberating beyond belief. I can, in fact, liken it to only one other experience, that of driving a car with a surfeit of horsepower. When you floor the pedal of a Bentley Azure, and that behemoth glides effortlessly past a Porsche Boxster, well, life takes on a hue that's not entirely green.

**SOFT AND SCARY**

So, too, is the experience with the 600. And it wasn't solely with music known for its bombast. Yes, I used some scary percussion discs, marvelling as much at the Guarneris' refusal to break as at the phenomenal extension and sheer freedom of the sound. But the tear-in-eye/lump-in-throat moments arrived repeatedly with the soft stuff, with the very material you would

assume required little in the way of wattage. Incapable as I am of equating the power of, say, a real trumpet with the audio wattage needed to reproduce it into a given speaker, I am equally unable to grasp what is the 'wattage' of a human voice. But even with a wispy thing of a vocal from Art Garfunkel, or Joni Mitchell in one of her more delicate moods, the absolute freedom from concerns about headroom was still manifest. Voices were open, natural, unconstrained. They enjoyed a real space. They were free of artifice.

This is walking straight into Antony Michaelson's web [see *HFN's* coverage of his Supercharger, p48], but there's no escaping it. The massed vocals of Mr Big's 'To Be With You' swelled into the room to near-Gregorian majesty, while The Byrds' jingle-jangled all morning, the tingle of the signature 12-string Rickenbacker enjoying clarity, presence and body that are denied it by a struggling power source.

**LILTING LADYLOVE**

Every time I've reviewed a product, without fail, there's been one telling moment, one 'showpiece' track that revealed more about the item than any other. It is indicative of the talent that was Dusty Springfield that 'Son of Preacher Man' just may be the sexiest song ever recorded. Yes, even more salacious than Peggy Lee's 'Fever'. That Dusty was also one of Sappho's sisters adds to the mythos: I am deeply amused that a song by a deceased lesbian has the same effect on me as Viagra.

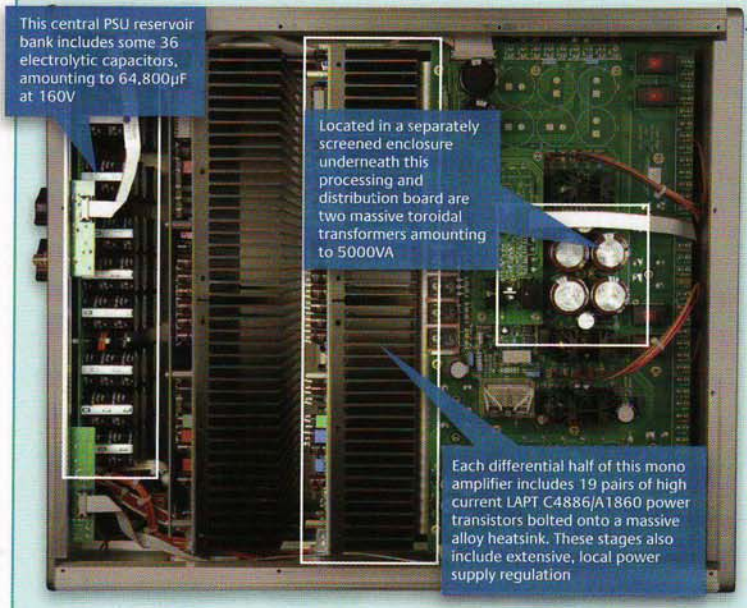
I've heard that song a few hundred times. But through the Evolution 600, I detected details I missed in the past. More crucial, though, was the reproduction of one of the most effective musical effects in the history of recorded sound: Dusty Springfield's breathiness.

Which provided me with the one word I wish to use to define the Krell Evolution 600. With the 'g' in place, without allusion to its current usage, with sole reference to its effect on one's heart, soul and nervous system: 'chilling'. How so? Because the Evolution 600 delivers that elusive 'tingle factor' more repeatedly than any amp I can recall in recent memory, right up there with the kilowatt Musical Fidelity kW monoliths and the 600W Audio Research Reference monoblocks. Constantly dazzled was I by its way not with bombast, for which the only rivals are probably the bigger Evolution models, but the sheer absence of artifice and the heightened detail. Addicted as I am to the works of Judee Sill, it was an honour, a privilege to hear even further into the layers of sound on her deceptively simple recordings.

This is the first product in years that made me want to have a cigarette after the act. ☺

**KRELL**  
Evolution 600 / £12,900 each

hi-finews  
**LAB**  
RESULTS



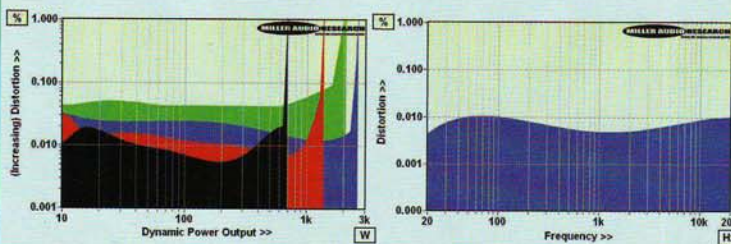
**HI-FI NEWS LAB REPORT**

While there's no debate over which is the heaviest or the more sophisticated in design, it's touch-and-go whether this behemoth from Krell or the two-box kW550 from Musical Fidelity (*HFN*, Jan 07) is actually the more powerful. The Evolution 600 achieves a full 670W/8ohm and virtually doubles this with 1.32kW/4ohm followed by 2.62kW/2ohm which must put it as the 'stiffest' power amp on the planet. However, this extreme PSU regulation is traded for a reduced headroom of 690W, 1.38kW and 2.62kW into 8, 4 and 2ohm, if 'reduced' is a plausible description. Either way, these 600-series monoblocks will comfortably drive any speaker this side of insanity.

Power consumption is a little on the high side, as you might expect, drawing 270W in standby mode and 425W when switched on but idling. At full output into 8ohm the

consumption is close to 1.4kW, into 4ohm it's over 2kW. The output impedance is low enough at 0.03ohm but, unusually, drops far lower above 10kHz where some 'difficult' loudspeakers might also present a reduced load.

Distortion is within specification, with a maximum of 0.02% at the 1W and 600W extremes but dropping to a minimum of ~0.003% at 50W/8ohm. This performance is broadly maintained at all frequencies (see graph, below). The response is very gently tailored to -0.5dB at 20kHz and -1.9dB at 100kHz but the 600-series has subtler qualities. Even when dealing out peaks of clean (<1% THD) 46A current, the Evolution 600 remains utterly silent - every other big power amp I've tested has emitted a series of audible 'thuds' as the current surges through its output devices. PM



ABOVE LEFT: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) loads  
ABOVE RIGHT: Distortion versus frequency at 10W/8ohm

**HI-FI NEWS SPECIFICATIONS**

Power Output, 8/4ohm (<1% THD)	670W/1320W
Dynamic Power, 8/4/2/1ohm	690W/1375W/2623W/2080W
Output Impedance (20Hz-20kHz)	0.025-0.002ohm
Frequency Response (20Hz-100kHz)	+0.0dB to -1.9dB
Input Sensitivity (for 0dBW/600W)	150mV/3725mV
A-wtd S/N ratio (for 0dBW/full output)	90.6dB/115.5dB
Distortion (10W/8ohm, 20Hz-20kHz)	0.005-0.01%